



Australian Government

Department of the Environment and Energy

Assessment of the
TASMANIAN MARINE PLANT FISHERY

December 2017

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This report should be attributed as '*Assessment of the Tasmanian Marine Plant Fishery December 2017*, Commonwealth of Australia 2017'.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy 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 and Energy on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Energy or the Australian Government.

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EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE TASMANIAN MARINE PLANT FISHERY

On 28 August 2017, the Department received an application to undertake an assessment of the Tasmanian Marine Plant Fishery (the fishery) under the wildlife trade provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The sustainability of the fishery's management arrangements have also been assessed against the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. A public comment period was open from 28 August 2017 until 29 September 2017.

The fishery is managed by the Water and Marine Resources Division of the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) under the provisions of the *Living Marine Resources Management Act 1995* (Tas) and in accordance with the *Fisheries (Marine Plant) Rules 2017* (Tas). Stakeholder consultation on key issues is described in state legislation.

Since the 2011 assessment under the EPBC Act, DPIPWE, in consultation with key stakeholders, has reviewed the fishery's management arrangements, and implemented revised control measures for the harvest of marine plants in Tasmania. The new management arrangements will help to ensure greater control over the commercial harvest of marine plants in Tasmania's jurisdiction, and will increase certainty and security for all stakeholders.

The harvest is controlled by output (catch) and input (effort) controls (see Section 1). Harvesting can only occur in designated coastal waters and beaches under an approved fishing licence. Harvesters must identify specific harvesting areas and provide DPIPWE with a permit from the relevant land manager to access the harvesting site prior to receiving a harvesting licence.

The fishery targets a variety of native and exotic marine plants from designated beaches and coastal waters. It is a limited entry fishery with conditions attached to each harvesting licence specifying the area and amounts to be collected. Harvesters use hand collection methods with support from mechanical devices or dive equipment. The use of land-based vehicles is permitted in non-sensitive areas. The use of on-water vessels is permitted for harvesting exotic species only. Harvesting native species from the water, either floating or attached to the seabed, is prohibited.

Harvesting does not impact on live native marine plants because the material that is cast ashore by natural events such as wave, tidal or storm action is either dead or dying by the time it is harvested. The amounts of marine plants removed for recreational or Aboriginal use, or by local councils is not known, but is considered negligible. Given the selective hand collection methods in use, the impact on byproduct or bycatch species is considered negligible.

Based on the management arrangements in place in the fishery, the low impact harvesting methods used, and the condition of native plants when harvested, the Department considers the harvesting operations will not be detrimental to the survival or conservation status of the taxon to which it relates in the short term. However, it is important that DPIPWE collect up-to-date data that accounts for the cumulative harvest of marine plants.

Threatened, endangered and protected species

The Tasmanian coastline provides foraging and roosting habitat for EPBC-listed migratory shorebirds. Cast marine plants contain essential macrofauna food items such as amphipods and larvae, and roosting habitat, and provides camouflage and protection from inclement weather. Any significant changes to macrofaunal communities can create broader impacts on predator communities such as insects and birds. In addition, repeated human disturbance to important habitat including the use of heavy machinery on beaches and foreshores is likely to have a detrimental impact on shorebird behaviour if not managed appropriately. It is important that DPIPWE have in place a sufficient level of ongoing independent monitoring to evaluate the effect of harvesting on protected species including disruption to the foraging and roosting behaviour, and to ensure compliance.

Cast marine plants provide an ecological benefit as a significant resource for the broader terrestrial and coastal ecosystems. The new management arrangements aim to ensure greater control over the commercial harvest of marine plants and increase certainty and security for stakeholders. Management arrangements include a process to assess individual harvesting applications, and a monitoring program to ensure the impacts on the broader ecosystem are minimised. It is important that DPIPWE continue to monitor harvesting operations and implement effective management measures as required.

Notwithstanding the progress made to develop and implement new management arrangements, the Department has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised.

Based on the available information, the Department considers that the declaration of the harvest operations of the Marine Plant Fishery as an approved wildlife trade operation for three years, until 11 December 2020, is appropriate. This declaration is subject to the conditions listed at Section 4 of this assessment report. In summary, these conditions require DPIPWE to:

- collect and analyse logbook data for each harvesting site, and to implement management changes as necessary,
- collaborate with other government agencies, industry, and where possible, the community, to develop appropriate licencing conditions and monitoring activities to ensure ongoing protection of listed shorebird species, and
- include any data obtained from logbook records and monitoring programs in the annual report sent to the Department.

SECTION 1: ASSESSMENT SUMMARY OF THE TASMANIAN MARINE PLANT FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION).

