



**Australian Government**

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**Department of the Environment and Energy**

Assessment of the  
**COMMONWEALTH SOUTHERN AND EASTERN  
SCALEFISH AND SHARK FISHERY**

February 2019

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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 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 or the Australian Government.

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## EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE COMMONWEALTH SOUTHERN AND EASTERN SCALEFISH AND SHARK FISHERY

In October 2018, the Australian Fisheries Management Authority (AFMA) submitted an application for the Commonwealth Southern and Eastern Scalefish and Shark Fishery (the fishery) to the Department of the Environment and Energy (the Department) for assessment as an approved wildlife trade operation under 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's 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. A public comment period was open from 11 October 2018 to 13 November 2018. The Department received two comments summarised at Section 3 of this report.

### Management arrangements

AFMA manage the fishery in accordance with the *Southern and Eastern Scalefish and Shark Fishery Management Plan 2003* made under the *Fisheries Management Act 1991* (Cth). Fishing operations are also managed through co-management agreements are also in place with industry bodies, and Offshore Constitutional Settlement arrangements with Queensland, New South Wales (NSW), Victoria, Tasmania, South Australia (SA), and Western Australia (WA).

The area of the fishery extends south from Fraser Island in Queensland to Cape Leeuwin in Western Australia, along the eastern and southern coastlines, and extending seaward to the limit of Australia's exclusive economic zone (EEZ). The fishery comprises four main sectors – the Commonwealth South East Trawl, the East Coast Deepwater Trawl, the Great Australian Bight Trawl, and the Gillnet, Hook and Trap, which has four sub-sectors for management purposes. A range of fishing gear and methods are used in each sector (e.g. otter trawl, Danish seine, pair trawl, longline, dropline, and traps). Harvesting is managed through a range of input (effort) and output (catch) controls, including statutory fishing rights, catch limits linked to the fishery harvest strategy, strategies to manage bycatch and protected species, and area and seasonal closures.

### Target stocks

The fishery harvests a wide range of species, primarily Blue Grenadier, Deepwater Flathead, Gummy Shark, Blue Eye Trevalla, Eastern School Whiting, Silver Warehou, and Tiger Flathead. Secondary species include Pink Ling, Bight redfish, Ocean Perch, and Royal Red Prawn.

A number of species listed as conservation dependent under the EPBC Act that occur in the fishery are considered overfished. Rebuilding strategies containing appropriate timeframes for rebuilding are in place to manage overfished stocks of Orange Roughy in the fishery's southern and western zones, Eastern Gemfish, Blue Warehou, Redfish and School Shark. A management strategy is in place to rebuild Harrison's Dogfish and Southern Dogfish.

### Protected species and ecosystems

The fishery is known to interact with a number of species listed under the EPBC Act, including dolphins, sea lions, and seals. These species along with seabirds are known to actively forage around fishing vessels. AFMA is actively managing interactions with these species through protected species management strategies, bycatch and discard workplans (aligned to the Commonwealth bycatch policy), and trigger limits that lead to management responses. In addition, AFMA is currently undertaking ecological risk assessments (ERA) for each sector of the fishery. These ERAs will be incorporated into the Fishery Management Strategy, which is being developed and scheduled for completion by mid-2020.

While acknowledging AFMA's commitment to mitigating impacts to protected species, the Department considers it important that the fishery is accredited under Part 13 of the Act subject to conditions requiring AFMA ensures that protection measures for these species groups are maintained and improved as required (see Section 4).

The assessment also considered the possible impacts on shark species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) caught in the fishery. Annual bycatch of CITES listed Hammerhead shark species (Scalloped Hammerhead, Great Hammerhead, Smooth Hammerhead) is below the levels set by the 2014 non-detriment finding, made by the Australian CITES Scientific Authority. As Oceanic Whitetip is at risk of overfishing from international tuna longline fisheries no export of this species can be permitted. The minimal take of Porbeagle is unlikely to be detrimental, however this species is listed under Part 13 of the EPBC Act and therefore cannot be targeted, although can only be retained if already dead at retrieval.

## **Conclusion**

Following assessment, the fishery has been found to meet most of the Guidelines (Section 2) and the majority of the requirements of the EPBC Act (Section 3). The Department considers that the management regime for the fishery provides for fishing operations to be managed in a manner that minimises its impact on the structure, productivity, function and biological diversity of the ecosystem. Notwithstanding the progress made by AFMA to address the key challenges faced by this fishery, the Department has identified a number of risks and uncertainties that must be managed to ensure that impacts are reduced, including interactions with protected species and the need to recover overfished stocks.

On this basis, the Department considers that the declaration of the harvest operations of the Commonwealth Southern and Eastern Scalefish and Shark Fishery, as an approved wildlife trade operation for three years, until 12 February 2022, is appropriate. Unless a specific time frame is provided, each condition must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

**SECTION 1: ASSESSMENT SUMMARY OF THE COMMONWEALTH SOUTHERN AND EASTERN SCALEFISH AND SHARK FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION), CONSISTENT WITH THE EPBC ACT**

Guidelines assessment	Meets	Partially meets	Does not meet	Details
Management regime	6 of 9	3 of 9		The Department considers that overall the management regime for the fishery aims to ensure that fishing is conducted in a manner that does not lead to overfishing. Co-management arrangements with industry bodies are not publicly available. It is important that AFMA consider recent amendments to the seabird threat abatement plan and the marine debris threat abatement plan, and incorporate any changes as required.
Principle 1 (target stocks)	4 of 11	7 of 11		Given the existing and proposed management arrangements for the fishery, the Department considers that the management regime aims to ensure that fishing is conducted in a manner that reduces the risk of overfishing, and the operation of the fishery will not be detrimental to the survival or conservation status of the target species in the short term. Suitable management arrangements are in place for conservation dependent stocks.
Principle 2 (bycatch and TEPS)	7 of 12 2 of 12 N/a	3 of 12		A number of risks and uncertainties have been identified in relation to bycatch and interactions with protected species including a lack of information on the numbers and types of bycatch. There is a need to collect accurate and up-to-date information that will inform the development of strategies to minimise the impact on bycatch species. Accurate reporting will also assist in managing the incidental capture of shark species listed on Appendix II of CITES.
Principle 2 (ecosystem impacts)	2 of 5	3 of 5		Based on the available information, and the management arrangements in place in the fishery (including an industry code of practice) the Department considers that the fishing operations will be managed in a manner that minimises the impact on the structure, productivity, function and biological diversity of the ecosystem. A fishery management strategy is being developed. This strategy will incorporate information from ecological risk assessments for each sector of the fishery.

EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12				A number of key ecological features and conservation values are identified in management plans for the South east, the South-west, and the Temperate East marine bioregions. Ongoing monitoring, assessment and management is required to ensure that fishing activities do not have an adverse impact on any of these ecological features or conservation values.
Part 13				The fishery interacts with Australian Sea Lions, dolphins, seals, and seabirds. AFMA has indicated that a management strategy is being developed to mitigate impacts to seals, while management measures are in place for the other species/species groups. Ongoing monitoring and management is required to manage interactions.
Part 13A				While the fishery meets the objectives of Part 13A of the EPBC Act, there is an ongoing need to manage a number of issues summarised at Section 3 of this assessment report.
Part 16				Although a number of risks and uncertainties exist, precautionary measures are considered to be in place to prevent serious or irreversible environmental damage being caused by this fishery.

## Notes:

### Assessment history for the Commonwealth Southern and Eastern Scalefish and Shark Fishery

- Previous assessment information is available on the Department's website at <http://www.environment.gov.au/marine/fisheries/commonwealth/scalefish>.
  - 1st assessment September 2003 – Approved wildlife trade operation (WTO) until 22 December 2006 subject to 18 recommendations. List of exempt native specimens (LENS) amended while an approved WTO is in place. Management plan accredited under Part 13, and pursuant to subsection 33(1) of the EPBC Act on 19 December 2003.
  - 2nd assessment December 2006 – WTO declaration until 22 December 2009 subject to six conditions and five recommendations. LENS amended. Management plan accredited under Part 13, and pursuant to subsection 33(1) of the EPBC Act on 30 May 2007. WTO conditions varied in December 2007 and December 2008. LENS extended until 19 February 2010.
  - 3rd assessment February 2010 – WTO declaration until 30 July 2012 subject to nine conditions. LENS amended. Management plan accredited under Part 13 on 02 February 2010. LENS extended until 28 February 2013.
  - 4th assessment February 2013 – WTO declaration until 25 February 2016 subject to six conditions and four recommendations. LENS amended. Management plan accredited under Part 13 on 25 February 2013 subject to four conditions.
  - 5th assessment February 2016 – WTO declaration until 21 February 2019 subject to five conditions. LENS amended. Management plan accredited under Part 13 on 22 February 2016 subject to four conditions.

### Fishery reporting:

- Annual reports for Commonwealth fisheries – <https://www.afma.gov.au/about/corporate-publications>.

### Key web links:

#### Fishery information

- Southern and Eastern Scalefish and Shark Fishery information – <https://www.afma.gov.au/fisheries/southern-eastern-scalefish-shark-fishery>.
- Fishery management policies – <https://www.afma.gov.au/about/fisheries-management-policies>.
- Management Advisory Committees, Resource Assessment Groups, and the Commonwealth Fisheries Marine Mammal Working Group – <https://www.afma.gov.au/fisheries/committees>.
- AFMA bycatch and discarding workplans – <https://www.afma.gov.au/sustainability-environment/bycatch-discarding/bycatch-discard-workplans>.
- Seabird bycatch operational guidelines for Commonwealth fisheries – [https://afma.govcms.gov.au/sites/g/files/net5531/f/seabird\\_bycatch\\_operational\\_guidelines.pdf](https://afma.govcms.gov.au/sites/g/files/net5531/f/seabird_bycatch_operational_guidelines.pdf).
- Protected species information (turtles, seals, dolphins, seabirds, sharks, and Australian sea lions) – <https://www.afma.gov.au/protected-species>.
- AFMA's protected species interaction reports – <https://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports>.
- Protected species management strategies for Australian sea lion, dolphin, seabirds, and dogfish – <https://www.afma.gov.au/sustainability-environment/protected-species-management-strategies>.
- NSW Southern Trawl Sub-Fishery transitioning arrangements – <https://www.afma.gov.au/fisheries/southern-eastern-scalefish-shark-fishery/transitioning-nsw-southern-fish-trawl-fishery-commonwealth-management>.

### Enforcing legislation

- *Fisheries Management Act 1991* (Cth) – <https://www.legislation.gov.au/Current/C2017C00363>.
  - *Fisheries Management Regulations 1992* (Cth) – <https://www.legislation.gov.au/Details/F2017C00241>.
  - *Fisheries Management (Southern and Eastern Scalefish and Shark Fishery) Regulations 2004* (Cth) – <https://www.legislation.gov.au/Details/F2011C00627>.



