



**Australian Government**

**Department of the Environment and Energy**

Assessment of the  
**Tasmanian Freshwater Eel Fishery**

**August 2016**

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#### **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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## SECTION 1: SUMMARY OF THE ASSESSMENT FOR THE TASMANIAN FRESHWATER EEL FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

**Purpose:** To enable transparent articulation of which commercial fisheries assessed under the EPBC Act clearly meet all legislative requirements and all Guidelines, and those which may require further investigation or assessment to demonstrate requirements are met.

Overview of the Tasmanian Freshwater Eel Fishery against the relevant requirements of the Guidelines and the EPBC Act.

| Guidelines                      | Meets                  | Partially meets | Does not meet | Details  |
|---------------------------------|------------------------|-----------------|---------------|--|
| Management regime               | 6 of 9<br>1 of 9 N/a   | 2 of 9          |               | <p><b>The management regime is effective.</b></p> <p>The Tasmanian Freshwater Eel Fishery's (the fishery) management arrangements are regulated by the <i>Inland Fisheries Act 1995</i> (TAS) and its subordinate legislation, and closely monitored by the Inland Fisheries Service (IFS). Management is transparent and information is publicly accessible. However, the general public is not involved in consultation processes and the fishery is managed in an adaptive manner due to the absence of a finalised suite of performance measures and indicators.</p>   |
| Principle 1 (target stocks)     | 4 of 11<br>3 of 11 N/a | 4 of 11         |               | <p><b>Target stocks are generally well managed.</b></p> <p>There is a reliable information collection system in place and independent research is factored into the management arrangements. However, there is limited information on the target species biology which makes it difficult to estimate the potential productivity of the fishery and to set meaningful reference points.</p> <p>Eels have a long history of low exploitation in Tasmania and where data is insufficient, precautionary management arrangements have been implemented. Spatial restrictions act as safeguards to ensure the fishing activity is sustainable for the scale of the fishery. These include a prohibition on fishing in running water, except in limited areas with prior approval, and maintaining some catchments where no fishing is allowed.</p> |
| Principle 2 (bycatch and TEPS)  | 8 of 12<br>2 of 12 N/a | 2 of 12         |               | <p><b>Risks to bycatch and protected species are minimal.</b></p> <p>The main bycatch concerns are associated with the capture of protected species such as platypus and water rats. The IFS closely monitor fishing activity through random, targeted site visits and have implemented measures to avoid the capture of protected species.</p>  |
| Principle 2 (ecosystem impacts) | 4 of 5<br>1 of 5 N/a   |                 |               | <p><b>Ecological risk is inherently low due to the passive fishing method and relatively small scale of the fishery.</b></p> <p>Given the fishery mainly operates in modified environments, the gear used is relatively passive and the scale of the fishery is quite small, the risk to the wider ecosystem is considered minimal. The highest risk is associated with</p>  |

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|  |                      |        |  | restocking activities due to the potential of transferring pest species, primarily Redfin Perch and Eastern Gambusia, into pest-free areas. To mitigate any risk to the wider ecosystem, the management arrangements are highly precautionary and restocking activities are strongly regulated.                                    |
| <b>EPBC requirements</b>   |                      |        |  |  |
| Part 12  |                      |        |  | <b>Not applicable.</b><br>There is no fishing activity within areas covered by a bioregional plan.   |
| Part 13  |                      |        |  | <b>Not applicable.</b><br>No Part 13 assessment is required as no fishing activity occurs in the Commonwealth marine area.   |
| Part 13A   | 1 of 3<br>1 of 3 N/a | 1 of 3 |  | The Department considers that the amendment of the list of exempt native specimens to include product derived from the fishery would be consistent with the provisions of Part 13A. There is limited consultation if LENS is amended, although it is sufficient for strict requirements, as per advice to Minister in MS14-002367. |
| Part 16  | 1 of 1               |        |  | The Department has accounted for the precautionary principle in the preparation of its advice.   |
| <p><b>Conclusion:</b></p> <p>The fishery targets the Long-finned Eel (<i>Anguilla reinhardtii</i>) and Short-finned Eel (<i>A. australis</i>) using fyke nets and eel traps. There is limited information on the target species biology which makes it difficult to estimate the potential productivity of the fishery, although management arrangements are highly precautionary. Spatial restrictions act as safeguards to ensure the fishing activity is sustainable for the scale of the fishery. There are no bycatch concerns apart from some interactions with protected species, however this risk is mitigated by close monitoring from IFS and specific measures targeted toward reducing the catch and/or mortality from any such interactions. The ecological risk from fishing operations is inherently low, therefore the fishery meets all environmental requirements of the EPBC Act and most of the Guidelines.</p> <p><u>Outstanding issue 1:</u> Target stocks are actively managed, however there are no clearly defined performance indicators and performance measures. While sound management measures are available, such as reduction in fishing effort, gear restrictions or closure of a particular water body, there is no clearly defined point at which these measures are reviewed and implemented.</p> |                      |        |  |  |
| <p><b>Final recommendation for 2016 assessment of the Tasmanian Freshwater Eel Fishery:</b></p> <p>Low risk, eligible for 10 year approval (2016-2026).</p>  |                      |        |  |  |

