



Australian Government

**Department of Agriculture,
Water and the Environment**

Assessment of the Commonwealth Southern and Eastern Scalefish and Shark Fishery

February 2022

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Disclaimer

This document is an assessment carried out by the Department of Agriculture, Water and the Environment of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment on the fishery in relation to decisions under 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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ASSESSMENT SUMMARY

In July 2021, the Australian Fisheries Management Authority (AFMA) submitted an application for the Commonwealth Southern and Eastern Scalefish and Shark Fishery (SESSF) to the Department of Agriculture, Water and the Environment for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as an approved wildlife trade operation (WTO), against the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. A public comment period was open from 10 September 2021 to 15 October 2021.

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 seaward to the limit of Australia's exclusive economic zone. The fishery comprises 4 main sectors – the Commonwealth Trawl (CTS), East Coast Deepwater Trawl (ECDT), Great Australian Bight Trawl (GABT) and the Gillnet, Hook and Trap (GHAT) sectors. The GHAT sector has a further 4 sub-sectors for management purposes. A range of fishing gear and methods are used in each sector, including 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.

The department has determined that product taken in the fishery should be included in the list of exempt native specimens under Part 13A of the EPBC Act until 12 February 2025, subject to conditions listed at Section 2 of this report.

Fishery management arrangements

AFMA manages the fishery in accordance with the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 made under the *Fisheries Management Act 1991* and regulates the fishery in accordance with the Fisheries Management Regulations 2019. Fishing operations are also managed through co-management agreements in place with industry bodies, and Offshore Constitutional Settlement arrangements with the Queensland, New South Wales, Victorian, Tasmanian, South Australian and Western Australian governments.

Target stocks

The fishery harvests a wide range of species but primarily targets 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.

Conservation Dependant Species

A number of species that occur in the fishery are listed as conservation dependent under the EPBC Act and are considered overfished (i.e. have a current biomass below their prescribed limit reference point). 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.

These conservation dependant species are not allowed to be targeted in the fishery and they have a minimal bycatch Total Allowable Catch set annually to cover any incidental bycatch by operators targeting other species. Because there is minimal catch of these species there is very little or no biological and catch per unit effort data collected in the fishery to inform traditional stock assessment methods.

A lack of scientific data makes it difficult to determine whether these stocks are recovering. There is minimal recent data collected or available to determine any changes in the biomass levels of these stocks or to demonstrate whether the rebuilding strategies are working. There is also some uncertainty in relation to the potential productivity of the overfished stocks, given their levels of depletion and apparent inability to recover.

The department considers that more work needs to be done to determine the status and promote the recovery of overfished stocks including conservation dependant species. Conditions have been included in the WTO Declaration to address the issue on the reliance of traditional stock assessment methods on fishery dependant data, and the development of new methods to determine biomass levels of these stocks.

Protected species and threatened ecological communities

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 (ERAs) for each sector of the fishery. These ERAs will be incorporated into the proposed Fishery Management Strategy for the fishery, which is under development.

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 EPBC Act subject to conditions requiring AFMA ensures protection measures for these species are maintained and improved as required. These conditions are outlined at Section 2 of this report.

Ecosystem impacts

The most recent ERA for the fishery was released in 2019 and covers the period 2012–16. The ERA identified 21 species as potentially being at high risk. Fourteen of these species were at risk from the CTS sector (otter board trawl and Danish seine), one species was at risk from the GABT sector (also high risk in the CTS sector), and 7 species were at risk from the gillnet sub-sector of the GHAT sector.

By comparison, the proceeding 2012 ERA process identified 24 species or species groups (some across multiple sectors) as potentially being at high risk. Thirteen of these species or species groups were at risk from the CTS sector, 2 species groups were at risk from the GABT sector, and 10 species or species groups were at risk from the gillnet sub-sector of the GHAT sector.