## **Management plan**

- Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 – <https://www.legislation.gov.au/Series/F2005B02463>.
  - Southern and Eastern Scalefish and Shark Fishery management arrangements booklet 2018 – <https://www.afma.gov.au/fisheries-services/fisheries-management-plans>.
  - Boat operating procedures manual for the Great Australian Bight Trawl sub-fishery – <https://www.afma.gov.au/sites/g/files/net5531/f/uploads/2014/02/boat-operating-procedures-great-australian-bight-apri-2011.pdf>.
  - Directions and Determinations for the Southern and Eastern Scalefish and Shark Fishery – <https://www.legislation.gov.au>.

## **Harvest strategy**

- Harvest strategy framework for the Southern and Eastern Scalefish and Shark Fishery – <https://www.afma.gov.au/sustainability-environment/harvest-strategies>.

## **Ecological risk assessments**

- Ecological risk management strategy for the Southern and Eastern Scalefish and Shark Fishery 2015 – <https://www.afma.gov.au/sites/default/files/uploads/2014/11/SESSF-ERM-Strategy-2015.pdf>.
  - Risk assessments for the Commonwealth South East Trawl, the Gillnet, Hook and Trap, and the Great Australian Bight Trawl Sectors – <https://www.afma.gov.au/sustainability-environment/ecological-risk-management-strategies>.

## **Stock assessments**

- Stock assessments and annual catch reports – <https://www.afma.gov.au/fisheries/southern-eastern-scalefish-shark-fishery>.

## SECTION 2: DETAILED ANALYSIS OF THE COMMONWEALTH SOUTHERN AND EASTERN SCALEFISH AND SHARK FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Guidelines criteria	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.	<p><b>Partially meets</b></p> <p>The Southern and Eastern Scalefish and Shark Fishery (the fishery) is managed by the Australian Fisheries Management Authority (AFMA) in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> (SESSF Management Plan), made under the <i>Fisheries Management Act 1991</i> (Cth). The fishery is regulated by the <i>Fisheries Management Regulations 1992</i> (Cth), and the <i>Fisheries Management (Southern and Eastern Scalefish and Shark Fishery) Regulations 2004</i> (Cth). The <i>Fisheries Administration Act 1991</i> (Cth) also mandates that AFMA carry out specific functions and responsibilities relating to the management of Commonwealth fisheries.</p> <p>The management arrangements are published on AFMA's website, and include links to the Federal Register of Legislation (FRL) website. The SESSF Management Plan and management directions and determinations are published on the FRL. The <i>SESSF Management Arrangements Booklet 2018</i> and the <i>Boat operating procedures manual for the Great Australian Bight Trawl sub-fishery</i> provide guidance to fishing operators. These documents are updated annually and made available to operators before the fishery opens on 1 May each year.</p> <p>The fishery is also managed under Offshore Constitutional Settlement agreements with Queensland, New South Wales (NSW), Victoria, Tasmania, South Australia (SA), and Western Australia (WA). Furthermore, AFMA has developed formal co-management arrangements with the Southern Shark Industry Alliance (SSIA). AFMA also work closely with other industry bodies such as the South East Trawl Fishing Industry Association (SEFTIA). However, these arrangements are not publicly available.</p> <p>AFMA has developed an ecological risk management (ERM) framework to guide risk assessments for all Commonwealth fisheries. The ERM framework includes risk assessments for the main fishing methods (i.e. trawling, longline, and gillnet) in each sector of the fishery. The most recent ecological risk assessments (ERAs) are publicly available, although the ERAs for each sector are currently under review. The ERM framework will be replaced by a Fishery Management Strategy (FMS) that will incorporate key aspects from relevant fishery management strategies, workplans, and policies (see AFMA 2017). AFMA is in the process of developing a FMS for this fishery. The revised ERAs and FMS will be publicly available when completed.</p>
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public.	<p><b>Meets</b></p> <p>AFMA is required under federal legislation to consult with key stakeholders. However, consultation with the general public is only required when developing a plan of management. Key stakeholders and interested persons are invited to comment on amendments to the management plan and other aspects of the management arrangements. AFMA consult with government departments and key stakeholders in the relevant jurisdiction in relation to amendments to OCS agreements. The OCS agreements require that regular consultations occur regarding the management of mobile species stocks.</p> <p>AFMA engage interested stakeholders on research, policy, environmental, and fishery management issues through the South East Management Advisory Committee (SEMAC) and the Great Australian Bight Management Advisory Committee (GABMAC). AFMA anticipate releasing the FMS for public comment by mid-2020.</p>

	AFMA and the NSW Department of Primary Industries are currently negotiating, in consultation with key stakeholders, a proposal to transition the NSW Southern Fish Trawl Fishery to Commonwealth management. This process has undergone a lengthy consultation period. See Notes – Fishery information (above).
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process.	<p><b>Meets</b></p> <p>SEMAC and GABMAC are statutory bodies formed under the Fisheries Administration Act with responsibility for providing management advice to AFMA and the AFMA Commission. Membership of these committees include fishery managers, scientists and economists, commercial fishing operators, state and territory government agencies, environmental non-government organisations, and recreational anglers.</p> <p>Resource Assessment Group's (SESSFRAG) are non-statutory bodies with responsibility for providing critical analysis of scientific and economic reports, and subsequent advice to the management advisory committees and AFMA. The SESSFRAG is the primary scientific and economic advisory body for this fishery, although the SharkRAG contributes to the management of the Gillnet, Hook and Trap (GHaT) Sector, the South East RAG (SERAG) contributes to the management of the South East Trawl Sector, and the Great Australian Bight RAG (GABRAG) contributes to the management of the GAB Trawl Sector. The SESSFRAG, the SharkRAG, SERAG and the GABRAG include members with expertise in fisheries science and management, fisheries economics, and the fishing industry. These bodies will also contribute to the development of the FMS for this fishery. The Fishing Industry Policy Council was established under the Fisheries Administration Act to consult with key stakeholders, and report information to the minister responsible for Commonwealth fisheries.</p>
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured.	<p><b>Meets</b></p> <p>Strategic objectives and performance measures are broadly defined in the Fisheries Management Act. The SESSF Management Plan contains fishery-specific objectives, performance measures, and performance criteria. Management actions to achieve these objectives are identified in the risk management strategy and harvest strategy for this fishery. The harvest strategy policy and harvest strategy guidelines for Commonwealth-managed fisheries (DAWR 2018b; DAWR 2018d) provides the basis for developing the harvest strategy for this fishery, which includes objectives, harvest control rules, reference/trigger points, performance measures, and decision rules (AFMA 2017). Key information from these strategy and policy documents are contained in the management arrangements booklet and boat operating procedures manual.</p> <p>AFMA's ecological risk management framework uses a hierarchical approach to assess the sources of risk, their consequences, and likelihood of occurrence (DAFF 2013). This approach is used to assess the risks posed by each fishing method to target and non-target species, protected species, habitats, and communities.</p>
Be capable of controlling the level of harvest in the fishery using input and/or output controls.	<p><b>Meets</b></p> <p>The fishery extends from Fraser Island in Queensland to Cape Leeuwin in Western Australia. The fishery has four main sectors – East Coast Deepwater Trawl (ECDT), Commonwealth South East Trawl (CSET), GAB Trawl (GABT), and GHAT, which has four sub-sectors – Scalefish Hook, Shark Gillnet, Shark Hook, and Trap (Patterson 2018). Harvesting is managed through a range of input (effort) and output (catch) controls including:</p> <ul style="list-style-type: none"> <li>• Limited entry – licences and permits include conditions such area of operation, permitted species, as well as gear and other restrictions.</li> <li>• Area restrictions – concession holders must operate within defined areas, and are notified of closed areas (permanent or temporary).</li> </ul>

	<ul style="list-style-type: none"> <li>• Closures (seasonal and area) – apply to different sectors, and may be used to manage bycatch and protected species interactions. A trawl exclusion zone applies to the western part of the ECDT Sector. In the GHAT Scalefish Hook Sub-sector, fishing is prohibited from the NSW coast seaward to 80 nautical miles (nm).</li> <li>• Statutory fishing rights (SFRs) – transferable, but mandatory, and contain restrictions on the amounts of fish permitted (quota SFR) or gear used (boat SFR). <ul style="list-style-type: none"> <li>○ Quota SFRs allow concession holders to take an agreed amount of fish for a specified quota species.</li> <li>○ Boat SFRs allow the nominated vessel and specified methods to be used subject to restrictions.</li> </ul> </li> <li>• Catch limits – apply to most target and byproduct species. Incidental catch limits apply to some species. Harvest strategy guides the setting of total allowable commercial catches (TACC). Trip limits apply for certain species that are also targeted by fisheries in other jurisdictions.</li> <li>• Gear restrictions – apply to all vessels and may include specified trap dimensions or net material and mesh configurations, the number of hooks per line, and determine the depths at which nets or lines are set.</li> <li>• Compliance measures – mandatory use of vessel monitoring systems (VMS) and bycatch reduction devices (BRDs). Mandatory seabird management plans for all trawl and auto-longline vessels. Monitoring includes satellite tracking, on-board observers, and cameras fitted to some vessels. Mandatory reporting via logbooks and catch disposal records verified against fish receiver data.</li> </ul> <p>In addition, the fishing industry has implemented voluntary closures, voluntary gear restrictions, and industry codes of conduct.</p>
Contain the means of enforcing critical aspects of the management arrangements.	<p><b>Partially meets</b></p> <p>Electronic monitoring is the primary method for monitoring fishing activities. AFMA regularly analyse monthly logbooks and catch disposal records against fish receiver records. A risk based compliance and enforcement assessment is undertaken on a biennial basis. The assessment is informed by compliance intelligence, including information via Crimfish (<a href="https://www.afma.gov.au/monitoring-enforcement/report-illegal-fishing-activity">https://www.afma.gov.au/monitoring-enforcement/report-illegal-fishing-activity</a>). Priority risks are identified for ongoing investigation include quota evasion, failure to report interaction/retention of protected or prohibited species, and misreporting or mishandling of bycatch and discards. A number of enforcement measures are available under fisheries legislation and regulations.</p> <p>On-board observers are used randomly in all sectors except the GHaT. Observers monitor and report catch data, fishing effort, bycatch/discards, and protected species interactions. VMS provides information on fishing effort and the position, speed and direction of vessels.</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>A number of mechanisms are in place to assess the effectiveness of management measures. Some measures are mandated by fisheries legislation, including annual reporting requirements.</p> <p>AFMA facilitates regular stock assessments for key species and species groups (see Tuck 2016a; 2016b; 2018). Stock assessment findings and other peer reviewed research and studies are analysed by the SESSFRAG in consultation with the SharkRAG and the GABRAG. Advice is then provided to SEMAC and GABMAC about the status of target and non-target species stocks, impacts of fishing on the marine environment, and information gaps that may affect the performance of the fishery.</p> <p>The SESSF Management Plan is regularly reviewed, and outlines obligations for assessing the effectiveness of performance measures and reporting. The harvest strategy for this fishery will be reviewed in 2019 to align with the harvest strategy policy and guidelines for Commonwealth fisheries, which was revised in 2018 (see DaWR 2018b; 2018d).</p>