**Notes:**

**Assessment history:**

The assessment history for the Tasmanian Freshwater Eel Fishery – <http://www.environment.gov.au/marine/fisheries/tas/freshwater-eel>.

1<sup>st</sup> assessment finalised November 2004 – Exempt from Part 13A export provisions until 03 November 2009. Export approval was subject to seven recommendations.

2<sup>nd</sup> assessment finalised October 2009 – Exempt from Part 13A export provisions until 01 May 2014 (F2009L04072). Export approval was subject to six recommendations.

3<sup>rd</sup> assessment finalised April 2014 – Exempt from Part 13A export provisions until 17 April 2019 (F2014L00461). Export approval was subject to five recommendations.

**Fishery reporting:**

Annual report – available on the Inland Fisheries Service – <https://www.ifs.tas.gov.au/publications/>.

Protected species interactions – not publicly reported.

**Key links and references:**

The fishery is managed in accordance with provisions in the following Tasmanian legislation and regulations – <https://www.legislation.tas.gov.au/>:

– *Inland Fisheries Act 1995*

– *Inland Fisheries (Recreational Fishing) Regulations 2009*

– *Inland Fisheries (Seaward Limits) Order 2004*

– *Inland Fisheries (Commercial Nets and Fees) Regulations 2009*

Tasmanian Inland Fisheries Service 'Freshwater Eel Fishery' – <https://www.ifs.tas.gov.au/>.

Inland Fisheries Advisory Council – <https://legacy.ifs.tas.gov.au/about-us/inland-fisheries-advisory-council>.

Purser J, Cooper P, Diggle J and Ibbott T 2014 'Tasmanian eel industry development and management plan', University of Tasmania, Launceston TAS, Available at <http://frdc.com.au/Archived-Reports/FRDC%20Projects/2012-208-DLD.pdf>.

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

| Guidelines  | Meets         | Partially meets         | Does not meet | Comment   |
|---|---------------|-------------------------|---------------|---|
| <b>THE MANAGEMENT REGIME</b>  |               |                         |               |   |
| 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   | <b>Meets.</b> |                         |               | Management arrangements are documented, publicly available and transparent. Tasmanian commercial freshwater eel fishing licences are issued and managed under the <i>Inland Fisheries Act 1995</i> and its subordinate legislation including the Inland Fisheries (Commercial Nets and Fees) Regulations 2009, Inland Fisheries (Recreation Fishing) Regulations 2009 and Inland Fisheries (Seaward Limits) Order 2004.   |
| Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public  |               | <b>Partially meets.</b> |               | The management regime has been developed through consultation with recreational groups, water managers, conservation groups, fisheries managers, angling representative bodies and industry. The Inland Fisheries Advisory Council (IFAC) is a statutory advisory body that advises the Minister for Inland Fisheries and is also used by the Inland Fisheries Service (IFS) for consultation on a range of matters.<br>The general public are not involved in the consultation process.  |
| Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process   | <b>Meets.</b> |                         |               | The management of the freshwater eel industry in Tasmania is the responsibility of IFS, which seeks advice from IFAC. IFAC is established under the provisions of the Inland Fisheries Act and is the peak advisory body for matters relevant to the functions of IFS. The role of IFAC is to provide strategic advice to the Tasmanian Minister on all aspects of freshwater fisheries policy and management. IFAC is comprised of representatives with knowledge and experience in commercial fishing, fish processing, fish marketing, recreational fishing, aquaculture, conservation of freshwater ecosystems and tourism. There are also representatives from non-government organisations (NGO's). |
| Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured   |               | <b>Partially meets.</b> |               | In the absence of a finalised suite of stated measures and indicators, IFS manages the fishery in an adaptive manner to ensure that target species are harvested within historical limits, bycatch is minimised and protected species interactions are avoided.   |
| Be capable of controlling the level of harvest in the fishery using input and/or output controls  | <b>Meets.</b> |                         |               | Management measures include the following input and output controls: <ul style="list-style-type: none"> <li>• limited entry</li> <li>• size limits</li> <li>• gear restrictions, and</li> </ul>   |