Guideline categories	Meets	Partially meets	Does not meet	Details
Management regime	9 of 9			The management regime is effective.
Principle 1 (target stocks)	3 of 11 and 8 of 11 N/a			While harvesting operations are unlikely to impact on the survival of target species, it is important that management decisions are based on accurate and up-to-date fishery data. The introduction of mandatory logbook recording will help to address any concerns with data collection for the commercial fishery.
Principle 2 (bycatch and TEPS)	3 of 12 and 6 of 12 N/a	2 of 12	1 of 12	The fishery does not harvest bycatch species. The fishery is likely to interact with threatened, endangered or protected species (TEPS), particularly migratory shorebirds. It is important that accurate and up-to-date information is collected in relation to impacts on listed migratory shorebirds caused by harvesting beach-cast marine plants. The pre-harvesting assessments conducted by land managers provide some assurance that TEPS interactions and impacts will be minimised, however it is important that DPIPW ensure adequate monitoring and reporting of TEPS interactions.
Principle 2 (ecosystem impacts)	1 of 5 N/a	4 of 5		It is important to base management decisions on relevant and accurate information. Currently, there is insufficient information to determine the impacts, if any, on the structure, productivity, function and biological diversity of the ecosystem as a result of harvesting marine plants. To improve the quality of data, it is important that all land managers make efforts to use a similar process for pre-harvesting assessments, and that they seek to implement monitoring of harvesting operations, and report TEPS interactions.
EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12				Not applicable because no marine bioregional plan occurs in the area in which the fishery operates.
Part 13				Not Applicable because the fishery operates within state waters and coastal areas only.

Part 13A				The fishery is likely to interact with migratory shorebirds protected under the EPBC Act. It is important that DPIPWE regularly consult with land managers (both private and public) to ensure that harvesting operations are adequately monitored, and that any interaction with shorebirds is reported to DPIPWE in a timely manner. These measures will ensure that suitable management actions are implemented as required.
Part 16				The delegate to the Minister for the Environment and Energy has taken account of the precautionary measures in place in the Tasmanian Marine Plant Fishery.

Assessment history

- 1st assessment finalised February 2005 – Wildlife Trade Operation (WTO) with 6 conditions and 3 recommendations. Three public comments were received. Concern was raised in the public comments that a management plan for the harvesting operations (marine algae) has not been finalised. DPIWE advised that the completion of a management plan was a low priority at that time, and that the harvest is effectively managed through the permits issued. The Department concurred with this position. The assessment report is available at <http://www.environment.gov.au/system/files/pages/0a7402bc-3e90-412a-9983-fc326bc6f690/files/tas-kelp-assessment.pdf>.
- 2nd assessment finalised February 2008 – WTO with 6 conditions and 3 recommendations. No public comments were received. The assessment report is available at <http://www.environment.gov.au/system/files/pages/1ec7b6a4-0cbf-4305-8c02-828ceec4b539/files/report08.pdf>.
- 3rd assessment finalised August 2011 – Exempt with 5 recommendations. Two public comments were received. One public comment raised concerns regarding the lack of a formal management plan and the inadequate assessment of the fisheries impact on shorebirds. The second public comment advised of recent surveys and reports to be considered while assessing the fishery. The assessment report is available at <http://www.environment.gov.au/system/files/pages/f41f8018-d412-4f04-b5ab-86484463a642/files/assessment-report-2011.pdf>.

Fishery reporting

- Annual report - DPIPWE provided annual reports for 2013–14, 2014–15 and 2015–16 for the harvest of cast bull kelp on King Island only.
- Protected species report - not applicable because the fishery operates within state waters and coastal areas.

Key links

- Fishery information is available on DPIPWE's website - www.fishing.tas.gov.au or <http://dPIPWE.tas.gov.au/sea-fishing-aquaculture/commercial-fishing/seaweed-fishery>.

Management plan

- Fisheries (Marine Plant) Rules 2017 - <http://dipwe.tas.gov.au/sea-fishing-aquaculture/sustainable-fisheries-management/fishery-reviews/marine-plant-fishery-management-plan-2017>.

Enforcing legislation

- Tasmanian legislation website is available at <https://www.legislation.tas.gov.au/>.
- Legislative framework for Tasmania's fisheries is available at <http://dipwe.tas.gov.au/sea-fishing-aquaculture/sustainable-fisheries-management/legislation>.
- Living Marine Resources Management Act 1995 (primary legislation for managing the state's fisheries)
- Fisheries (Marine Plant) Rules 2017 (management plan under which the fishery operates)
- Tasmanian Resource Management and Planning System is available at <http://epa.tas.gov.au/policy-site/Pages/The-RMPS.aspx> (underpins sustainable resource use in Tasmania).