	The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) review the ecological and economic performance of Commonwealth fisheries annually. Since 2009, ABARES has provided annual assessments for 37 species or species groups taken in the fishery (Patterson et al. 2016; 2017; 2018). The Fisheries Research and Development Corporation's <i>Status of key Australian fish stocks reports</i> (SAFS reports) contains independent assessments for a number of species stocks taken in this fishery (Stewardson et al. 2016).
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>A range of management actions are in place to assess, monitor, and manage the impacts of fishing on the wider marine ecosystem.</p> <p>AFMA has facilitated risk assessments for the effects of fishing by otter board trawl in the CSET and GABT Sectors, by Danish seine in the CSET Sector, and by auto-longline and shark gillnet in the GHAT Sector. The ECDT Sector was assessed as part of the ERA for the CSET Sector. The assessments included analyses of risks posed by fishing methods to target and non-target species, protected species, habitats, and communities (Smith et al. 2007; Walker et al. 2007; Hobday et al. 2011; AFMA 2017a; 2017b).</p> <p>On-board observers are randomly assigned vessels where they monitor fishing activities and record information such as protected species interactions and bycatch (discards). Electronic monitoring such as video surveillance is used on some vessels. Satellite tracking helps to ensure that fishing activities are spread across the fishery to avoid localised depletion. Independent on-board observers also provide records of impacts such as gear loss, discards, and protected species interactions.</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>Partially meets</b></p> <p>The fishery is compliant with most relevant Commonwealth plans, policies and strategies that aim to mitigate impacts to target and non-target species, and to the marine environment in which the fishery operates. The relevant plans, policies and strategies are administered by the Department of Agriculture and Water Resources (i.e. fisheries) or the Department of the Environment and Energy (e.g. protected species and habitats), and are periodically revised and updated. In 2018, the bycatch policy and guidelines and harvest strategy policy and guidelines for Commonwealth-managed fisheries were revised (DaWR 2018a; 2018b; 2018c; 2018d). AFMA has indicated that existing bycatch and discard workplans and the fishery harvest strategy will be reviewed to ensure they continue to meet standards.</p> <p>It is important that AFMA consider amendments in the revised <i>Threat abatement plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i> (DoEE 2018), and the <i>Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans</i> (DoEE 2018).</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.	
<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.	
<b>Information requirements</b>	
<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><b>Partially meets</b></p> <p>Over thirty species or species groups are managed under quota. The species/species groups and its quota are identified in the management arrangements booklet, which is updated annually. A number of species are classified as overfished, and listed as conservation dependent under the EPBC Act.</p> <p>Key target species include Alfonsino (<i>Beryx splendens</i>), Bight Redfish (<i>Centroberyx gerrardi</i>), Blue-eye Trevalla (<i>Hyperoglyphe artartica</i>), Blue Grenadier (<i>Macruronus novaezelandiae</i>), Blue Warehou (<i>Seriolella brama</i>), Deepwater Flathead (<i>Platycephalus</i></p>

	<p><i>conatus</i>), deepwater sharks (Order: Squaliformes), Elephantfish (<i>Callirhynchus milii</i>), other flathead (<i>Neoplatycephalus</i> sp.), Gemfish (<i>Rexea solandri</i>), Gummy Shark (<i>Mustelus antarcticus</i>), Jackass Morwong (<i>Nemadactylus macropterus</i>), John Dory (<i>Zeus faber</i>), Mirror Dory (<i>Zenopsis nebulosa</i>), ocean perch (<i>Helicolenus barathri</i> and <i>H. percoides</i>), Orange Roughy (<i>Hoplostethus atlanticus</i>), Smooth Oreo (<i>Pseudocyttus maculatus</i>), other Oreodory (Family: Oreosomatidae), Pink Ling (<i>Genypterus blacodes</i>), Redfish (<i>Centroberyx affinis</i>), Ribaldo (<i>Mora moro</i>), Royal Red Prawn (<i>Haliporoides sibogae</i>), sawsharks (<i>Pristiophorus cirratus</i>, <i>P. nudipinnis</i>), School Shark (<i>Galeorhinus galeus</i>), School Whiting (<i>Sillago flindersi</i>), Silver Trevally (<i>Pseudocaranx georgianus</i>), and Silver (Spotted) Warehou (<i>Seriola punctata</i>). Harvesting also a wide range of byproduct species that are not managed under quota, including Blue Swimmer Crab (<i>Portunus armatus</i>), and Ocean Jacket (<i>Nelusetta ayraud</i>).</p> <p>Logbooks are provided to record daily catch and effort for all target and byproduct species, bycatch (discards), protected species interactions, locations fished, gear configuration (vessels, nets, hooks, traps etc.), and fishing methods (e.g. trawling). This information is reported to AFMA on a monthly basis.</p> <p>AFMA publish monthly catch reports and annual summaries of landed catch. Additional information is available through VMS data, independent stock assessments, and research studies and surveys. In the GHaT Sector, the Southern Shark Industry Alliance (SSIA) will coordinate a biological sampling program for gillnet and longline vessels that allows trained crew members and port based personnel to collect biological samples. While the long-term success of this program is unknown, AFMA anticipate it will supplement existing measures and improve data collection.</p> <p>Catch data is verified against fish receiver records and catch disposal records for all concession holders in the fishery. Some vessels use e-monitoring such as video surveillance. AFMA randomly assigns on-board observers to monitor fishing activities and to record information such as protected species interactions and bycatch (discards).</p>
<b>Assessment</b>	
<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>Meets</b></p> <p>AFMA facilitate independent assessments for quota-managed species and other key stocks. The TACC's for these species is set in accordance with the fishery's harvest strategy (Tuck et al. 2018).</p> <p>The ABARES <i>Fishery status reports 2018</i> classified three stocks as <i>uncertain</i> with regard to stock biomass. These stocks are deepwater sharks in the eastern and western zones, and Orange Roughy stock in the GAB Sector. Seven stocks are classified as <i>overfished</i>. These are School Shark, Blue Warehou, Gemfish (eastern), Redfish, Orange Roughy (southern and western zones), and gulper sharks. With regard to fishing mortality (pressure), seven stocks are classified as <i>uncertain</i>. These species are ocean perch, oreodory, Blue Warehou, Gemfish (eastern), Redfish, School Shark, and gulper sharks. The fishing pressure for other stocks is considered sustainable (<i>not subject to overfishing</i>) (Patterson et al. 2018).</p> <p>The SAFS report assessed 12 species stocks taken in this fishery, and also considered that School Shark, Gemfish (eastern), and Orange Roughy (eastern zone) stocks are overfished. The other stocks are considered to be sustainably fished (Stewardson et al. 2016).</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 general distribution and spatial structure is well known for most key species harvested in the fishery. However, some species stocks such as Blue Grenadier, Eastern School Whiting, ocean perch, and Smooth Oreodory are currently managed as single stock units, although research indicates there may be two separate biological stocks. Little is known about the individual stock structure of the eighteen deepwater shark species harvested in the fishery. The available catch data does not readily identify deepwater sharks to species level, and stock assessments consider these species as one unit. Deepwater sharks are</p>

	<p>currently managed as two distinct stocks according to where they are most likely to occur in the fishery (eastern and western stocks). No formal studies have been conducted to determine the stock structure and distribution for Redfish (Patterson et al. 2018).</p> <p>Fishery status reports (Patterson et al. 2016; 2017; 2018), and the SAFS reports (Stewardson et al. 2016) provide information on the distribution and spatial structure for many key species taken in the fishery. AFMA facilitate research and surveys for quota managed species. The SESSFRAG is responsible for identifying knowledge gaps and providing research and scientific advice to AFMA. Ongoing research is able to identify and close knowledge gaps. Relevant information is factored into the management arrangements.</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>Partially meets</b></p> <p>There are reliable estimates for landed catches in the fishery. Commercial catch and effort data is recorded in daily catch logs and catch disposal records. This information can be verified against multiple sources including independent studies, vessel monitoring systems, and fish receiver records. An electronic recording system has been introduced that allows fish receivers to record catches for each vessel. This systems should improve data quality. On-board scientific observers are used randomly in most sectors, but are not used in the GHaT Sector.</p> <p>When setting the TACC, the SESSFRAG also considers the available data from state-managed fisheries (commercial and recreational catches and discards). Although there is some uncertainty in relation to reliable reporting for discards.</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>Mandatory reporting of catch and effort is a key aspect of the management arrangements. Productivity has been calculated for target species and key byproduct species through regular fishery dependent and independent assessments. Stock assessments were undertaken during the 2016 and 2017 fishing seasons (Tuck et al. 2018). The assessment report is in two parts – Part 1 is publicly available (Tuck et al. 2018), while Part 2 will be published when it is finalised. There is some uncertainty in relation to the potential productivity of overfished stocks (Patterson et al. 2017; 2018).</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>Meets</b></p> <p>Robust reference points are in place. The harvest strategy policy for Commonwealth fisheries sets the default limit biomass reference point (<math>B_{LIM}</math>) at 20 per cent (<math>B_{20}</math>) of the unfished spawning biomass. The default maximum sustainable yield (<math>B_{MSY}</math>) proxy is 40 per cent (<math>B_{40}</math>) of the unfished spawning biomass. The default target biomass (<math>B_{TARG}</math>) is generally equal to <math>B_{MEY}</math>, and is calculated at approximately 48 per cent (<math>B_{48}</math>) of the unfished spawning biomass. A key outcome from stock assessments at all tiers is the calculation of a recommended biological catch (RBC) that is used to determine TACC's for each species (AFMA 2017; DaWR 2017b; DaWR 2017d; Knuckey et al 2017). Stocks that are assessed at being below the limit reference point of the estimated unfished biomass are considered overfished.</p>
<p><b>1.1.7</b> There are management strategies in place capable of controlling the level of take.</p>	<p><b>Meets</b></p> <p>Harvesting is adequately managed through a mixture of input and output controls (described above). The primary management approach is to assign quota to key target species. Quota management is directly linked to the fishery harvest strategy. A range of precautionary management triggers are built into the harvest strategy. Performance measures are also in place for key species stocks, including some non-quota species. In the East Coast Deepwater Trawl Sector, the TACC is set at 200 t for Boarfish (<i>Paristiopterus labiosus</i>), and 50 t incidental catch for Orange Roughy. These TACC's act as a trigger, which results in</p>