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|  | <ul style="list-style-type: none"> <li>• spatial closures.</li> </ul>   |
| Contain the means of enforcing critical aspects of the management arrangements   | <p><b>Meets.</b></p> <p>Fisheries Officers have the power to enforce the Inland Fisheries Act and its subordinate legislation. The IFS enforce conditions created under the Inland Fisheries Act by way of inspections of fishing operations.</p>   |
| Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria   | <p><b>Meets.</b></p> <p>The IFS undertake annual reviews of the performance of the fishery, including all management strategies, policies and objectives. The IFS has the power to refine the management of the fishery should any assessments recommend change to the management.</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><b>Meets.</b></p> <p>The fishery operates within Tasmanian inland waters. Impacts of fishing for eels on the wider marine ecosystem is reliant on cooperative management with other jurisdictions. Within the area of the fishery, fishers are required to complete a pre-fishing report detailing the exact time and location of where they intend to fish. The IFS can then restrict fishing activities in any ecologically sensitive areas and enforce compliance by conducting random site visits.</p> <p>Furthermore, the IFS adopt a precautionary management approach. Precautionary measures such as restricting the number of rivers open to eel fishing, making it compulsory for all fyke nets to be fitted with excluder screens, and prohibiting the take of bycatch apart from pest species to help mitigate any adverse impacts on the ecosystem in which the fishery operates.</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><b>Not applicable.</b></p> <p>There are no relevant plans or strategies relating to threat abatement, recovery or bycatch with which the fishery is required to be compliant.</p>  |
| <p><b>PRINCIPLE 1</b> - 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.</p> |   |
| <p><b>Objective 1</b> - 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.</p>  |   |
| <p><b>Information requirements</b></p>   |   |
| <p><b>1.1.1</b> There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.</p> | <p><b>Meets.</b></p> <p>Mandatory logbooks are used to record daily catch, effort and bycatch in the fishery. Logbook returns are submitted to the IFS monthly.</p> <p>Limited fishery independent information has been collected due to the size of the fishery. However, IFS compliance officers act as independent observers, with the ability to verify fishers' catch data.</p>  |
| <p><b>Assessment</b></p>   |   |