In 2019, all ERAs included a revised methodology to allow for intensity of fishing effort to be explicitly accounted for (spatially heterogeneous effort). This approach resulted in different species being assessed as potentially high risk compared to the 2012 ERAs and is considered better able to estimate fishing mortality and risk.

The outcomes of the ERAs are used to inform bycatch and discard workplans and inform the broader management of risk to the ecosystem in the fishery.

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 GABT and CST sectors, Danish seine in the CST sector, and scalefish automatic longline and shark gillnet in the GHAT sector). Measures include regular risk assessments, fishery closures and electronic monitoring (including video-based monitoring and satellite vessel tracking). These measures help to ensure that operators comply with the management arrangements.

Trawling is restricted to depths less than 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 to monitor and manage their impacts.

Research and monitoring

Strategic research priorities are identified in the Southern and Eastern Scalefish and Shark Fishery Five Year Strategic Research Plan 2016–20. This plan provides a basis for industry, managers, scientists and other parties to work together to address management and research needs for the fishery. A Strategic Research Plan for 2021–25 (inclusive) is being developed for

the SESSF, consistent with AFMA's framework for cost-effective research, but is yet to be finalised.

Each year Resource Assessment Groups (RAGs) develop an annual research statement to allow research to be tailored and prioritised for the needs of the fishery. Annual research statements for 2022–23 are yet to be finalised. Further details on the AFMA research framework is available at www.afma.gov.au/research.

Information about completed projects funded by AFMA or the AFMA Research Committee are available at: www.afma.gov.au/research-reports and for the Fisheries Research Development Corporation (FRDC) at www.frdc.com.au.

While acknowledging AFMA's commitment to ongoing research, more needs to be done to improve understanding and management of overfished stocks including conservation dependant species.

Public submissions

One public comment was received on AFMA's application for export approval under the EPBC Act. The public comment raised concerns about the management of target stocks and risks to protected species and habitats, AFMA's failure to recover conservation dependent listed species, and risks to endemic chondrichthyans from fishing.

AFMA provided the department with a detailed response to the issues raised in the public submission and all issues as well as AFMA's response were considered in conducting this assessment.

Conclusion

The fishery has been found to meet most of the Guidelines (see Section 3) and the majority of the requirements of the EPBC Act (see Section 4). The department considers 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 through conditions as listed at Section 2 of this report. These conditions relate to:

- ensuring that impacts to the ecosystem are reduced
- improving understanding of interactions with protected species
- determining the current status of overfished stocks
- recovering overfished stocks.

On this basis, the department considers the declaration of the harvest operations of the Commonwealth Southern and Eastern Scalefish and Shark Fishery, as an approved wildlife trade operation for 3 years, until 12 February 2025, is appropriate. Unless a specific time frame is provided, each condition (see Section 2 of this report) must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

SECTION 1: ASSESSMENT SUMMARY

Guidelines assessment	Meets	Partially meets	Does not meet	Details
Management regime	8 of 9	1 of 9	0 of 9	<p>Overall, the management regime for the fishery aims to ensure that fishing is conducted in a manner that does not lead to overfishing.</p> <p>The ecological risk management (ERM) framework is under review and will be replaced by a Fishery Management Strategy (FMS) that will incorporate key aspects from relevant fishery management arrangements including workplans, and policies. AFMA is in the process of developing an FMS for this fishery. As part of AFMA's review of the ERM framework, AFMA is looking to make changes to the content and form of FMS to allow easier development and implementation. The FMS for the SESSF will be made publicly available when completed.</p>
Principle 1 (target stocks)	4 of 11	7 of 11	0 of 11	<p>Given the existing and proposed management arrangements for the fishery, the management regime is likely to ensure that fishing is conducted in a manner that reduces the risk of overfishing.</p> <p>However, 7 stocks, made up of 6 species, are classified as overfished and all 6 species are listed as conservation dependent under the EPBC Act. Precautionary recovery strategies are in place for the 7 overfished stocks. However, there has been no change in their stock status since 2014 and no scientific evidence that stocks are recovering.</p> <p>There is minimal recent data collected or available to determine any change in status of these stocks or to demonstrate whether the rebuilding strategies are working. There is also some uncertainty in relation to the potential productivity of these overfished stocks, given their levels of depletion and apparent inability to recover.</p> <p>The general distribution and spatial structure is well known for most key species harvested in the fishery. However, some species such as blue grenadier, eastern school whiting, ocean perch, and smooth oreo dory are currently managed as single stocks, despite research indicating there may be multiple distinct biological stocks of these species.</p> <p>There is also some uncertainty in relation to reliable reporting for discards.</p>
Principle 2 (bycatch and TEPS)	7 of 12 2 of 12 N/a	3 of 12	0 of 12	<p>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.</p> <p>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.</p>