	the sector being closed if the trigger is reached. OCS agreements also contain measures such as catch limits per trip for some species that are also targeted by other jurisdictions.
<b>1.1.8</b> Fishing is conducted in a manner that does not threaten stocks of byproduct species.	<p><b>Partially meets</b></p> <p>The fishery harvests many byproduct species that are not managed under the quota system. Operators are required to record the numbers of byproduct species caught or discarded. Key byproduct are reported to AFMA via catch disposal records each month.</p> <p>High risk byproduct species are identified during the ERA process. The ERA includes an assessment for some key non-quota species such as Broadnose Shark (<i>Notorynchus cepedianus</i>), Gould's squid (<i>Nototodarus gouldi</i>), King Dory (<i>Cyttus traversi</i>), Latchet (<i>Pterygotrigla polyommata</i>), Leatherjacket (various), Ocean Jacket (<i>Nelusetta ayraud</i>), Pacific Red Gurnard (<i>Chelidonichthys kumu</i>), and Snapper (various).</p> <p>Management measures such as catch restrictions can be implemented for certain species in different sectors of the fishery if they are identified through analysis of mandatory reporting, stock assessments and ERA framework.</p>
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)	
<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><b>Partially meets</b></p> <p>Notwithstanding efforts to mitigate the effects of fishing on target and byproduct stocks, six stocks are classified as overfished, and listed as conservation dependent under the EPBC Act. In addition, Pink Ling stocks in the eastern zone has declined. AFMA has implemented appropriate measures that are likely to improve the stock status for these species over different timeframes. Therefore, the Department considers the fishery has a medium chance to achieve the objective to conduct fishing operations at ecologically viable stock levels.</p>
<p><b>If overfished, go to Objective 2:</b></p> <p><b>If not overfished, go to PRINCIPLE 2:</b></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.	
<b>Management responses</b>	
<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><b>Partially meets</b></p> <p>Precautionary recovery strategies are in place for six overfished stocks. However, there has been no change in their stock status over the past four years (2014–2017), and no scientific evidence that stocks are recovering. In each case, the stock biomass is classified as overfished, and fishing pressure is considered uncertain if stocks are overfished (Patterson et al. 2018).</p> <p>The harvest strategy policy and guidelines for Commonwealth-managed fisheries contain specific approaches for developing management strategies for overfished stocks, including default performance measures and triggers. Harvest control rules recommend zero RBC where stocks are determined to be overfished, although a low catch limit may be applied to allow for incidental captures. Management strategies are regularly reviewed and catch limits adjusted to account for annual harvesting levels and new information.</p> <p>Rebuilding strategies have been developed for overfished Blue Warehou (AFMA 2014a), Eastern Gemfish (AFMA 2015a), southern and western zones stocks of Orange Roughy (2014b), Redfish (AFMA 2016), dogfish species (AFMA 2012), and School Shark (AFMA 2015b) stocks. These strategies are precautionary with timeframes based on biological characteristics for the relevant species.</p>



	A management strategy is also in place to rebuild populations of Harrison's Dogfish and Southern Dogfish to above $B_{lim}$ of 25 per cent of unfished biomass within 62 years and 86 years respectively. These timeframes are required due to the low productivity (slow growth rate, late age at maturity, and low fecundity) for these species.
<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><b>Meets</b></p> <p>Strategies to rebuild stocks of Blue Warehou, Eastern Gemfish, dogfish species, Orange Roughy, Redfish, and School Shark contain specific management measures. The strategies include objectives and decision rules that aim to meet biological timeframes for each species. The stock status and performance for each of these species is reviewed annually against the objectives of the relevant stock management strategy. All stock management strategies are reviewed every five years. Specific management actions are in place to manage Pink Ling stocks in the eastern zone. While the eastern zone stock is classified as <i>not overfished</i> (stock biomass) and <i>overfishing is not occurring</i> (fishing pressure), the available information indicates the stock is declining towards the limit reference point (Patterson et al. 2017; 2018). Management measures include industry oversight of voluntary actions by trawl and auto-longline operators to limit catches. Daily catch limits have been removed to allow flexibility for operators to manage their quota for the fishing season. AFMA has indicated that a stock assessment is scheduled for 2018. Pink Ling is managed as a single stock for both eastern and western zones. Under proposed amendments to the management arrangements (to begin 1 May 2020), each zone may have separate statutory fishing rights to limit fishing effort to sustainable levels.</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.	
<b>Objective 1</b> - The fishery is conducted in a manner that does not threaten bycatch species.	
<b>Information requirements</b>	
<b>2.1.1</b> Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	<p><b>Partially meets</b></p> <p>Information about bycatch or discard species is recorded in daily logbooks, and reported to AFMA each month. Discard information for the top ten landed quota species for each vessel is collected and maintained through the Independent Scientific Monitoring Program (ISMP). Information is also obtained through electronic monitoring such as surveillance cameras. Misreporting may be identified through an analyses of bycatch records, and management actions taken accordingly. Species level reporting is required, where possible, across all sectors. However, management arrangements allow operators in the Commonwealth Trawl Sector to record discards for non-quota species at the family level in an attempt to improve overall bycatch reporting. There are limited means to independently verify bycatch records other than AFMA's independent scientific observer program. Observers are randomly assigned to vessels to collect a range of information including bycatch and discards.</p>
<b>Assessment</b>	
<b>2.1.2</b> There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	<p><b>Meets</b></p> <p>AFMA's bycatch strategy contains guiding principles for identifying bycatch issues. The fishery ERM strategy addresses the impacts to high risk species identified through the ERAEF process. AFMA has developed and implemented bycatch and discard workplans for four fishing methods in three sectors of the fishery – otter board trawl and Danish seine in the CSET Sector, otter board trawl in the GABT Sector, scalefish automatic longline, and shark gillnet in the GHaT Sector. The ERA's identified 26 species (or species groups) as being at risk from fishing. At risk species (or species groups) include seals, sea lions, dolphins, and 16 chondrichthyans (sharks, rays, and skates). Albatrosses are the only seabirds identified as high risk, although the fishery is known to interact with many seabirds including petrels, prions, and shearwaters.</p>

	Bycatch trigger limits apply to some species such as dolphins, sea lions, and seabirds, and can result in area closures. Broader fishery closures are used to manage bycatch by protecting breeding habitats or to restrict the use of specific fishing gear in high risk areas.
<b>Management responses</b>	
<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><b>Meets</b></p> <p>A number of management responses are in place. Bycatch and discarding workplans are reviewed every two years, although action items are reviewed at six-monthly intervals. The <i>Guide to AFMA's ecological risk management</i> describes the broad requirements and expectations for monitoring, assessing and implementing management actions.</p> <ul style="list-style-type: none"> <li>AFMA's <i>Bycatch strategy: Mitigating protected species interactions and general bycatch</i> contains five principles for managing bycatch in a consistent manner across the fishery. Bycatch and discarding workplans have been developed for vessels using otter board trawl, Danish seine, gillnet, and automatic longline in the CSET, GABT, and GHaT Sectors. These workplans describe actions that aim to minimise bycatch in the fishery. Further information is available at <a href="https://www.afma.gov.au/sustainability-environment/bycatch-discarding/bycatch-discard-workplans">https://www.afma.gov.au/sustainability-environment/bycatch-discarding/bycatch-discard-workplans</a>. In the GABT Sector, AFMA has developed handling guides for sharks and rays, and online education videos, and the ISMP and fishery independent survey (FIS) are being refined to improve species level reporting for species identified as high risk.</li> <li>In the scalefish automatic longline contains six action items of which five are completed. These relate to. AFMA has improved mitigation measures for seabirds and chondrichthyans, and continues to develop an electronic monitoring program for automatic longline vessels.</li> <li>AFMA continues to regulate mesh size, and has implemented handling guides for sharks and rays for the shark gillnet sub-sector. Ongoing actions in this sub-sector include developing the dolphin management strategy, and implementing best practice guidelines for marine mammal interactions.</li> <li>In the CSET Sector, dogfish bycatch mitigation measures have been developed for vessels targeting Royal Red Prawn. Best handling practice guides for chondrichthyans and identification guides for seabirds have been distributed to all operators. All vessel SMPs have been reviewed, and additional seabird mitigation devices have been trialled. An ongoing action is to assess catch trends for high risk bycatch species in the CSET Sector.</li> </ul> <p>Incidental catch limits are in place for overfished species (see above). Under a revised OCS agreement between the Commonwealth and SA, individual trip limits and TAC will be implemented to manage Snapper (<i>Pagrus auratus</i>) bycatch.</p>
<b>2.1.4</b> An indicator group of bycatch species is monitored.	<p><b>Meets</b></p> <p>Species identified as high risk during risk assessments are regularly monitored. Operators are required to record target species discards, and protected species bycatch. Management strategies for Australian Sea Lion, dolphins, and seabirds contain objectives and decision rules. Fishing zones are closed if bycatch trigger limits for Australian Sea Lion and dolphins are reached. A management strategy is being developed for seals. Oceanic longline and trawl vessels are required to report seabird bycatch.</p> <p>Bycatch TACC is in place for Orange Roughy (Albany and Esperance zone and western zone), and Redfish. Operators are required to report bycatch for these species in catch logs. Bycatch trends may be identified through logbook reports and monitoring (e.g. on-board observers or cameras).</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><b>Meets</b></p> <p>The fishery ERM strategy contains a list of priority species, which includes 16 chondrichthyans, three teleosts (bony fishes), two invertebrate species groups, albatrosses, and four marine mammal species. Decision rules are in place for some species such as sharks that are considered to be at high risk.</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></p> <p>The management arrangements have a medium to high chance of achieving the objective to conduct the fishery in a manner that does not threaten bycatch species. The fishery employs a number of non-selective fishing methods and gear that increases the risk to bycatch species. AFMA and industry have shown a commitment to develop and implement mitigation measures. Improvements to bycatch management will involve the collection of up-to-date and accurate information. It is important that bycatch is recorded to species level for all sectors. Doing so will improve timeframes for identifying risks to bycatch species and implementing appropriate management actions.</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 protected species and threatened ecological communities.</p>	<p><b>Partially meets</b></p> <p>Discards and interaction data for threatened, endangered and protected species (TEPS) is collected via daily logbooks. Electronic monitoring (e.g. cameras and satellite tracking) is the primary means to verify records. Information may also be gathered through research studies and surveys. Independent scientific observers board vessels at random to collect bycatch/discard data, although they are not used in the GHaT Sector.</p> <p>Protected species reporting is mandatory for all sectors. Species level reporting is required where possible. In the Commonwealth Trawl Sector however, operators may record non-target species to family level. The Department considers that species-level data will improve the implementation of appropriate management actions in a timely manner.</p> <p>There are no reports of interactions with threatened ecological communities (TEC). The Giant Kelp Marine Forests of South East Australia TEC (Giant Kelp Forest TEC) is listed as endangered under the EPBC Act, and is known to occur within the area of the fishery. The Giant Kelp Forest TEC is found in temperate coastal waters off Tasmania, Victoria and South Australia at depths of approximately 8 to 30 metres below the surface, and provides shelter and foraging habitat for a wide range of commercially important fish species, including Snapper, leatherjacket and cuttlefishes (TSSC 2012).</p>
<p><b>Assessments</b></p>	
<p><b>2.2.2</b> There is an assessment of the impact of the fishery on endangered, threatened or protected species.</p>	<p><b>Meets</b></p> <p>AFMA use the ERA process to identify high risk species. The ERA process considers impacts to TEPS using the same process identified above for target and non-target species.</p>
<p><b>2.2.3</b> There is an assessment of the impact of the fishery on threatened ecological communities.</p>	<p><b>Not applicable</b></p> <p>The ERA considers impacts to habitats and communities. While the ERA did not specifically identify risks to the Giant Kelp Forest TEC, the likelihood of any significant impacts is considered low. The area in which the Giant Kelp Forest TEC occurs is well known, and the possibility of gear entanglement is expected to provide an economic incentive for vessels to avoid this area.</p>
<p><b>Management responses</b></p>	
<p><b>2.2.4</b> There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.</p>	<p><b>Partially meets</b></p> <p>TEPS issues are addressed through a range of measures including bycatch and discard workplans, mandatory reporting, closures, and ongoing monitoring, and species-specific management strategies. These measures are reviewed regularly. The fishing industry support ecological sustainability through co-management agreements and codes of practice. The Commonwealth Fisheries Marine Mammal Working Group provide scientific and management advice to AFMA regarding marine mammal interactions.</p>