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| <p><b>1.1.2</b> 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.</p> | <p><b>Partially meets.</b></p> <p>Specific information on population parameters including age structure, natural mortality, growth, spawning stock size and recruitment size is lacking in the fishery. Without this information, it is difficult to conduct a robust assessment of the fishery. Furthermore, stock assessments for eels is difficult due to their complex life cycle which involves migrating between freshwater and the marine environment.</p> <p>However, the IFS annually review the performance of the commercial eel fishery in Tasmania. In conjunction with stakeholders such as IFAC, all management strategies, policies and objectives are reviewed.</p>  |
| <p><b>1.1.3</b> The distribution and spatial structure of the stock(s) has been established and factored into management responses.</p>  | <p><b>Partially meets.</b></p> <p>The distribution of target species is well known in Tasmania. There is some uncertainty as to whether both species are panmictic (free interchange of genes within an interbreeding population). If it is found that either species is not panmictic as assumed, it is likely to have important implications for the management of the fishery. The biological diversity and reproductive capacity would have to be reconsidered with management potentially needing to be on a catchment by catchment basis, rather than a regional basis.</p>   |
| <p><b>1.1.4</b> 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.</p>   | <p><b>Meets.</b></p> <p>The IFS has been collecting commercial catch statistics for the fishery since 1966. The last recreational fishing survey for freshwater eel was published in 2003. At the time it was predicted that the recreational take was five per cent. Eels are not considered to be an important recreational species, with anecdotal evidence suggesting recreational interest has declined in the last decade. There is no Indigenous sector within the fishery.</p>  |
| <p><b>1.1.5</b> There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.</p>  | <p><b>Partially meets.</b></p> <p>Specific information on population parameters including age structure, natural mortality, growth, spawning stock size and recruitment size is lacking in the fishery. Without this information it is difficult to estimate the potential productivity of the fished stock. The IFS take a precautionary approach by implementing measures such as restricting the number of rivers open to eel fishing, making it compulsory for all fyke nets to be fitted with excluder screens, and prohibiting the take of any bycatch apart from pest species. Given the stable longevity of the fishery, ongoing harvest at current levels appears sustainable.</p>   |
| <p><b>Management responses</b></p>   |   |
| <p><b>1.1.6</b> 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.</p>  | <p><b>Partially meets.</b></p> <p>Lack of information on population parameters including age structure, natural mortality, growth, spawning stock size and recruitment size is a major impediment in the development of specific reference points for eel stocks. Nonetheless, the IFS has developed general reference points including:</p> <ul style="list-style-type: none"> <li>• no more than three consecutive years of decrease in catch per unit effort from each licence catchment</li> <li>• total harvest is within 50 per cent of five year rolling average, and</li> <li>• number of juvenile eels per kg is within 50 per cent of five year rolling average.</li> </ul> <p>In addition, spatial restrictions act as safeguards to ensure the fishing activity is sustainable for the scale of the fishery. These include a prohibition on fishing in running water, except in limited areas with prior approval, and maintaining some catchments where no fishing is allowed.</p> |

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| <p><b>1.1.7</b> There are management strategies in place capable of controlling the level of take.</p>   | <p><b>Meets.</b><br/>Management measures, including the input and output controls identified above, are capable of controlling the level of take.</p>   |
| <p><b>1.1.8</b> Fishing is conducted in a manner that does not threaten stocks of byproduct species.</p>   | <p><b>Not applicable.</b><br/>There are no byproduct species allowed to be commercially taken in the fishery apart from pest species (i.e. carp, redfin perch or tench).</p>  |
| <p>(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)</p>  |   |
| <p><b>1.1.9</b> The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>   | <p><b>Meets.</b><br/>The capability of the management strategy to constrain the harvest of freshwater eel to within sustainable levels is high. Although there is a lack of rigorous information on the target species life history characteristics, the approach of the fisheries managers to adopt a precautionary management strategy is sufficient to ensure that the fishery is conducted in a manner that does not lead to overfishing.</p> |
| <p><b>If overfished, go to Objective 2:<br/>If not overfished, go to PRINCIPLE 2:</b></p>  |   |
| <p><b>Objective 2</b> - 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.</p>  |   |
| <p><b>Management responses</b></p>   |   |
| <p><b>1.2.1</b> 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.</p> | <p><b>Not applicable.</b><br/>Stocks are not considered to be in a state of recovery. Therefore, no specific management arrangements are in place to address a precautionary recovery response.</p>   |
| <p><b>1.2.2</b> 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.</p>  | <p><b>Not applicable.</b><br/>The current take at stock level is considered sustainable. Therefore, no specific triggers or management responses are in place to address a precautionary recovery response.</p>   |
| <p><b>PRINCIPLE 2</b> - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.</p>  |   |
| <p><b>Objective 1</b> - The fishery is conducted in a manner that does not threaten bycatch species.</p>   |   |
| <p><b>Information requirements</b></p>   |   |