Ecological Risk Assessment

- Regulatory impact statement for Draft Fisheries (General and Fees) Amendment Regulations 2016 - http://dipwe.tas.gov.au/Documents/Marine%20Plant_RIS%20and%20CBA.pdf.
- <https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2016-030>

Publicly available stock assessment

- Stock assessments for the fishery are not undertaken because only cast native plants can be harvested.

SECTION 2: DETAILED ANALYSIS OF THE TASMANIAN MARINE PLANT FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Guidelines for the Ecologically Sustainable Management of Fisheries (2nd edition)	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent	<p>Meets</p> <p>The fishery is managed by the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) in accordance with the <i>Fisheries (Marine Plant) Rules 2017</i> (Tas) and the <i>Living Marine Resources Management Act 1995</i> (Tas). Fishery management information is publicly available (see web links above). The Tasmanian Resource Management and Planning System is included at Schedule 1 of the Living Marine Resources Management Act, and aims to ensure the sustainable use and development of the state's natural and physical resources.</p> <p>A voluntary code of conduct is in place for harvesting on King Island, but this document is not publicly available. There is no voluntary code of conduct for other harvesting areas.</p>
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	<p>Meets</p> <p>The management arrangements have been reviewed since the 2011 assessment under the EPBC Act. The management plan (<i>Fisheries (Marine Plant) Rules 2017</i>) was developed in consultation with all interested and affected parties, and included a 60 day public exhibition period. Key stakeholders were identified through a targeted consultation process during the development of the management plan. Any further changes to the management plan will require further public consultation.</p> <p>Under the Tasmanian Resource Management and Planning System citizens have the right to appeal against development applications and environmental impacts including commercial fishing activities.</p>
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	<p>Meets</p> <p>DPIPWE consult with other government agencies, localised experts and community interests as required.</p> <p>There is no stock assessment process because the take of native species is restricted to material that is dead or decaying at the time of harvest. Nevertheless, the management regime includes a process for assessing the amounts harvested from specific harvesting areas. The process includes a pre-harvesting assessment of the available biomass undertaken by the relevant land manager (Tasmanian Parks and Wildlife Service, Crown Land Services, local government authority or private landowner) prior to granting a land access permit. Through this process, DPIPWE are made aware of the harvesting locations and amounts to be harvested.</p>

	<p>The Tasmanian Seafood Industry Council, as the peak fishing body for the industry, would provide advice to the Tasmanian fisheries minister on important issues affecting the state's wild capture fisheries.</p>
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	<p>Meets</p> <p>The Living Marine Resources Management Act includes broad objectives for managing the fishery, and the overall objective of the <i>Fisheries (Marine Plant) Rules 2017</i> is the sustainable and orderly use of the state's marine resources.</p>
Be capable of controlling the level of harvest in the fishery using input and/or output controls	<p>Meets</p> <p>The harvest is limited by input and output controls. The level of harvest is controlled through:</p> <ul style="list-style-type: none"> • limited entry under the following licence types: <ul style="list-style-type: none"> - fishing licence (marine plant) - not limited but non-transferable - fishing licence (King Island Kelp) - capped at one licence (allows for multiple supervisors and assistants during harvesting) - fishing licence (Undaria) - capped at one licence (allows for multiple supervisors during harvesting), single species licence, area restrictions, and a commercial dive licence - fishing licence (introduced marine plant) - no cap on the number of licences, but harvesters must hold a commercial dive licence - commercial dive licences - currently capped at 55 licences. • licence conditions and endorsements attached to individual licences (may include the area of operation, permitted species to be harvested, nominated persons permitted to supervise or assist, harvesting limited to <50 per cent of the available biomass, and specific conditions for land-based vehicles usage) • mandatory logbook reporting • mandatory pre-reporting that identifies the specific location and target species • prior reporting assessment and compliance monitoring operations undertaken by the relevant land manager • area restrictions and seasonal closures including areas to protect nesting shorebirds • gear restrictions • limited number of processing licences (some have exclusivity arrangements): <ul style="list-style-type: none"> - Kelp Industries Pty Ltd to take and process King Island kelp - KelpoMix to process kelp from the Granville Harbour area; and - Marinova Pty Ltd to take and process Undaria from the east coast of Tasmania including from the restricted zone <p>No licence is required for the non-commercial harvest of marine plants, however local council require a permit for the removal of marine plants for aesthetic purposes.</p>