	<p>Prescribed handling practices are either in place or being developed for certain species, including White, Porbeagle and Mako sharks. Live sharks must be released back to the water alive and unharmed, where possible. Identification guides are also in place or being developed for chondrichthyans and seabirds.</p> <p>The fishery's accreditation under Part 13 for interactions with protected species is subject to conditions (see Table 2, Section 4). These conditions require that AFMA ensure appropriate measures are in place for Australian Sea Lion (Condition A), dolphins (Condition B), seals (Condition C), and seabirds (Condition D), and continue to monitor catch and effort for non-target sharks (Condition E). AFMA has indicated that a management strategy for seals will be developed.</p>
<b>2.2.5</b> There are measures in place to avoid impact on threatened ecological communities.	<p><b>Not applicable</b></p> <p>Risk is considered low. See item 2.2.3 above.</p>
<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.	<p><b>Meets</b></p> <p>Given the existing management strategies, and AFMA's commitment to ongoing research and development, the fishery has a medium to high chance of achieving the objectives to conduct the fishery in a manner that minimises the impact of fishing on endangered, threatened or protected species. The management arrangements are likely to achieve the same objective for threatened ecological communities.</p>
<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>	
<b>2.3.1</b> Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fishery's impact on the ecosystem and environment generally.	<p><b>Partially meets</b></p> <p>The ERA for this fishery accounts for the potential impacts of fishing on five components of the marine environment – target, byproduct, bycatch/discards, protected species, and the habitats and communities in which those species occur. The ERM applies to potential impacts of the main fishing gear and methods used in the fishery – otter board trawl in the GABT and CSET Sectors, Danish seine in the CSET Sector, and scalefish automatic longline and shark gillnet in the GHaT Sector. Very little information is available in relation to direct impacts of fishing on the physical environment, including benthic habitats. However, such impacts may be estimated through an understanding of the biological characteristics of target species, substrate geomorphology, and the gear used. Information such as mandatory catch reporting, vessel monitoring programs, electronic monitoring, independent scientific observers, and independent research and stock assessments can be used to better understand the risk of fishing to the marine environment.</p>
<b>Assessment</b>	
<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> <p>1. Impacts on ecological communities</p> <ul style="list-style-type: none"> <li>• Benthic communities</li> <li>• Ecologically related, associated or dependent species</li> <li>• Water column communities</li> </ul> <p>2. Impacts on food chains</p> <ul style="list-style-type: none"> <li>• Structure</li> <li>• Productivity/flows</li> </ul>	<p><b>Meets</b></p> <p>The impacts are managed through a range of measures such as catch and size limits, catch triggers, trip limits, spatial closures, gear restrictions, electronic monitoring, and mandatory reporting. The Fisheries Management Act mandates that fishing is conducted in a manner consistent with the principles of ecological sustainable development. The ERA and ERM process has been implemented to mitigate the effects of fishing on the marine environment in which the fishery operates. The ERA identified two key issues for vessels operating otter board trawls in the fishery. One issue relates to the direct impacts on vulnerable benthic habitats from demersal otter board trawl gear. Midwater otter board trawls are unlikely to have a direct impact on the benthic habitat. The second issue relates to direct impacts on a number of byproduct and bycatch species not currently managed directly through the quota management system. High risk habitats occur on the mid-slope at depths between 700m and 1500m.</p> <p>Danish seine gear is unlikely to have a major impact on the marine environment, the ERM strategy identified three outer shelf benthic habitats as high risk. Automatic longline is not likely to have a major impact on the marine ecosystem, although there is</p>

<p>3. Impacts on the physical environment</p> <ul style="list-style-type: none"> <li>• Physical habitat</li> <li>• Water quality</li> </ul>	<p>potential for the main line to catch on large, erect and fragile epifauna. Vessels in the GABT Sector are primarily demersal and midwater trawls. The ERM strategy identified 21 habitat types as high risk. The impact to these habitat types is considered low.</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 ERM strategy is based on high risk species. A range of management actions are in place to ensure fishing operations do not have a significant impact on the marine environment in which the fishery operates. Risks and mitigation measures are addressed in the risk assessment reports for each fishing method (i.e. otter board trawl in the GABTS and CSETS, Danish seine in the CSETS, and scalefish automatic longline and shark gillnet in the GHaTS). Measures include regular risk assessments, fishery closures, electronic monitoring such as surveillance cameras, and satellite tracking. These measures help to ensure that operators comply with licence or permit conditions.</p> <p>Trawling is restricted below 700m to protect deepwater species such as Orange Roughy and sharks. Larger factory trawl vessels are required to have vessel management plans, and seal excluder devices, and are subject to higher levels of observer coverage.</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 indicated by application of the precautionary approach.</p>	<p><b>Meets</b></p> <p>Performance measures are in place.</p> <p>Bycatch catch limits also apply for Orange Roughy in the Western Deepwater Shark Area to minimise the impact to this species.</p>
<p><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.</p>	<p><b>Meets</b></p> <p>The management arrangements have a good chance of achieving the objective to conduct the fishery in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>

### SECTION 3: ASSESSMENT OF THE COMMONWEALTH SOUTHERN AND EASTERN SCALEFISH AND SHARK 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 13 and Part 13A.

#### Part 12 – Identifying and monitoring biodiversity and making bioregional plans

Section 176 Bioregional Plans	Comment
(5) Minister must have regard to relevant bioregional plans	<p><b>Partially meets</b></p> <p>The area of the fishery encompasses the South-east Marine Region (DoE 2015), the South-west Marine Region (DSEWPaC 2012a), and the Temperate East Marine Region (DSEWPaC 2012b).</p> <p>There is no marine bioregional plan for the south-east marine region. However, the <i>South-east marine region profile</i> describes the major ecosystems and processes in the area. Conservation values of regional priority identified in the region include eight key ecological features (KEFs). The region also provides foraging and nursery habitat for over forty-five EPBC Act-listed species, and a number of protected places including marine reserves, and ecological communities (DoE 2015).</p> <p>The <i>Marine bioregional plan for the temperate east marine region 2012</i> describes 16 conservation values of regional priority, including marine turtles, Grey Nurse Shark, White Shark, and seabirds. The fishery has in place mitigation measures that have proven effective in minimising interactions with these species. Harvesting of living resources and physical disturbance to seafloor, are described as pressures <i>of concern</i> in the temperate east marine region. Specific measures are in place in the fishery that mitigate the impact of these pressures, including a closures, mandatory use of bycatch reduction devices, and trigger limits (DSEWPaC 2012a).</p> <p>The <i>Marine bioregional plan for the south-west marine region 2012</i> identified 23 conservation values of regional priority, including Australian Sea Lions, White Shark, School Shark, seabirds, and eight KEFs. These KEFs support highly diverse marine life, and provide important habitat for a range of commercially important species. Climate change factors (e.g. acidification and water temperature), and impacts caused by marine debris are considered pressures <i>of concern</i> in the region. Extraction of living resources, and bycatch are pressures of potential concern. Extraction of living resources places pressure on Australian Sea Lions and seabirds by reducing the availability of prey species. A number of species such as Orange Roughy, and seabirds are prone to bycatch. The marine bioregional plan indicates that these pressures are either not well understood or expected to increase (DSEWPaC 2012b).</p> <p>The fishery is likely to have an impact on many of the conservation values of regional priority identified in these marine bioregional plans and profiles. Ongoing management measures are required to ensure these impacts are minimised. There is no clear evidence to suggest any systematic change to species diversity or richness is caused by this fishery. Given the management measures in place in the fishery, the conservation values identified in these marine regions are not compromised by this fishery. However, the risks and uncertainties identified in this assessment require ongoing monitoring, assessment, and management to ensure that fishing effort does not have a material impact on the food chain or trophic structure in the area of the fishery.</p>

## Part 13 – Species and communities

Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	Comment
s. 208A (1) (a-e) , s.222A (1) (a-e), s.245 (1) (a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	Yes, there is an accreditable management regime. The Commonwealth Southern and Eastern Scalefish and Shark Fishery will be managed by the Australian Fisheries Management Authority (AFMA) in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> , and <i>Fisheries Management Regulation 1992</i> (Cth) made under the <i>Fisheries Management Act 1991</i> (Cth).
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	Comment
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of <b>listed threatened species</b> (other than conservation dependent species) are not killed or injured as a result of the fishing?	Yes, there are specific measures in place to mitigate the risk to listed threatened species, including a management strategy for Australian sea lion, operational guidelines for seabird bycatch, dolphin mitigation strategy for gillnet fishing, bycatch and discard workplans, and fishery closures. In addition, AFMA has collaborated with the South East Trawl Fishing Industry Association (SETFIA) to implement a formal learning pathway for fishing operators and crews regarding TEPS interactions. The management regime for the fishery was accredited under Part 13 of the EPBC Act in February 2016. AFMA advised the Department of minor amendments to the management regime as they occur, and through annual reports. The Department agreed that the amendments do not significantly affect the sustainability of the fishery and that a new Part 13 accreditation is not required at this time. The Department considers the conditions attached to the Part 13 accreditation are appropriate to help ensure the ongoing protection for threatened species listed under the EPBC Act (see Table 2, Section 4). The management arrangements continue to require that operators must take all reasonable steps to prevent the killing or injuring of members of listed threatened species.
(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species?	Yes, there were interactions reported since the most recent assessment in February 2016. The Department is informed of interactions with listed threatened species through quarterly protected species reports. These reports indicate that the fishery continues to have frequent interactions with listed threatened species, particularly Bottlenose and Common Dolphins, Australian Sea Lions, and a variety of seabirds, including albatrosses and petrels. Although interactions do occur, given the management arrangements in place in the fishery, including the mitigation measures (see Table 1), the Department considers the current operation of the fishery is not likely to adversely affect the survival or recovery in nature of any listed threatened species.



Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	Comment
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing?	<p>Yes, there are specific measures in place to mitigate the risk to listed migratory species, including dolphin mitigation strategy for gillnet fishing, bycatch and discard workplans, and fishery closures to mitigate impacts on key shark prey species such as sea lions.</p> <p>The management regime for the fishery was accredited under Part 13 of the EPBC Act in February 2016. AFMA has advised the Department of minor amendments to the fishery's management regime as they occur, and through annual reports. The Department agreed that the amendments do not significantly affect the sustainability of the fishery and that a new Part 13 accreditation is not required at this time. The Department considers the conditions attached to the Part 13 accreditation are appropriate to help ensure the ongoing protection for species listed as migratory under the EPBC Act (see Table 2, Section 4).</p> <p>The management arrangements continue to require that operators must take all reasonable steps to prevent the killing or injuring of members of listed migratory species or a population of that species.</p>
(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?	<p>Yes, there were interactions reported since the most recent assessment in February 2016. The Department is informed of interactions with listed migratory species through quarterly protected species reports. These reports indicate frequent interactions with non-target shark species and seabirds.</p> <p>Although interactions do occur, given the management arrangements in place in the fishery, including the mitigation measures (see Table 1), the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a listed migratory species or a population of that species.</p>
Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes	Comment
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing?	<p>Yes, there are measures in place to mitigate the risk to cetaceans, including fishery closures, a strategy to reduce dolphin bycatch in gillnets, and bycatch and discard workplans.</p> <p>The management regime for the fishery was accredited under Part 13 of the EPBC Act in February 2016. AFMA advised the Department of minor amendments to the management regime for the fishery as they occur, and through annual reports. The Department agreed that the amendments do not significantly affect the sustainability of the fishery and that a new Part 13 accreditation is not required at this time. The Department considers the conditions attached to the Part 13 accreditation are appropriate to help ensure the ongoing protection for cetaceans (see Table 2, Section 4).</p> <p>Therefore, the Department considers the existing management arrangements require that operators take all reasonable steps to prevent the killing or injuring of cetaceans and that the capture of any cetaceans would be incidental to and not the purpose of the operation of the fishery.</p>



<p>(g) And, is the fishery likely to adversely affect the conservation status of a species of cetacean or a population of that species?</p>	<p>Yes, there were interactions reported since the most recent assessment in February 2016. The Department is informed of interactions with cetaceans through quarterly protected species reports. These reports indicate frequent interactions with Bottlenose and Common Dolphins, particularly within the Gillnet, Hook and Trap Sector of the fishery. AFMA has implemented a revised strategy to reduce dolphin bycatch across the fishery. In 2017, AFMA implemented the <i>Gillnet dolphin mitigation strategy: minimising dolphin interactions with gillnets in the SESSF</i> (AFMA 2017), which places the responsibility for reducing bycatch on operators to develop suitable mitigation measures for individual vessels. Additional actions are described in bycatch and discard workplans for each sector of the fishery.</p> <p>Although there are obvious risks to cetaceans, the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species in the short term.</p>
<p><b>Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes</b></p>	<p><b>Comment</b></p>
<p>(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?</p>	<p>Yes, there are specific measures in place to mitigate the risk to listed marine species, including mandatory Seabird Management Plans on all vessels using auto-longline and trawl gear, bycatch reduction devices, and actions articulated in vessel management plans and bycatch and discard workplans for each sector of the fishery.</p> <p>The fishery's management regime was accredited under Part 13 of the EPBC Act in February 2016. AFMA has advised the Department of minor amendments to the management regime for the fishery as they occur, and through annual reports. The Department agreed that the amendments do not significantly affect the sustainability of the fishery and that a new Part 13 accreditation is not required at this time. The Department considers the conditions attached to the Part 13 accreditation are appropriate to help ensure the ongoing protection for species listed as marine under the EPBC Act (see Table 2, Section 4).</p> <p>Therefore, the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a listed marine species.</p>
<p>(g) And, is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?</p>	<p>Yes, there were interactions reported since the most recent assessment in February 2016. The Department is informed of interactions with listed marine species through quarterly protected species reports. These reports indicate frequent interactions with pinnipeds and seabirds.</p> <p>Mitigation measures include bycatch and discard workplans for each sector, and revised strategies to reduce seabird bycatch for vessels using longline and trawl gear and dolphin bycatch in gillnets.</p> <p>Although there are obvious risks to listed marine species, the Department considers that the current operation of the fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species in the short term.</p>

Section 303AA Conditions relating to accreditation of plans, regimes and policies	Comment
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	The Department considers that the accreditation of the Southern and Eastern Scalefish and Shark Fishery's management regime remains valid under sections 208A, 222A, 245 and 265.
<p>(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p> <p>In such a case, the instrument of accreditation is to specify the period, circumstances or condition.</p>	<p>To satisfy the requirements of sections 208A, 222A, 245, and 265, the Department recommends the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> be accredited under Part 13 subject to conditions that requires AFMA to:</p> <p>Condition A:</p> <ul style="list-style-type: none"> <li>maintain management measures clearly directed toward limiting the impact of fishing activity on Australian Sea Lions to levels which will assist in enabling the recovery of the species, including all subpopulations, and</li> <li>monitor and review the adequacy of its Australian Sea Lion management measures, in consultation with marine mammal experts.</li> </ul> <p>Condition B:</p> <ul style="list-style-type: none"> <li>collect and report on dolphin interactions, where possible to species level, and continue to refine management measures to minimise the bycatch of dolphins in gillnets. This should include ongoing monitoring and review of these measures, in consultation with marine mammal experts.</li> </ul> <p>Condition C:</p> <ul style="list-style-type: none"> <li>work with industry and relevant experts to develop and implement management measures to minimise mortality of seals in the Commonwealth Trawl Sector of the fishery.</li> </ul> <p>Condition D:</p> <ul style="list-style-type: none"> <li>ensure efficient and effective seabird management plans remain in place for the Commonwealth Trawl Sector and Gillnet Hook and Trap sector automatic longline vessels.</li> <li>ensure adequate monitoring is in place to ensure compliance with seabird management plans, and</li> <li>continue to implement measures such as bycatch devices and/or offal management to address the risk of interactions with seabirds in the Commonwealth Trawl Sector and for Gillnet Hook and Trap sector automatic longline vessels.</li> </ul> <p>Condition E:</p> <ul style="list-style-type: none"> <li>monitor catch and effort data and implement programs to improve the accuracy of identification and recording of all non-target shark species.</li> </ul>
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	Not applicable.

## Part 13A – International movement of wildlife specimens

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <p>(a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;</p> <p>(b) to protect wildlife that may be adversely affected by trade;</p> <p>(c) to promote the conservation of biodiversity in Australia and other countries;</p> <p>(d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;</p> <p>(e) to promote the humane treatment of wildlife;</p> <p>(f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and</p> <p>(h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.</p>	<p>The management arrangements for the fishery have been assessed as consistent with the general guidance provided in the objects of Part 13A as follows:</p> <ul style="list-style-type: none"> <li>to ensure that Australia complies with its obligations under the 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 (see Table 1)</li> <li>the operation of the fishery is unlikely to be unsustainable and threaten biodiversity within the next three years, and</li> <li>the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.</li> </ul>
Section 303 CG Minister may issue permits (CITES species)	Comment
<p>(3) The Minister must not issue a permit unless the Minister is satisfied that:</p> <p>(a) the action or actions specified in the permit will not be detrimental to, or contribute to trade which is detrimental to:</p> <p>(i) the survival of any taxon to which the specimen belongs; or</p>	<p>Given the fishery's management arrangements in place to monitor and control the level of harvest of CITES species and noting the minimal level of CITES species being exported from the fishery, the Department considers that the fishery will not be detrimental to the survival of any taxon to which the CITES specimen belongs in the short to medium term. Condition 3 on the WTO declaration for the fishery includes annual reporting requirements (see Table 1, Section 4). Condition E on the Part 13 accreditation requires that AFMA monitor catch and effort for non-target sharks, and implement appropriate measures to mitigate the effect of fishing on these species (see Table 2, Section 4). These conditions will allow the Department to monitor the status of CITES specimens harvested in the fishery.</p>
<p>(ii) the recovery in nature of any taxon to which the specimen belongs; or</p>	<p>The CITES species harvested from the fishery are not considered to be overfished in Australian waters, as concluded by the non-detriment finding (DoEE 2014). Management arrangements are in place to help ensure CITES species are sustainably fished. Should stocks fall below defined reference points, the fishery is conducted such that there is a high degree of probability the stock would recover to ecologically viable stock levels within nominated timeframes.</p> <p>Management arrangements in place to control harvest of CITES species include limited entry, gear restrictions, and spatial closures. Mitigation measures include specific trigger limits for Smooth Hammerhead in the shark gillnet sub-sector of the Gillnet, Hook and Trap Sector.</p> <p>Two additional CITES-listed shark species (Porbeagle and Oceanic Whitetip) are occasionally caught as bycatch. These species are not eligible for consideration for export permits.</p>

<p>(iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and</p>	<p>Recognising the management arrangements including restrictions and mitigation measures in the fishery, the potential for the fishery to impact unacceptably and unsustainably on any relevant ecosystem generally is considered quite low. The Department is satisfied that the fishery is conducted in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>
<p><b>Section 303DC Minister may amend list (non CITES species)</b></p>	<p><b>Comment</b></p>
<p>(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by:</p> <p>(a) doing any of the following:</p> <p>(i) including items in the list;</p> <p>(ii) deleting items from the list;</p> <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; or</p> <p>(b) correcting an inaccuracy or updating the name of a species.</p>	<p>The Department recommends that specimens that are or are derived from fish or invertebrates harvested in the Southern and Eastern Scalefish and Shark Fishery, as defined in the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i>, in force under the <i>Fisheries Management Act 1991</i> (Cth) and <i>Fisheries Management Regulations 1992</i> (Cth), but not including</p> <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> <li>specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list)</li> </ul> <p>be included in the list of exempt native specimens while the Southern and Eastern Scalefish and Shark Fishery is subject to a declaration as an approved wildlife trade operation.</p>
<p>(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes of Part 10, Division 1 or 2 assessment.</p>	<p>The fishery was assessed under Part 10 of the EPBC Act in May 2007. That assessment concluded that actions approved or taken in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i>, as amended by the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan Amendment 2006</i> (No. 2), would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area. Consequently, the management plan was accredited under section 33 of the EPBC Act.</p> <p>AFMA has informed the Department of minor amendments to the fishery's management arrangements since that accreditation, including:</p> <ul style="list-style-type: none"> <li>mandatory requirement for trawl vessels to use approved seabird mitigation devices,</li> <li>decision rules that trigger fishing zone closures to reduce protected species bycatch implemented,</li> <li>ecological risk management framework developed and implemented,</li> <li>decision rules to protect Boarfish and Orange Roughy stocks implemented,</li> <li>implement/revise management strategies for protected species,</li> <li>implement dogfish management strategy, and a monitoring and assessment workplan to assess the effectiveness of the strategy,</li> <li>implement fishery bycatch strategy, and revise bycatch and discarding workplans for the main fishing methods,</li> <li>stock rebuilding strategies implemented for overfished species stocks,</li> </ul>

	<ul style="list-style-type: none"> <li>negotiate industry co-management arrangements,</li> <li>introduce electronic monitoring, and</li> <li>mandatory catch disposal via a fish receiver.</li> </ul>
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	The Department considers that it has taken into account all matters relevant to making an informed decision to amend the list of exempt native specimens to include product taken in this fishery.
(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 AFMA was made available on the Department's website from 11 October 2018 to 13 November 2018. Two comments were received.
(5) A copy of an instrument made under section 303DC is to be made available for inspection on the internet.	Yes, the instrument made under section 303DC(1)(a) for the fishery will be registered on the Federal Register of Legislation, and a link to the instrument made available through the Department's website. Under subsection 56(1) of the <i>Legislation Act 2003</i> (CTH), registration on the FRL meets the requirements for gazettal.
<b>Section 303FN Approved wildlife trade operation</b>	<b>Comment</b>
(2) The Minister may, by instrument published in the <i>Gazette</i> , declare that a specified wildlife trade operation is an <i>approved wildlife trade operation</i> for the purposes of this section.	Yes, the instrument to declare the fishery as an approved wildlife trade operation under section 303FN will be registered on the Federal Register of Legislation and a link to the instrument made available through the Department's website. Under subsection 56(1) of the <i>Legislation Act 2003</i> (CTH), registration on the FRL meets the requirements for gazettal.
(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 Objects of 13A – see above assessment against the Guidelines.
(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 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 three years, given the management measures currently in place (see Section 1).
(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	The EPBC Regulations do not specify Crustacea or fish as a class of animal in relation to the welfare of live specimens.