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| <p><b>2.1.1</b> Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.</p>   | <p><b>Meets.</b><br/>Fishers are required to record bycatch information as part of their daily catch records and submit their logbooks to the IFS every month. Compliance risk is managed through a close and effective relationship between IFS officers and the small number of commercial eel fishers in the industry. Officers conduct targeted compliance activities during peak periods, providing a high level of observer coverage.</p>   |
| <p><b>Assessments</b></p>  |   |
| <p><b>2.1.2</b> There is a risk analysis of the bycatch with respect to its vulnerability to fishing.</p>  | <p><b>Meets.</b><br/>A risk analysis was conducted through a number of workshops held during the development of the Industry Development Plan (Purser <i>et al.</i> 2014). Bycatch of protected species was rated as moderate due to the possible compliance risk regarding reporting. Bycatch of all other species is considered to be relatively benign due to the nature of the fishing gear used. Fyke nets are cleared at least every 24 hours and the majority of bycatch is released alive. Bycatch species are predominantly introduced fish species.</p> |
| <p><b>Management responses</b></p>   |   |
| <p><b>2.1.3</b> 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 protected species). Steps must be taken to develop suitable technology if none is available.</p> | <p><b>Meets.</b><br/>The primary measures in place to avoid capture and mortality of bycatch species are:</p> <ul style="list-style-type: none"> <li>• mandatory excluder screens on all fyke nets or the cod ends raised 300 mm clear of the water surface</li> <li>• fyke nets to be cleared every 24 hours, and</li> <li>• restrictions on the dimensions of fyke nets and eel traps deployed.</li> </ul>  |
| <p><b>2.1.4</b> An indicator group of bycatch species is monitored.</p>  | <p><b>Not applicable.</b><br/>Monitoring indicator species not required, based on historic low bycatch rates. However, data from logbooks is reviewed at least annually for any emerging issues.</p>  |
| <p><b>2.1.5</b> There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.</p>  | <p><b>Not applicable.</b><br/>As per 2.1.4.</p>   |
| <p><b>2.1.6</b> The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>   | <p><b>Meets.</b><br/>The IFS manages the fishery through a precautionary management approach and has a high chance of achieving the objective.</p>  |
| <p><b>Objective 2</b> - 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.</p>   |   |
| <p><b>Information requirements</b></p>   |   |
| <p><b>2.2.1</b> Reliable information is collected on the interaction with endangered, threatened or</p>  | <p><b>Meets.</b></p>  |

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| protected species and threatened ecological communities.  | Fishers are required to record interactions with protected species in a logbook and submit to the IFS every month. The data provided is verified by IFS officers who have a close and effective relationship with the small number of commercial eel fishers in the industry. Officers conduct targeted compliance activities during peak periods, providing a high level of observer coverage.   |
| <b>Assessments</b>  |   |
| <b>2.2.2</b> There is an assessment of the impact of the fishery on endangered, threatened or protected species.  | <b>Meets.</b><br>A risk analysis was conducted through a number of workshops held during the development of the Industry Development Plan (Purser <i>et al.</i> 2014).  |
| <b>2.2.3</b> There is an assessment of the impact of the fishery on threatened ecological communities.  | <b>Partially meets.</b><br>The ecological risk assessment did not specifically consider the impact of the fishery on threatened ecological communities (TECs). However, the impact is considered to be minimal due to the small area where fishing occurs, the passive nature of the gear used, and because fishing is predominantly conducted in modified habitats (e.g. dams). Should the IFS identify any overlap between TECs and fishing activity, they have the capacity to close that area to fishing.   |
| <b>Management responses</b>   |   |
| <b>2.2.4</b> There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.  | <b>Meets.</b><br>The primary measures in place to avoid capture and mortality of protected species are: <ul style="list-style-type: none"> <li>• mandatory excluder screens on all fyke nets or the cod ends raised 300 mm clear of the water surface</li> <li>• fyke nets to be cleared every 24 hours</li> <li>• restrictions on the dimensions of fyke nets and eel traps deployed, and</li> <li>• limiting the use of nets or traps set in running water, managed by exemption permit.</li> </ul> The mitigation strategy is targeted toward larger protected species such as platypus and water rats. However, the large mesh size of fyke nets limits the interactions with smaller protected species, such as <i>Galaxia spp.</i> , as they are able to pass through the mesh. |
| <b>2.2.5</b> There are measures in place to avoid impact on threatened ecological communities.  | <b>Partially meets.</b><br>No TECs have been identified in any area where fishing occurs. However, should the IFS identify any overlap between TECs and fishing activity, they have the capacity to close that area to fishing.   |
| <b>2.2.6</b> The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective. | <b>Meets.</b><br>In general, the fishery is considered relatively benign with a limited number of operators who utilise low impact gear and are only active in selected waterways. The Department considers that the potential impact on protected species is likely to be low and the precautionary management response has a high chance of achieving the objective.  |
| <b>Objective 3</b> - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.                                |   |
| <b>Information requirements</b>   |   |