Contain the means of enforcing critical aspects of the management arrangements	<p>Meets</p> <p>Fishing operators are required to adhere to the conditions and endorsements on the land access permit (provided by the relevant land manager), and the fishing licence (provided by DPIPWE). Conditions on land access permits include land access permit and harvesting licence to be clearly displayed in vehicles whilst harvesting. On King Island, all collectors are required to abide by a voluntary code of conduct.</p> <p>Compliance operations are mostly undertaken by the land manager that issues the land access permit. That is, Tasmanian Parks and Wildlife Service, Crown Land Services, local government authority or private landowner.</p> <p>DPIPWE can validate harvesting amounts through daily logbook records and by cross referencing with the amounts processed.</p>
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria.	<p>Partially meets</p> <p>In Tasmania, fishery management plans are subject to formal review every five years, and remade every ten years. Specific reviews may be undertaken at earlier intervals if required.</p> <p>There is no performance review such as a stock assessment because the fishery harvests dead or decaying native species.</p>
Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates.	<p>Meets</p> <p>The fishery is not likely to have a significant impact on the wider marine ecosystem. Harvesting of native species is limited to beach-cast marine plants. The harvest of exotic species using dive gear is permitted from within the marine environment. The amount of exotic species harvested is not known, but its removal is expected to have a positive impact. Licence conditions and endorsements are aimed at avoiding the spread of exotic species to other marine areas.</p>
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy.	<p>Meets</p> <p>The fishery appears to be compliant with relevant Commonwealth plans, strategies and policies including the <i>Conservation advice - Thinornis rubricollis rubricollis</i> (Hooded plover – eastern). Relevant policy documents relating to migratory shorebirds can be found here: http://www.environment.gov.au/biodiversity/migratory-species/migratory-birds. Species specific information can be found on their SPRAT profiles: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.</p>
PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover.	
Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.	
Information requirements	
1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data	<p>Meets</p>

collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.	The fishery has a reliable information collection system in place for other harvesting areas following the introduction of mandatory logbook reporting under the revised management arrangements. Logbook reports are to include the amounts, the area and volume of marine plants harvested each day. This information is checked against processor reports. DPIPWE will use the first two years of logbook records to develop baseline information that will inform management actions including changes as required.
Assessment	
1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and /or reproductive capacity. Review should take place at regular intervals but at least every three years.	Not applicable Given the target species are detached from the ocean substrate by natural events, and then washed ashore by wave action where it desiccates and dies, Principle 1 is considered not applicable. Exotic species are harvested from the water, but strict conditions are placed on licence holders with the aim to avoid spreading. These species are considered to be wide spread.
1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.	Not applicable See 1.1.2 above.
1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.	Not applicable See 1.1.2 above.
1.1.5 There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.	Not applicable See 1.1.2 above.
Management responses	
1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.	Not applicable See 1.1.2 above.
1.1.7 There are management strategies in place capable of controlling the level of take.	Meets The harvest controls measures mentioned above are capable of controlling the level of commercial harvest.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	Not applicable As this operation collects cast marine plants which has already washed ashore, there are no byproduct species harvested.
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)	

1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets The new management arrangements address issues around data collection and orderly harvest of marine plants, and has a high chance of achieving the objective.
If overfished, go to Objective 2: If not overfished, go to PRINCIPLE 2:	
Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	
Management responses	
1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.	Not applicable A precautionary recovery strategy is not required because stocks of native marine plants will not be adversely impacted by the fishery.
1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.	Not applicable Stocks are not considered to be at or below the biological or effort bottom line, and adequate management responses are in place to minimise the impact on live marine plants.
PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.	
Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.	
Information requirements	
2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	Not applicable While there is no requirement to record bycatch in logbooks, management measure including hand collection methods and licence conditions and endorsements restrict harvesting to specific areas and target species.
Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	Not applicable A risk analysis for bycatch species is not required (see 2.1.1).
Management responses	
2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or	Meets The management arrangements include measures such as licence conditions and harvesting amounts to minimise any impacts on non-target species.