				Accurate reporting will also assist in managing the incidental capture of shark species listed on Appendix II of CITES.
Principle 2 (ecosystem impacts)	4 of 5	1 of 5	0 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. Very little information is available in relation to direct impacts of fishing on the physical environment, including benthic habitats. However, information such as understanding of the biological characteristics of target species, substrate geomorphology, and the gear used could be used to better understand the risk of fishing to the marine environment
EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12		Partially meets		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	Meets			The fishery interacts with Australian sea lions, dolphins, seals, and seabirds. In particular, reports indicate frequent interactions with bottlenose and common dolphins, particularly within the GHAT sector of the fishery. Management measures are in place for several species or species groups. However, ongoing monitoring and management is required to manage and minimise interactions with protected species. 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.
Part 13A	Meets			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 in sections 2 and 3 of this assessment report.
Part 16	Meets			Although a number of risks and uncertainties exist, precautionary measures are in place to prevent serious or irreversible environmental damage being caused by this fishery.

SECTION 2: SUMMARY OF ISSUES REQUIRING CONDITIONS

Table 1: Conditions under Part 13A – International movement of wildlife specimens

Issue	Part 13A Conditions
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure these decisions remain valid and export approval continues uninterrupted, the Department of Agriculture, Water and the Environment needs to be advised of any changes made to the management regime.</p> <p>This will allow the Department of Agriculture, Water and the Environment to assess whether the new arrangements are equivalent or better (in terms of ecological sustainability) to those in place at the time of the original decision. This includes operational and legislated amendments that may affect the sustainability of the target species; or negatively impact on byproduct, bycatch, protected species, or the broader ecosystem.</p> <p>The Australian Fisheries Management Authority has made a number of minor amendments to the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i>. The Australian Fisheries Management Authority has informed the Department of Agriculture, Water and the Environment of management changes as they occurred.</p>	<p>Condition 1 Operation of the Commonwealth Southern and Eastern Scalefish and Shark Fishery must be carried out in accordance with the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 in force under the <i>Fisheries Management Act 1991</i> (Cth) and the Fisheries Management Regulations 2019 (Cth).</p> <p>Condition 2 The Australian Fisheries Management Authority must inform the Department of Agriculture, Water and the Environment 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>Condition 3 The Australian Fisheries Management Authority must inform the Department of Agriculture, Water and the Environment of any intended changes to fisheries legislation that may affect the legislative instruments relevant to this approval.</p>
<p><u>Annual Reporting</u></p> <p>It is important that the department receives annual reports on the performance of the fishery, and the Australian Fisheries Management Authority's progress in implementing the conditions and commitments described in this assessment report.</p> <p>These reports should be prepared in accordance with Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. They will need to include a description of the fishery; the current management arrangements in place; research and monitoring outcomes; recent catch data for all sectors of the fishery; status of target stock(s); any interactions with <i>Environment Protection and Biodiversity Conservation Act 1999</i> protected species; impacts of the fishery on the</p>	<p>Condition 4 The Australian Fisheries Management Authority must produce and present reports on the Commonwealth Southern and Eastern Scalefish and Shark Fishery, including progress against all Part 13A conditions, to the Department of Agriculture, Water and the Environment by 30 June annually, as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>.</p>