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| <p><b>2.3.1</b> 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><b>Meets.</b></p> <p>Information to assist in assessing the impact of the fishery on the ecosystem is collected through logbook data, fish dealer returns, resource assessments, distribution surveys and related research data. Due to the scale and value of the fishery, and the low impact of the gear on the habitat, the level of information collected, combined with the generally precautionary nature of the management regime, will result in minimal impacts of fishing operations on the ecosystem.</p>   |
| <p><b>Assessment</b></p>   |   |
| <p><b>2.3.2</b> 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"> <li>1. Impacts on ecological communities <ul style="list-style-type: none"> <li>• Benthic communities</li> <li>• Ecologically related, associated or dependent species</li> <li>• Water column communities</li> </ul> </li> <li>2. Impacts on food chains <ul style="list-style-type: none"> <li>• Structure</li> <li>• Productivity/flows</li> </ul> </li> <li>3. Impacts on the physical environment <ul style="list-style-type: none"> <li>• Physical habitat</li> <li>• Water quality.</li> </ul> </li> </ol> | <p><b>Meets.</b></p> <p>A risk analysis was conducted through a number of workshops held during the development of the Industry Development Plan (Purser <i>et al.</i> 2014). Most commercial eel fishing in Tasmania is conducted in waters that have been man-made (e.g. farm dams and hydro-electric impoundments) and/or artificially enhanced (e.g. restocked with eels). The impacts on the ecological communities from the fishing operations are low.</p> <p>Food chain interactions may be affected by the removal of a large predator from the system. However, the top predatory role that eels once occupied may have been replaced through the introduction of trout. Given that the fishery largely occurs in modified environments and the gear used is relatively passive, impacts on physical habitat and water quality are considered to be low.</p> <p>Restocking activities – transferring juvenile eels upstream above artificial barriers – pose the highest risk to the ecosystem. The potential for the transfer of pest species, primarily Redfin Perch (<i>Perca fluviatilis</i>) and Eastern Gambusia (<i>Gambusia holbrooki</i>), from restocking activities is actively addressed by the IFS. Restocking activities are highly regulated and can only be undertaken by IFS officers observing strict protocols to ensure risks to the ecosystem are minimised.</p> |
| <p><b>Management responses</b></p>   |   |
| <p><b>2.3.3</b> Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.</p>   | <p><b>Meets.</b></p> <p>The fishery is managed through a precautionary approach by limiting fishing activities to clearly defined reaches of a limited number of waters, using closely regulated gear which is passive and operated in such a way as to have minimum ecological impact. The IFS has developed a Risk Management Protocol, including strict chemical grading, to manage the risk of transferring pest species during restocking activities. Furthermore, fishers are required to apply for a permit if they wish to nominate a water body to be restocked. The IFS then coordinate the distribution of eels for restocking activities according to the permit conditions.</p>  |
| <p><b>2.3.4</b> 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</p>   | <p><b>Not applicable.</b></p> <p>No performance measures considered necessary due to the highly precautionary management approach.</p>  |

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| indicated by application of the precautionary approach.   |  |
| <b>2.3.5</b> The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective. | <b>Meets.</b><br>The management regime for the fishery is conducted in a sufficiently precautionary manner to minimise the impact of fishing operations on the ecosystem generally. Therefore, the management response has a high chance of achieving the objective. |

**SECTION 3: ASSESSMENT OF THE TASMANIAN FRESHWATER EEL FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT**

**Please Note** – the table below is not a complete or exact representation of the EPBC Act. It is intended as a checklist 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.