(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 <b>regard</b> to: (a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and	The fishery will not have a significant impact on any relevant ecosystem within the next <b>three years</b> , given the management measures currently in place, which include the arrangements described above at s303FN 3(b).
(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).	The management arrangements that will be employed for the fishery as outlined in the assessment against the Guidelines (above), are likely to be effective.
(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have <b>regard</b> 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.	The fishery will be managed under the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> , the <i>Fisheries Management Act 1991</i> (Cth) and <i>Fisheries Management Regulations 1992</i> (Cth). The legislation under which the fishery is managed applies throughout Commonwealth waters, and in state or Northern Territory waters in accordance with the relevant offshore constitutional settlement agreement. 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 Southern and Eastern Scalefish and Shark Fishery is a commercial fishery.
(10A) In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.	The impacts of actions under the operations of the fishery were assessed under Part 10 of the EPBC Act in May 2007. That assessment concluded that actions approved or taken in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> , as amended, would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area. Consequently, the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> , as amended by the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan Amendment 2006</i> (No. 2), was accredited under section 33 of the EPBC Act. AFMA has informed the Department of minor amendments to the fishery's management arrangements since that accreditation, including those identified at section 303DC(1A) above.
(10B) Subsection (10A) does not limit the matters that may be taken into account in deciding whether to declare that a fishery is an approved wildlife trade operation for the purposes of this section.	

Section 303FR Public consultation	Comment
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <p>(a) setting out the proposal to make the declaration; and</p> <p>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</p> <p>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</p> <p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to declare the fishery an approved wildlife trade operation and included the application from AFMA, was released for public comment on 11 October 2018 to 13 November 2018, a total of 23 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>Two public comments were received on the submission and annual report. The public comments highlighted a number of issues requiring management attention, including that AFMA:</p> <ul style="list-style-type: none"> <li>• Revise and update bycatch and discard work plans and strategies for all sectors of the fishery to address the impact of fishing on high risk and protected species.</li> <li>• Continue to manage marine debris, compliance, data reporting, and protected species interactions by further developing cross-jurisdictional management arrangements, and using an appropriate level of independent human observers.</li> <li>• Continue to monitor the effects of fishing on species and the marine environment, review risk management strategies, and work towards implementing appropriate management measures in consultation with key stakeholders.</li> <li>• Work towards finalising the harvest strategy for the fishery, and implement appropriate measures to ensure that all species are fished sustainably.</li> <li>• Facilitate ongoing research, particularly in areas identified as high risk for impacts on protected species and the marine environment in which the fishery operates.</li> </ul> <p>The Department's assessment has considered the public comments received on the submission and addressed the issues through conditions under Part 13 and Part 13A (Section 4).</p>
Section 303FT Additional provisions relating to declarations	Comments
<p>(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.</p>	<p>A declaration for the fishery will be made under section 303FN.</p>
<p>(4) The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p>	<p>The standard conditions applied to wildlife trade operations include:</p> <ul style="list-style-type: none"> <li>• operation in accordance with the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 made under the Fisheries Management Act 1991 (Cth),</li> <li>• notifying the Department of any changes to the management regime, and</li> <li>• annual reporting in accordance with the requirements of the Australian Government's Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition.</li> </ul>



In such a case, the instrument of declaration is to specify the period, circumstances or condition.	The WTO instrument for the fishery specifies the standard and any additional conditions applied.
(8) A condition may relate to reporting or monitoring.	One of the standard conditions (Condition 3) 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.	Not applicable.
(11) A copy of an instrument under section 303FN, or this section is to be made available for inspection on the internet.	The instrument for the fishery made under sections 303FN and the conditions under section 303FT will be registered as a notifiable instrument on the Federal Register of Legislation and a link to the instrument made available through the Department's website. Under subsection 56(1) of the <i>Legislation Act 2003</i> (CTH), registration on the FRL meets the requirements for gazettal.

## Part 16 – Precautionary principle and other considerations in making decisions

Section 391 Minister must consider precautionary principle in making decisions	Comment
<p>(1) Minister must take account of the precautionary principle in making a decision, to the extent that the decision is consistent with other provisions under this Act.</p> <p>(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.</p>	<p>Having regard to:</p> <ul style="list-style-type: none"> <li>the management measures in place in the fishery, including the annual monitoring of stocks against prescribed performance measures, management strategies for overfished stocks, and the mitigation measures already in place to minimise risks to protected species (summarised in Table 1),</li> <li>the requirement under the <i>Fisheries Management Act 1991</i> (Cth) for all Commonwealth fisheries to be managed consistent with the precautionary principle, and</li> <li>the proposed conditions that would form part of the declaration as an approved wildlife trade operation,</li> </ul> <p>the Department considers that the precautionary principle has been accounted for in the preparation of advice in relation to a decision under section 303DC and section 303FN.</p>



## SECTION 4: COMMONWEALTH SOUTHERN AND EASTERN SCALEFISH AND SHARK FISHERY – SUMMARY OF ISSUES REQUIRING CONDITIONS UNDER PART 13 (PROTECTED SPECIES) AND PART 13A (WILDLIFE TRADE) OF THE EPBC ACT, FEBRUARY 2019

**Table 1: Conditions under Part 13A – Wildlife trade**

Issue	Part 13A Conditions
<p><b><u>General Management</u></b></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 (the Department) 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>The Australian Fisheries Management Authority (AFMA) has made a number of minor amendments to the <i>Southern and Eastern Scalefish and Shark Fishery (SESSF) Management Plan 2003</i>. AFMA has informed the Department of management changes as they occurred.</p>	<p><b>Condition 1:</b></p> <p>Operation of the Commonwealth Southern and Eastern Scalefish and Shark Fishery will be carried out in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> in force under the <i>Fisheries Management Act 1991</i> (Cth).</p> <p><b>Condition 2:</b></p> <p>The Australian Fisheries Management Authority to inform the Department of the Environment and Energy of any intended material changes to the Commonwealth Southern and Eastern Scalefish and Shark Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>
<p><b><u>Annual Reporting</u></b></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 <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> 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 <a href="http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries">http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries</a>.</p> <p>AFMA provide annual reports to the Department. The annual reports summarise fishing operations, including catches for quota managed species, and changes to the management arrangements.</p>	<p><b>Condition 3:</b></p> <p>The Australian Fisheries Management Authority to produce and present reports to the Department annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>
<p><b><u>Conservation dependent and overfished species</u></b></p> <p>The fishery harvests a number of species listed as conservation dependent under the EPBC Act as either byproduct or bycatch. These species are Blue Warehou, Eastern Gemfish, gulper sharks (Harrison's Dogfish, Southern Dogfish), Orange Roughy, and School Shark. A number of key target and byproduct species stocks are also considered overfished or approaching the limit reference point of 20 per cent of the unfished biomass.</p>	<p><b>Condition 4:</b></p> <p>AFMA to:</p> <p>a) ensure that management measures are in place to meet the objectives of the rebuilding strategies and management strategies for species listed as conservation dependent under the EPBC Act, and</p>

Issue	Part 13A Conditions
<p>The Department is aware of strategies put in place by AFMA that aim to rebuild overfished stocks in the fishery. The primary objective for rebuilding strategies is to restore stocks to above the limit reference point within biologically reasonable timeframes. Once achieved, the objective will be to continue rebuilding stocks towards the target reference point. Reference points and timeframes are described in each species specific strategy. Rebuilding strategies are reviewed at five year intervals.</p> <p>AFMA has developed and implemented a management strategy for gulper sharks (Harrison's Dogfish and Southern Dogfish) that also aims to recover stocks and mitigate impacts to Endeavour Dogfish and Greeneye Spurdog.</p> <p>Stock rebuilding strategies are in place for Blue Warehou, Eastern Gemfish, Orange Roughy, Redfish, and School Shark that contain revised rebuilding timeframes and other relevant management measures. The Redfish rebuilding strategy contains measures to meet its objectives within appropriate biological timeframes (AFMA 2016).</p> <p>In addition, stock assessments indicated that Pink Ling stocks in the eastern zone of the fishery was approaching the limit reference point. While Pink Ling stocks (eastern and western) are considered '<i>not overfished</i>' and '<i>not subject to overfishing</i>' (Patterson et al. 2018), AFMA has implemented specific management measures to ensure that the eastern stock continues to remain sustainable.</p> <p>AFMA anticipate a review of the above strategies to ensure they continue to align with the revised harvest strategy policy guidelines for Commonwealth fisheries.</p> <p>Given the importance of ensuring stocks are sustainably fished, the Department considers it important appropriate management measures are in place, and that they are continually reviewed to ensure the rebuilding objectives are met (see <b>Condition 4</b>). An annual evaluation of the effectiveness of the rebuilding strategies, management strategies and the status of the conservation dependent stocks should be provided to the Department (see <b>Condition 3</b>).</p>	<p>b) continue to evaluate and report to the Department on the effectiveness of rebuilding strategies and management strategies for conservation dependent listed species.</p>
<p><b><u>Ecological Risk Assessments/Ecological Risk Management</u></b></p> <p>AFMA has informed the Department that the ecological risk assessment and management framework for all Commonwealth fisheries has been reviewed. This framework contains improved data collection and assessment techniques and describes a process for assessing and progressively addressing the impacts that fisheries activities have on the marine ecosystem, including target, byproduct, and bycatch species, protected species, habitats, and ecological communities. The framework also requires that the development of fishery management strategies incorporates all management arrangements in place in the fishery (such as bycatch and discard workplans).</p> <p>AFMA also advised the Department that a review for the SESSF ecological risk management (ERM) strategy was scheduled towards the end of the 2017–2018 fishing season. The SESSF ERM strategy details the management arrangements in place to</p>	<p><b>Condition 5:</b> AFMA to:</p> <p>a) continue regular reviews of ecological risk assessments in the fishery, ensuring that the cumulative impact of all Commonwealth commercial fisheries in the area is taken into account, and</p> <p>b) implement management actions to address and mitigate risks and impacts for species that are identified as high risk, including data collection for species that are assessed as high risk because of missing information.</p>

Issue	Part 13A Conditions
<p>address and mitigate risks to species assessed as high risk. The revised SESSF ERM will also support the objectives of the Commonwealth fisheries bycatch policy (DaWR 2018). Cumulative impacts are assessed across sectors within the fishery using the Sustainability Assessment for Fishing Effects (SAFE), which was developed by AFMA in collaboration with CSIRO.</p> <p>The Department considers that it is important that AFMA continue to review the ecological risk management framework to ensure the early detection and management of risks associated with fishing activities in each sector of the SESSF. It is particularly important that reviews consider the cumulative impacts of all commercial fishing activity undertaken in the same spatial area. Recreational fishing should also be considered where available data allows. Final reports on ecological risk assessment outcomes and management response documents should be made available publicly or provided directly to the Department.</p>	