Issue	Part 13A Conditions
<p>ecosystem in which it operates; and progress in implementing the conditions described in this assessment report.</p> <p>Electronic copies of the guidelines are available from the Department of Agriculture, Water and the Environment website at: http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries.</p>	
<p><u>Conservation dependent and overfished species</u></p> <p>The fishery harvests a number of species listed as conservation dependent under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, 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% of the original biomass.</p> <p>The Department of Agriculture, Water and the Environment is aware of rebuilding strategies put in place by the Australian Fisheries Management Authority 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 rebuilding strategy. Rebuilding strategies are reviewed at 5-year intervals.</p> <p>It is critical that appropriate management measures are in place and that they are continually reviewed to ensure that rebuilding objectives are met.</p> <p>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 of Agriculture, Water and the Environment as part of the reporting specified in Condition 4.</p> <p>Stock rebuilding strategies and management strategies are in place for gulper sharks, blue warehou, eastern gemfish, orange roughy, redfish, and school shark that contain revised rebuilding timeframes and other relevant management measures.</p>	<p>Condition 5 The Australian Fisheries Management Authority must:</p> <ul style="list-style-type: none"> a) ensure that management measures are in place to meet the objectives of rebuilding strategies and management strategies, for species listed as conservation dependent under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> b) by 12 August 2024, investigate and develop alternative methods that will provide an index of abundance (relative or absolute), to determine the status of conservation dependent stocks c) develop a research plan under the Orange Roughy Rebuilding Strategy which identifies options for monitoring stock status for all orange roughy stocks within the area of the Commonwealth Southern and Eastern Scalefish and Shark Fishery d) continue to evaluate and report to the Department of Agriculture, Water and the Environment on the effectiveness of rebuilding strategies and management strategies for conservation dependent listed species.

Issue	Part 13A Conditions
<p><u><i>Gulper sharks</i></u></p> <p>The Australian Fisheries Management Authority 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>The stock status of gulper sharks is classified as uncertain and there is little evidence to support signs of recovery, due to minimal recent data. Fishery dependent data has not been informative due to low population size, closures, avoidance behaviour by operators and challenges for quick identification within the current handling practice requirements.</p> <p>A fishery independent survey, to establish the baseline relative abundance of gulper sharks and support monitoring through time, has been funded and is scheduled to be undertaken during 2022–23.</p> <p>The survey results should provide an indication of the effectiveness of the current management strategy and inform future management measures if required. The Department of Agriculture, Water and the Environment considers the development of alternative methods that will provide an index of abundance is critical to understanding the status of gulper sharks and the effectiveness of the current management strategy.</p> <p><u><i>Blue warehou</i></u></p> <p>The blue warehou rebuilding strategy prescribes a rebuilding timeframe of one mean generation time plus 10 years to rebuild to the limit reference point of 20% of the original biomass. This means the current objective is to rebuild blue warehou stocks to, or above, the limit reference point by 2024.</p> <p>The Australian Fisheries Management Authority completed a 5-year review of the rebuilding strategy in 2019 which highlighted that while management measures have been implemented to support the rebuilding objectives, there has been no reliable data, index of abundance or other information to provide evidence of current stock status, rebuilding progress or to inform likely rebuilding timeframes.</p> <p>There is little evidence to support any recovery of the stock and it is currently unknown whether the species will rebuild to 20% of the original biomass within a biologically reasonable timeframe as required under the rebuilding strategy.</p>	