**Part 12**

|   | Meets | Partially meets | Does not meet | Comment  |
|---|-------|-----------------|---------------|--|
| <b>Section 176 Bioregional Plans</b>                        |       |                 |               |  |
| (5) Minister must have regard to relevant bioregional plans |       |                 |               | <b>Not applicable.</b><br>There is no fishing activity within areas covered by a bioregional plan. |

**Part 13**

No Part 13 assessment is required as no fishing activity occurs in the Commonwealth marine area.

**Part 13A**

| <b>Section 303BA Objects of Part 13A</b>  |       |                 |               |   |
|---|-------|-----------------|---------------|---|
| (1) The objects of this Part are as follows:<br>(a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;<br>(b) to protect wildlife that may be adversely affected by trade;<br>(c) to promote the conservation of biodiversity in Australia and other countries;<br>(d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;<br>(e) to promote the humane treatment of wildlife;<br>(f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and<br>(h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife. |       |                 |               |   |
|   | Meets | Partially meets | Does not meet | Comment   |
| <b>Section 303DC Minister may amend list (non CITES species)</b>  |       |                 |               |   |
| (1) The Minister may amend the LENS by:<br>(a) doing any of the following:<br>(i) including items in the list;<br>(ii) deleting items from the list;  |       |                 |               | The Department <b>recommends</b> that specimens that are or are derived from fish or invertebrates, taken in the Tasmanian Freshwater Eel Fishery as defined in the management regime in force under the <i>Inland Fisheries Act 1995 (TAS)</i> , but not including <ul style="list-style-type: none"> <li>specimens that belong to eligible listed threatened species, as defined under section 303BC of the EPBC Act, or</li> </ul> |

|   |   |
|---|---|
| <p>(iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject;</p> <p>(iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject</p>  | <ul style="list-style-type: none"> <li>specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list) be included in the list of exempt native specimens until 25 July 2026.</li> </ul>  |
| <p>(1A) In deciding to amend LENS, Minister must rely primarily on outcomes of Part 10, Div. 1 Or 2 assessment</p>  | <p><b>Not applicable</b></p> <p>No assessment under Part 10 of the EPBC Act has been completed as the fishery is not a Commonwealth fishery.</p>  |
| <p>(1C) The above does not limit matters that may be considered when deciding to amend LENS.</p>  | <p><b>Meets.</b></p> <p>The Department considers that the amendment of the list of exempt native specimens to include product derived from the fishery would be consistent with the provisions of Part 13A (listed above) as:</p> <ul style="list-style-type: none"> <li>the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species</li> <li>there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way, and</li> <li>the operation of the fishery is unlikely to be unsustainable and threaten biodiversity within the next ten years.</li> </ul> |
| <p>(3) Before amending LENS, Minister must consult:</p> <p>(a) other Minister or Ministers as appropriate; and</p> <p>(b) other Minister or Ministers of each State and self-governing Territory as appropriate; and</p> <p>(c) other persons and organisations as appropriate.</p> | <p><b>Partially meets.</b></p> <p>General consultation with the (TAS) Minister for Fisheries in October 2014 (MS14-002367).</p>   |

**Part 16**

|   | Meets   | Partially meets | Does not meet | Comment |
|---|---|-----------------|---------------|---------|
| <p><b>Section 391 Minister must consider precautionary principle in making decisions</b></p>  |   |                 |               |         |
| <p>(1) Minister must take account of precautionary principle</p> <p>(2) The precautionary principle is that lack of full scientific certainty should not be</p> | <p><b>Precautionary management measures in place</b></p> <p>The precautionary principle has been considered by the Department when making its recommendation to the delegate to include specimens in the list of exempt native specimens.</p> |                 |               |         |

used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