protected species). Steps must be taken to develop suitable technology if none is available.	
2.1.4 An indicator group of bycatch species is monitored.	Not applicable Monitoring of indicator group of bycatch species is not required because the harvest is restricted to cast marine plant species.
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Not applicable No bycatch species are harvested.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets The management response has a high chance of achieving the objective to conducting the fishery in a manner that does not threaten bycatch species.
Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.	
Information requirements	
2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.	Does not meet While the risk of interactions with migratory seabirds may be considered low, there is no reporting system in place to record interactions that may occur. Government authorities and private landowners assess the application to harvest prior to granting a land access permit to the proposed harvesting area. However, there is no indication that licence holders are required to report interactions with TEPS. In addition, DPIPWE provides financial and 'in kind' support to Birdlife Tasmania to undertake coastal bird surveys (mainly in the north-west). The results are incorporated into the Natural Values Atlas to assist in decision making. The fishery may interact with parts of the Giant Kelp Forest TEC as part of harvesting exotic species such as Undaria. However, the fishery has no information collection system in place in relation to interactions with threatened ecological communities (TECs).
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	Partially meets There is no ecological risk assessment of the impact on TEPS. On King Island, DPIPWE and Kelp Industries are aware of the potential for interactions, and have actively monitored for impacts on listed shorebird species in consultation with Birdlife Tasmania. However, this does not occur at other harvest sites within the fishery. In 2004, Birdlife Tasmania estimated that harvesting of kelp on King Island could affect nesting species such as the red-capped plover (<i>Charadrius ruficapillus</i>) and pied oystercatcher (<i>Haematopus longirostris</i>) but, indicated that harvesting would have a low impact on breeding populations because of the low number of collection sites. However, DPIPWE provide no evidence of similar surveys being

	<p>conducted by Birdlife Tasmania or other bodies such as government authorities or universities for other harvesting sites in Tasmania.</p> <p>Land managers undertake assessments for potential impacts prior to the harvesting operations, but there is no indication of ongoing monitoring or whether operators report interactions with shorebird species.</p>
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	<p>Not applicable</p> <p>The management arrangements prohibit the take of native specimens that are attached to the substrate or floating in the water. The Giant Kelp Marine Forests of South East Australia threatened ecological community is listed as endangered under the EPBC Act. Giant kelp (<i>Macrocystis pyrifera</i>) forests are located in the waters of south east Australia and kelp that is cast ashore is harvested by the fishery. Giant kelp plants that have detached from the substrata and washed ashore (wrack) are, however, excluded from the definition of the ecological community and therefore do not trigger the need for referral under national environmental law. Information on the Giant Kelp Marine Forests of South East Australia ecological community is available at http://www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=107.</p>
Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	<p>Meets</p> <p>The management arrangements include licence conditions and endorsements, and harvesting limits at each harvesting site to preserve nesting and foraging habitat for shorebirds and other species. The Minister may, by public notice, close parts of the fishery at specific times to restrict harvesting in specific areas to protect breeding populations of shorebirds. On King Island, for example, the harvesting and transportation of kelp and/or equipment is prohibited from September to March (inclusive) on sandy beaches (except for areas where harvesting would not be detrimental to nesting hooded plovers).</p>
2.2.5 There are measures in place to avoid impact on threatened ecological communities.	<p>Not applicable</p> <p>See 2.2.3 above.</p>
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	<p>Partially meets</p> <p>The management response has a medium chance of achieving the objective to conduct the fishery in a manner that avoids mortality of, or injuries to, TEPS and avoids or minimises impacts on TECs. Effective management decisions should be based on accurate and up-to-date information. It is important that DPIPWE collaborate with land managers and private landowners in relation to reporting TEPS interactions, and implement suitable management actions as required.</p>
Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	
Information requirements	

<p>2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fisheries impact on the ecosystem and environment generally.</p>	<p>Partially meets</p> <p>While information from previous assessments suggest the impacts are low, there is a lack of publicly available information to adequately assess the fishery's general impact on the ecosystem and environment. The quantum of marine plants harvested by the recreational sector, by Aboriginal communities, and by local councils and government agencies is unknown.</p> <p>It is important that DPIPWE collect accurate and reliable harvesting data to help inform risk assessments and management decisions. Reliable estimates are currently only available for the removal of King Island kelp (<i>Durvillaea potatorum</i>) in the King Island sector (approximately 1,903.4 tonne was harvested in 2015 and 2016). The introduction of logbooks for all harvesting areas will improve the data collection. DPIPWE propose using the logbook data for future management actions.</p>
<p>Assessment</p>	
<p>2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery.</p> <ol style="list-style-type: none"> 1. Impacts on ecological communities <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains <ul style="list-style-type: none"> • Structure • Productivity/flows 3. Impacts on the physical environment <ul style="list-style-type: none"> • Physical habitat • Water quality 	<p>Partially meets</p> <p>No whole of fishery ecological risk assessment has been conducted. However, the land manager responsible for issuing the land access permit is required to undertake an assessment of the impacts of harvesting operations. This assessment is undertaken prior to harvesting, and requires licence holders to specify the area in which harvesting is to take place, and the target species to be taken. Government authorities have a standard process under which the application to harvest is assessed. For example, Parks and Wildlife Service considers the risk level, any impacts to natural or cultural assets and the environment, the control measures in place, and whether the action complies with legislation, but it is unclear whether a similar process is applied by private landowners. On King Island, an industry code of practice is in place to help minimise the impacts to the wider ecosystem. However, there is no code of practice for other harvesting areas within the fishery.</p> <p>The amounts harvested in each area is sporadic and varies according to the prevailing weather conditions. However, without identifying accurate shorebird numbers and their foraging or habitat needs, there is no certainty that the removal of any amount of plant material will not have a detrimental impact on species, ecological communities, the food chain, or the physical environment.</p> <p>In addition, the decomposition of cast marine plants is an important contributor to the productivity of terrestrial and marine ecosystems. Consisting of seaweed and seagrasses, bacteria, benthic invertebrates, beach-cast wrack represents a vital source of carbon and nutrients for the wider food web dynamics, including beach and near-shore communities (PIRSA 2014). As marine plants decompose, they release a large supply of organic matter that contributes to nutrient cycles and supports marine communities, including some that lead to commercially important fish species (Kirkman & Kendrick 1997; PIRSA 2014).</p> <p>For the aforementioned reasons, it is important that DPIPWE and land managers (public and private) monitor operations during harvesting activities to identify impacts as they occur.</p>
<p>Management responses</p>	