Issue	Part 13A Conditions
<p>The Department of Agriculture, Water and the Environment considers it is critical to understand the current status of the stock to determine the effectiveness of the rebuilding strategy in meeting its objectives.</p> <p>Given the lack of recent data available on blue warehou, and the limited prospects of future data collection, to inform traditional stock assessment methods, the Department of Agriculture, Water and the Environment considers the development of alternative methods that will provide an index of abundance is critical to understanding the status of the blue warehou stock and the effectiveness of the current rebuilding strategy.</p> <p><u>Eastern gemfish</u></p> <p>The eastern gemfish rebuilding strategy prescribes a rebuilding timeframe to the limit reference point of 20% of the original biomass of one mean generation time plus 10 years (being approximately 19 years from 2008). This means the current objective is to rebuild eastern gemfish to, or above, the limit reference point by 2027.</p> <p>The stock assessment for eastern gemfish has not been formally updated since 2010. The 2010 assessment estimated eastern gemfish to be at 16% of original biomass, which is below the limit reference point of 20%. The model was updated in 2016 using catch data up to 2015. It provided no evidence of the stock rebuilding, and the updated assessment was not accepted due to uncertainty in the data.</p> <p>In 2020, the South East Resource Assessment Group noted that the non-spawning catch per unit effort index increased over the preceding 3 years, which is consistent with industry reports of higher catch rates in 2019 and 2020. The South East Resource Assessment Group also noted that the main index of abundance from the spawning aggregation is considered unreliable because of industry avoidance behaviour, so completing a new stock assessment by traditional methods may not be possible.</p> <p>There is little evidence to support any recovery of the eastern gemfish stock and it is currently unknown whether the species will rebuild to 20% of original biomass, within a biologically reasonable timeframe as required under the rebuilding strategy.</p> <p>Given the lack of recent data available on eastern gemfish, and the limited prospects of future data collection to inform traditional stock assessment methods, the Department of Agriculture, Water and the Environment considers the development of alternative methods that will provide an index of abundance is critical to</p>	

Issue	Part 13A Conditions
<p>understanding the status of the eastern gemfish stock and the effectiveness of the current rebuilding strategy.</p> <p><u>Orange roughy</u></p> <p>The Australian Fisheries Management Authority manages orange roughy across 9 zones in the Commonwealth Southern and Eastern Scalefish and Shark Fishery. The objective of the Orange Roughy Rebuilding Strategy is to rebuild orange roughy stocks (except Eastern Zone and Cascade Plateau that are assessed as having rebuilt) in the area of the Commonwealth Southern and Eastern Scalefish and Shark Fishery to 20% of original biomass within a biologically reasonable timeframe; being one mean generation time (56 years) plus 10 years (66 years) from the start of the Orange Roughy Conservation Plan. That is, to reach the limit reference point by no later than 2072.</p> <p>There have been no recent assessments for the remaining orange roughy zones (North East Remote, Southern, Western, Albany/Esperance, South Tasman Rise and Eastern Remote Zone). In the absence of recent stock assessments, these other stocks are assumed to be below their limit reference points.</p> <p>In 2020, the Australian Fisheries Management Authority and the South East Trawl Fishery Industry Association developed and implemented the Western Orange Roughy Research Plan with the objective to collect catch and effort data, as well as biological information on the age and size structure of the western stock. These data will support a future stock assessment to provide an index of abundance and evidence on whether the stock is recovering.</p> <p>The Department of Agriculture, Water and the Environment considers that the Australian Fisheries Management Authority should develop research plans for all orange roughy zones under the Orange Roughy Rebuilding Strategy which identifies options for monitoring stock status for all orange roughy stocks within the area of the Commonwealth Southern and Eastern Scalefish and Shark Fishery.</p> <p><u>Redfish</u></p> <p>The objective of the redfish rebuilding strategy is to rebuild redfish by approximately 2042. This is based on a mean generation time (16.7 years) plus 10 years, or 26.7 years from 2015, being approximately 2042.</p>	