**Table 2: Conditions under Part 13 – Protected species**

Issue	Part 13 Conditions
<p><b><u>Australian sea lions</u></b></p> <p>Australian Sea Lion are listed as vulnerable under the EPBC Act and are considered highly susceptible to fatal interactions with gillnets, based on research conducted in the fishery from 2007 to 2010. The area of the Shark Gillnet and Shark Hook sub-sectors of the SESSF overlap extensively with the foraging range of Australian Sea Lion populations offshore of South Australia.</p> <p>The <i>Australian Sea Lion Management Strategy: Southern and Eastern Scalefish and Shark Fishery</i> (implemented 2010, updated 2015) describes a range of management measures that aim to mitigate the impact of gillnet fishing on Australian Sea Lions. Management measures in the strategy include increasing the level of monitoring, increasing the size of colony closures, reducing bycatch triggers to a more precautionary level, and revised boundaries to better reflect colony location and population (AFMA 2015). Additional management measures include:</p> <ul style="list-style-type: none"> <li>• area closures of 18,500 km<sup>2</sup> to gillnet fishing around Australian Sea Lion colonies in South Australia,</li> <li>• independent monitoring (observers or cameras) to cover 100 per cent% of gillnet fishing offshore of South Australia,</li> <li>• mortality limits that act to trigger additional closures if unacceptable levels of interactions occur,</li> <li>• provisions to allow some gillnet fishers to switch to using hooks off South Australia, including in areas now closed to gillnets</li> </ul>	<p><b>Condition A</b></p> <p>AFMA to continue to:</p> <ol style="list-style-type: none"> <li>a) maintain management measures clearly directed toward limiting the impact of fishing activity on Australian Sea Lions to levels which will assist in enabling the recovery of the species, including all subpopulations, and</li> <li>b) monitor and review the adequacy of its Australian Sea Lion management measures, in consultation with marine mammal experts.</li> </ol>

Issue	Part 13 Conditions
<p>The strategy also describes an Australian Sea Lion Management Zone within the area of the fishery (divided into seven subzones for management purposes). A bycatch trigger limit for Australian Sea Lion is in place for each subzone, with a total bycatch trigger limit across the whole fishery set at 15 animals. When a subzone reaches its prescribed trigger limit, the zone is closed to gillnet fishing for a period of 18 months, equivalent to a full breeding cycle of Australian Sea Lion. The Department is advised when the trigger limit is reached and a subzone is closed. The trigger limit has been used twice since the strategy was implemented in 2010. Australian Sea Lion Management Zone C was closed from January 2016 to July 2017, and in September 2017, Australian Sea Lion Management Zone D was closed until 9 March 2019.</p> <p>The Department considers it important that these management measures remain in place. Ongoing consultation with marine mammal experts is also important to ensure the currency of information and the adequacy of the management actions to protect Australian Sea Lions from the impact of fishing.</p>	
<p><b><u>Dolphins</u></b></p> <p>A number of dolphin species occur within the area of the fishery, including Common and Bottlenose Dolphins.</p> <p>Operators in the gillnet sector of the fishery continue to report high numbers of dolphin entanglements.</p> <p>To address this issue, AFMA introduced the Gillnet Dolphin Mitigation Strategy in May 2017 as a way of applying specific performance criteria and a system of pre agreed responses to managing dolphin interactions in the gillnet sector.</p> <p>The strategy has an overarching objective of minimising dolphin interactions by adopting individual accountability approaches, creating incentives for fishers to innovate and adopt best practices to minimise dolphin interactions. Interactions.</p> <p>The strategy is supported by high levels of monitoring through AFMA's electronic monitoring program.</p> <p>The Department considers the dolphin strategy to be an important step in the management and understanding of dolphin bycatch within the fishery.</p>	<p><b>Condition B</b></p> <p>AFMA to collect and report on dolphin interactions, where possible to species level, and continue to refine management measures to minimise the bycatch of dolphins in gillnets. This should include ongoing monitoring and review of these measures, in consultation with marine mammal experts.</p>
<p><b><u>Seals</u></b></p> <p>Interactions with seals (Australian Fur Seal and Long-nosed Fur Seal) in the Commonwealth Trawl Sector has been an ongoing issue in the SESSF. There have been between 130–250 interactions annually since 2010, with a general trend of increase. Interactions generally occur when seals enter trawl nets to obtain food. A high proportion of interactions end in mortality, when the seal fails to resurface in time before becoming exhausted and subsequently drowns.</p> <p>The Department understands that the increase in reported interactions may be attributed to increases in the abundance of fur seals in Australian waters, including expansions of</p>	<p><b>Condition C:</b></p> <p>AFMA to continue to work with industry and relevant experts to develop and implement management measures to minimise mortality of seals in the Commonwealth Trawl Sector of the fishery.</p>

Issue	Part 13 Conditions
<p>range as fur seals recolonise new areas where populations were historically extirpated by commercial sealing.</p> <p>Since the previous EPBC Act assessment of the fishery, AFMA and the fishing industry have trialled alternative fishing gear configurations (shortened codends) with the expectation that this would reduce the levels of seal interactions. However, further trials concluded that shortened codends were unsuccessful in reducing interactions. AFMA has advised that it continues to work with the Commonwealth fisheries marine mammal working group to investigate alternative methods of reducing seal bycatch in the fishery. AFMA has also advised that SEFTIA is also considering options to mitigate seal interactions with trawling gear.</p> <p>While acknowledging the significant efforts made by AFMA and the fishing industry to reduce mortalities of fur seals caused by fishing activity, it remains important that research continues to develop and implement more effective mitigation measures to avoid bycatch of these protected species.</p>	
<p><b>Seabirds</b></p> <p>Seabirds can be attracted to fishing vessels at sea by discarded offal and baits. Seabirds have been known to ingest baited hooks during the setting or hauling of longlines and can also interact with trawl vessels where they collide with, and/or become entangled by, parts of the trawl gear. Mortalities of seabirds from interactions with commercial fishing activities have caused significant declines in a number of species worldwide.</p> <p>AFMA has identified vessels using longline and trawl gear as the most likely to interact with seabirds. However, the impacts of longline fishing activity on seabirds have been substantially reduced through the implementation of measures articulated in the 'Threat abatement plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (DoEE 2018).</p> <p>SEFTIA has facilitated trials of seabird bycatch mitigations devices, including "sprayers" and "bird bafflers", using targeted independent observers on trawl vessels. These trials have shown significant reductions in the numbers of interactions recorded (up to 90 %). The Department considers it important that AFMA continue to develop and implement appropriate mitigation measures, and to monitor and act on compliance issues in the trawl fishery regarding seabird interactions.</p> <p>Measures to mitigate seabird interactions are described in mandatory Seabird Management Plans (SMPs) for all trawl vessels in the Commonwealth Trawl Sector and all automatic longline vessels in the Gillnet Hook and Trap sector of the fishery. SMPs are customised for each vessel and can include a range of measures to reduce the risk of interactions with seabirds, including bycatch mitigation devices and requirements to minimise, and avoid where possible, the discharge of biological material, including offal, while fishing gear is in the water. The Department has been advised that operators' concession conditions have been amended to include the mandatory use of AFMA-approved SMP's on all trawl vessels prior to fishing.</p>	<p><b>Condition D:</b> AFMA to:</p> <ul style="list-style-type: none"> <li>a) ensure efficient and effective seabird management plans remain in place for the Commonwealth Trawl Sector and Gillnet Hook and Trap sector automatic longline vessels.</li> <li>b) ensure adequate monitoring is in place to ensure compliance with seabird management plans, and</li> <li>c) continue to implement measures such as bycatch devices and/or offal management to address the risk of interactions with seabirds in the Commonwealth Trawl Sector and for Gillnet Hook and Trap sector automatic longline vessels.</li> </ul>

Issue	Part 13 Conditions
<p>Condition D requires that AFMA continue to ensure that effective SMPs remain in place, and that an appropriate level of monitoring occurs to ensure compliance with agreed mitigation measures so that seabird mortality throughout the fishery is avoided or minimised. The Department recommends that offal management measures that have been demonstrated as highly effective in reducing seabird mortalities in other fisheries be implemented in this fishery where possible.</p>	
<p><b><u>Non-target sharks</u></b></p> <p>Sharks worldwide are generally considered more vulnerable to the effects of fishing than bony fish, due to their slow growth, late maturation and lower reproductive output. Consequently, a number of sharks (and rays) are included on international threatened species lists, such as the Bonn Convention on Migratory Species and the Convention on International Trade in Endangered Species of Fauna and Flora.</p> <p>In addition to national legislation and international treaties, Australia has developed a number of policies to mitigate the impacts to shark species. The second <i>National plan of action for the conservation and management of sharks 2012</i> (Shark plan 2) is Australia's overarching policy for guiding and coordinating engagement in shark conservation and management: <a href="http://www.agriculture.gov.au/fisheries/environment/sharks">http://www.agriculture.gov.au/fisheries/environment/sharks</a> .</p> <p>It is important that AFMA continue to develop measures in accordance with Shark Plan 2 that improve the accurate identification of non-target shark species. Accurate catch records for non-target sharks will assist in understanding the extent of the fishery's impact, and inform the implementation of appropriate management measures.</p> <p>Australia has a high diversity of shark species, many of which are targeted by the SESSF. Many more non-target shark species are caught incidentally, including Draughtboard Shark (<i>Cephaloscyllium laticeps</i>), Port Jackson Shark (<i>Heterodontus portusjacksoni</i>) and Spikey Dogfish (<i>Squalus megalops</i>).</p> <p>While some non-target shark species are retained, many animals with low commercial value are discarded at sea. Non-target species are not subject to formal management arrangements such as annual quotas or restrictions. In addition, it is rare that management practices will include monitoring and research initiatives for non-target species due to their low commercial value. Consequently, there is generally a lack of information regarding the distribution, status, and productivity of these species' stocks. The fishery is also known to interact with a number of shark species listed under the EPBC Act, including Grey Nurse (<i>Carcharias taurus</i>), White (<i>Carcharodon carcharias</i>), Shortfin Mako (<i>Isurus oxyrinchus</i>), and Porbeagle (<i>Lamna nasus</i>). In addition to being listed as "Migratory" under the EPBC Act, many shark species including White Shark are listed as "Threatened". Species that are listed as "Threatened" under the EPBC Act may have recovery plans developed in order to guide research and conservation actions aimed at recovery. For instance, the Recovery plan for the White Shark (<i>Carcharodon carcharias</i>) 2013 can be accessed at: <a href="http://www.environment.gov.au/resource/recovery-plan-white-shark-carcharodon-carcharias">http://www.environment.gov.au/resource/recovery-plan-white-shark-carcharodon-carcharias</a>.</p>	<p><b>Condition E:</b></p> <p>AFMA to monitor catch and effort data and implement programs to improve the accuracy of identification and recording of all non-target shark species.</p>

Issue	Part 13 Conditions
<p>The Department considers it important that AFMA continue to collect data in relation to the landing and discarding of all non-target shark species. This information should be collected at the species level, where possible, to allow the development of appropriate management actions.</p>	

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