<p>2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.</p>	<p>Partially meets</p> <p>Management actions, including the pre-harvesting assessments by land managers, have some capacity to minimise the impacts described in 2.3.1 however, it is important that DPIPWE implement a process for the ongoing monitoring of harvesting operations, and reporting of TEPS interactions. Cast marine plants can only be accessed by land. Coastal dunes are likely to be protected areas where vehicles are prohibited. Boats cannot be used to harvest cast marine plants unless specifically endorsed to do so.</p>
<p>2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.</p>	<p>Not applicable</p> <p>There are no decision rules in place, although given the scale of the fishery there are suitable management arrangements in place to reduce the likelihood of significant impacts from fishing activities.</p>
<p>2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Partially meets</p> <p>The management regime has a medium chance of achieving the objective of conducting the fishery in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>

SECTION 3: ASSESSMENT OF THE TASMANIAN MARINE PLANT FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT

The table below is not a complete or exact representation of the EPBC Act. It is intended to show that the relevant sections and components of the EPBC Act have been taken into account in the formulation of advice on the fishery in relation to decisions under Part 13A.

Part 12

	Comment
Section 176 Bioregional Plans	
(5) Minister must have regard to relevant bioregional plans	The Tasmanian Marine Plant Fishery operates in state waters and beaches. No marine bioregional plan applies to the South-east Region in which the Tasmanian Marine Plant Fishery operates.

Part 13A

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) ensure ethical conduct during any research associated with the utilisation of wildlife; and (g) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife. 	<p>The management arrangements for the Tasmanian Marine Plant Fishery have been assessed as consistent with the general guidance provided in the objects of Part 13A as:</p> <ul style="list-style-type: none"> • the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species • there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Section 1) • the operation of the Tasmanian Marine Plant Fishery is unlikely to be unsustainable and threaten biodiversity within the next five years, 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.
Section 303DC Minister may amend list (non CITES species)	
<p>(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by:</p> <ul style="list-style-type: none"> (a) doing any of the following: <ul style="list-style-type: none"> (i) including items in the list; (ii) deleting items from the list; (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; 	<p>The amendment to the list of exempt native specimens is made by:</p> <ul style="list-style-type: none"> (i) including in the list specimens and associated restrictions or conditions taken from the fishery; (ii) deleting from the list specimens and any associated restrictions or conditions taken from the fishery; and

(iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (b) correcting an inaccuracy or updating the name of a species.	(iii) imposing conditions or restrictions to which the inclusion of a specimen in the list is subject.
(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes of Part 10, Div 1 or 2 assessment	Not applicable. The Tasmanian Marine Plant Fishery does not operate in Commonwealth waters and therefore no assessment under Part 10 of the EPBC Act has been completed.
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	The fishing operations is consistent with Objects of Part 13A.
(3) Before amending the LENS, the Minister must consult: (a) other Minister or Ministers as appropriate; and (b) other Minister or Ministers of each State and self-governing Territory as appropriate; and (c) other persons and organisations as appropriate.	The submission from the Tasmanian Department of Primary Industries, Parks, Water and Environment was made available on the Department of Environment and Energy's website from 29 August 2017 to 29 September 2017.