Issue	Part 13A Conditions
<p>The 2020 stock assessment estimated the current stock is 3.8% of original biomass. Collection of age and length data has recently improved in the fishery. However, industry avoidance of redfish and low catches mean that catch per unit effort is becoming less informative as an index of abundance and there is uncertainty around the estimated biomass. There is no evidence to suggest that the stock is rebuilding.</p> <p>Given that catch per unit effort is becoming less informative in determining an index of abundance through traditional stock assessment methods, the Department of Agriculture, Water and the Environment considers the development of alternative methods that will provide an index of abundance is critical to understanding the status of the redfish stock and the effectiveness of the current rebuilding strategy.</p> <p><u>School shark</u></p> <p>The school shark Rebuilding Strategy was reviewed in 2014. The objective of the strategy is to rebuild school shark in the area of the Commonwealth Southern and Eastern Scalefish and Shark Fishery to the default limit reference biomass level of 20% of original biomass within a biologically reasonable timeframe (3 generation times or 66 years). The strategy prescribes a total allowable catch of up to 225 tonne per fishing season, which will still allow the recovery of the stock within the timeframes prescribed.</p> <p>The last full stock assessment in 2009 using traditional stock assessment methods, as described in the Commonwealth Southern and Eastern Scalefish and Shark Fishery Harvest Strategy Framework, estimated the biomass at 12% of original biomass.</p> <p>The stock was recently assessed in 2018 using a Close Kin Mark Recapture analysis assessment model. The Close Kin Mark Recapture analysis assessment model provides an estimate of current absolute abundance with trends of absolute abundance back to 2000. It does not provide an estimate of depletion from original biomass. The 2018 assessment indicated that the stock was on a recovery trajectory between 2000 and 2017.</p> <p><u>Harvest Strategies</u></p> <p>While there is a high degree of confidence in the outcomes of Close Kin Mark Recapture analyses, these analyses provide a measure of absolute abundance that</p>	

Issue	Part 13A Conditions
<p>is not related back to unfished biomass levels as the Commonwealth Fisheries Harvest Strategy Policy currently requires.</p> <p>The Department of Agriculture, Water and the Environment recognises that research to develop a harvest strategy framework that better caters for alternative stock assessment approaches, such as Close Kin Mark Recapture analysis, is funded and scheduled to be conducted within the next 2 years.</p>	
<p><u>Ecological Risk Assessments/Ecological Risk Management</u></p> <p>The Australian Fisheries Management Authority has informed the Department of Agriculture, Water and the Environment that the Ecological Risk Assessment and Ecological Risk Management framework for all Commonwealth fisheries is under review. The review will include evaluation of the systems and processes that underpin the Ecological Risk Management framework, with a view to streamline and improve the framework.</p> <p>The review will also make updates to Fisheries Management Paper 14 and the Ecological Risk Management Guide to reflect recent changes in Commonwealth Government policy (namely the 2018 Commonwealth Fisheries Harvest Strategy Policy, Commonwealth Fisheries Bycatch Policy and their supporting guidelines), changes to the content and form of Fishery Management Strategies and changes made to the Ecological Risk Assessment methodology since the release of the Ecological Risk Management Guide in 2017. The review is expected to be completed in 2022.</p> <p>The Ecological Risk Assessment/Ecological Risk Management 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.</p> <p>The framework also requires the development of Fishery Management Strategies that will incorporate all management arrangements in place in the fishery (such as bycatch and discard workplans).</p> <p>The Commonwealth Southern and Eastern Scalefish and Shark Fishery Ecological Risk Management strategy details the management arrangements in place to address and mitigate risks to species assessed as high risk. The revised</p>	<p>Condition 6</p> <p>The Australian Fisheries Management Authority must:</p> <ul style="list-style-type: none"> 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 b) continue to 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.