Section 303FN Approved wildlife trade operation	Comment
(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.	The delegate of the Minister for the Environment and Energy has, by instrument published on the Federal Register of Legislation, declared that the fishery is an approved wildlife trade operation for the purposes of section 303FN.
(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that: (a) the operation is consistent with the objects of Part 13A of the Act; and	The fishery is consistent with the Objects of Part 13A.
(b) the operation will not be detrimental to: 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 (ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and	The operation of the Tasmanian Marine Plant Fishery will not be detrimental to the survival or conservation status of a taxon to which it relates, nor will it threaten any relevant ecosystem, within the next 3 years , given the management measures in place.
(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	Not applicable. The fishery harvests plant material that is dead or decaying at the time of harvesting.

(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.	Not applicable. No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.
(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and	Based on the management measures in place, the Tasmanian Marine Plant Fishery will not have a significant impact on any relevant ecosystem within the next 3 years .
(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).	The management arrangements for the Tasmanian Marine Plant Fishery are likely to be effective.
(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (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 (b) whether the legislation applies throughout the State or Territory concerned; and (c) whether, in the opinion of the Minister, the legislation is effective.	<i>The Living Marine Resources Management Act 1995 (Tas) and the Fisheries (Marine Plant) Rules 2017 (Tas) are currently in force.</i> The Act under which the fishery is managed applies throughout Tasmanian waters, and The Department considers that the legislation is likely to be effective.
(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: (a) the operation is a commercial fishery.	The Tasmanian Marine Plant Fishery is a commercial fishery.

Section 303FR Public consultation	Comment
(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice: (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. (2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.	A public notice was released for public comment from 28 August 2017 to 29 September 2017. The public notice set out the proposal to declare the Tasmanian Marine Plant Fishery an approved wildlife trade operation and included the application from Tasmanian Department of Primary Industries, Parks, Water and Environment. Public comments were open for a total of 22 business days.
(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.	No public comments about the proposal were received.

Section 303FT Additional provisions relating to declarations	Comments
(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the Tasmanian Marine Plant Fishery will be made under section 303FN.
(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: (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 declaration is to specify the period, circumstances or condition.	The standard conditions applied to commercial fishery wildlife trade operations include: <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 <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. The wildlife trade operation instrument for the Tasmanian Marine Plant Fishery specifies the standard and additional conditions regarding interactions with threatened, endangered and protected species.
(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 made under sections 303FN and the conditions under section 303FT will be registered as a notifiable instrument and made available through the Department's website.

Part 16

	Comment
Section 391 Minister must consider precautionary principle in making decisions	
(1) Minister must take account of precautionary principle	The delegate to the Minister for the Environment and Energy has taken account of the precautionary measures in place in the Tasmanian Marine Plant Fishery.
(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.	The management regime is considered precautionary. Tasmania has also endorsed the <i>National Strategy for Ecologically Sustainable Development</i> , which embodies the precautionary principle (Commonwealth of Australia 1992).

SECTION 4: TASMANIAN MARINE PLANT FISHERY – SUMMARY OF ISSUES REQUIRING CONDITIONS, DECEMBER 2017

Issue	Condition
<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 and Energy 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, EPBC Act protected species or the ecosystem.</p>	<p>Condition 1:</p> <p>Operation of the Tasmanian Marine Plant Fishery will be carried out in accordance with the <i>management regime</i> under the <i>Living Marine Resources Management Act 1995</i> (Tas) and <i>Fisheries (Marine Plant) Rules 2017</i> (Tas).</p> <p>Condition 2:</p> <p>The Tasmanian Department of Primary Industries, Parks, Water and Environment to inform the Department of the Environment and Energy of any intended material changes to the Tasmanian Marine Plant Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) decisions are made.</p>
<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to the Department annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition' and include a description of the fishery, management arrangements in place, research and monitoring outcomes, recent catch data for all sectors of the fishery, status of target stock, interactions with EPBC Act protected species, impacts of the fishery on the ecosystem in which it operates and progress in implementing the Department's conditions and recommendations. Electronic copies of the guidelines are available from the Department's website at http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries.</p>	<p>Condition 3:</p> <p>The Tasmanian Department of Primary Industries, Parks, Water and Environment to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition'.</p>

Issue	Condition
<p><u>Collection of up-to-date and accurate data</u></p> <p>In 2004, 2007, and 2011, the Department assessed the environmental performance associated with harvesting cast bull kelp only from the King Island sector of the fishery (Commonwealth of Australia 2005; 2008; 2011). In the 2017 application for export approval, the Department of Primary Industries, Parks, Water and Environment (DPIPWE) is seeking export approval for the harvest of marine plants from all harvesting areas within its jurisdiction.</p> <p>Since the 2011 assessment under the EPBC Act, the Department of Primary Industries, Parks, Water and Environment (DPIPWE), in consultation with key stakeholders, has reviewed and implemented new management arrangements for the Tasmanian Marine Plant Fishery. The Department recognises that the revised management arrangements will allow greater control over the marine plant resource in Tasmania, and increase certainty and security for stakeholders.</p> <p>Notwithstanding the progress and improved management arrangements, it is important that DPIPWE collect accurate and up-to-date harvesting data for the commercial sector, and that this information is analysed and used to develop baseline data to ensure the orderly harvest of marine plants.</p> <p>DPIPWE have provided the Department with harvesting data for the King Island sector in accordance with recommendations made in previous EPBC Act assessments. Apart from King Island, there is very little information in relation to the amount of marine plants harvested in the commercial sector.</p> <p>It is important that management decisions are based on accurate and up-to-date harvesting data. DPIPWE recognises the need to collect data for all harvesting areas. Under the new management arrangements, DPIPWE has introduced mandatory reporting for harvesting and</p>	<p>Condition 4:</p> <p>The Department of Primary Industries, Parks, Water and Environment to collect and analyse logbook data for each harvesting site, and to implement management changes as necessary.</p> <p>The information and any proposed management changes must be provided to the Department of the Environment and Energy as part of the annual report for the fishery.</p>

Issue	Condition
<p>processing the commercial harvest. Collection and analysis of this information will inform DPIPWE of harvest activity levels to aid management decisions.</p> <p>It is important that DPIPWE consider the fishery's overall impact on the broader ecosystem prior to the granting a harvest licence. This is achieved through engagement with local experts within and external to DPIPWE for input on wildlife and access issues and advice on the broader ecosystem in particular for impacts on shorebirds. DPIPWE also monitor harvesting activities and impose strict licencing conditions requiring licence holders to identify specific harvesting areas and to gain permission to access the identified site from the relevant land owner or land manager such as Tasmanian Parks and Wildlife Service (TPWS).</p> <p>Even though no information is available on the amounts harvested by for non-commercial purposes, the total removals is considered negligible.</p> <p>It is important for DPIPWE to provide the Department with any information that causes a change in management arrangements as part of annual reporting requirements.</p>	
<p><u>Shorebird habitat and ecosystem protection</u></p> <p>The harvesting operations for the Tasmanian Marine Plant Fishery is active within sites identified as important habitat for migratory shorebird species listed under the EPBC Act. Shorebirds including hooded plovers, fairy terns and oyster catchers demonstrate high site fidelity and are sensitive to a range of human activities that can cause habitat loss or degradation, interrupt feeding or nesting habits, and injury or kill (e.g. vehicle strikes).</p> <p>Successful migration requires access to 'important habitat' with abundant food reserves and suitable roosting sites to ensure individuals are prepared for the return journey. Cast wrack is vital in this regard as it contains essential macrofauna food items (amphipods and larvae) and</p>	<p>Condition 5:</p> <p>The Department of Primary Industries, Parks, Water and Environment to collaborate with other state government agencies, industry, and where possible, the community, to develop appropriate licencing conditions and monitoring activities to ensure ongoing protection of listed shorebird species.</p> <p>Any data obtained from monitoring programs (excluding commercial in confidence data) must be included in the annual report sent to the Department.</p>

Issue	Condition
<p>provides camouflage and protection from inclement weather. Any change to these macrofaunal communities will likely affect predator communities, including insects and birds.</p> <p>Existing management measures aim to avoid adverse impacts to threatened and migratory shorebirds through area or seasonal closures, and commercial harvest limits. Limiting the harvesting to less than 50 per cent of the available biomass at each harvesting site is important. However, each site will have unique ecological and human characteristics including the number and type of shorebirds and other fauna using the area, and varying human disturbance.</p> <p>Under the previous management regime, whereby commercial harvesting was limited to King Island, DPIPWE worked collaboratively with key stakeholders and government agencies to identify important shorebird habitat and the potential interactions with collectors. The new management arrangements require the continuation of this coordinated effort. In particular, it is important that DPIPWE, in collaboration with other state government agencies, local councils, industry, special interest groups and where possible, the community to monitor harvesting activity and make appropriate changes.</p> <p>Licence applications are assessed individually by local experts using an approved process to determine licence conditions and the appropriate level of harvest activity for each specific area. Local advice is also used for ongoing observations of impacts, and provided to DPIPWE to implement any changes to management strategies that may be required.</p> <p>Data collection must also consider the number of protected species interactions (for individuals and for the population), and the intensity and duration of these interactions.</p>	

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