Issue	Part 13A Conditions
<p>Commonwealth Southern and Eastern Scalefish and Shark Fishery Ecological Risk Management Strategy will also support the objectives of the Commonwealth Fisheries Bycatch Policy.</p> <p>Cumulative impacts are assessed across sectors within the fishery using the Sustainability Assessment for Fishing Effects method, which was developed by the Australian Fisheries Management Authority in collaboration with the Commonwealth Scientific and Industrial Research Organisation.</p> <p>The Department of Agriculture, Water and the Environment considers that it is important the Australian Fisheries Management Authority 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 Commonwealth Southern and Eastern Scalefish and Shark Fishery.</p> <p>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>	
<p><u>Independent data validation and monitoring</u></p> <p>Information about bycatch or discard species is recorded by industry in daily logbooks and reported to the Australian Fisheries Management Authority each month. Discard information for the top 10 landed quota species for each vessel is collected and maintained through the Independent Scientific Monitoring Program. Information is also obtained on some sectors through electronic monitoring such as surveillance cameras. Misreporting may be identified through an analyses of bycatch records, and management actions taken accordingly.</p> <p>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.</p> <p>There are limited means to independently verify bycatch and discard records other than the Australian Fisheries Management Authority's independent scientific</p>	<p>Condition 7</p> <p>The Australian Fisheries Management Authority must:</p> <ol style="list-style-type: none"> by 12 August 2024, develop and implement a statistically robust, independent, quantitative and validated monitoring and data collection regime in the Commonwealth Southern and Eastern Scalefish and Shark Fishery. This may involve the use of electronic monitoring, onboard observers, or other means. ensure the information collected is sufficient to reliably demonstrate the accuracy of all reported catch, effort and protected species interaction data collected via logbooks. This regime needs to gather suitable data on the level of catch, discards and interactions in the fishery to inform the sustainable management of target, byproduct and bycatch species (including protected species).

Issue	Part 13A Conditions
<p>observer program. Observers are strategically assigned to vessels to collect a range of information including bycatch and discards.</p> <p>Discards and interaction data for <i>Environment Protection and Biodiversity Conservation Act 1999</i> protected species are collected via daily logbooks. Electronic monitoring (e.g. cameras and satellite tracking) is the primary means to verify records in some sectors (Gillnet Hook and Trap sector of the Commonwealth Southern and Eastern Scalefish and Shark Fishery). 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 Gillnet Hook and Trap sector.</p> <p>Protected species reporting is mandatory for all sectors. Species level reporting is required where possible.</p> <p>There is still a requirement to have a robust data validation and fishery monitoring system in place in the trawl sectors of the fishery, to accurately ascertain quantitative data on discard, bycatch and protected species interactions, to ensure the sustainability of, and mitigate the impacts to these species.</p> <p>It is essential the Australian Fisheries Management Authority, implement and maintain a statistically robust, independent, quantitative and validated monitoring and data collection regime for the sectors of the fishery which will allow:</p> <ul style="list-style-type: none"> • the collection of robust and qualitative data on discards, byproduct and bycatch species • identification of interactions with threatened, endangered and protected species • improved stakeholder confidence in the effectiveness of fishery management measures. <p>This regime should provide data that is independent and validates fisher logbook data. Fishery monitoring data should continue to be analysed, peer reviewed and reported publicly, such as through the annual status reports for the fishery.</p>	

Non-target sharks

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.

In addition to national legislation and international treaties, Australia has developed a number of policies to mitigate the impacts to shark species. The second *National plan of action for the conservation and management of sharks 2012* is Australia's overarching policy for guiding and coordinating engagement in shark conservation and management: <http://www.agriculture.gov.au/fisheries/environment/sharks>.

It is important the Australian Fisheries Management Authority continue to develop measures in accordance with the *National plan of action for the conservation and management of sharks 2012* to 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.

Australia has a high diversity of shark species, a number of non-target shark species are caught incidentally, including draughtboard shark (*Cephaloscyllium laticeps*), Port Jackson shark (*Heterodontus portusjacksoni*) and spikey dogfish (*Squalus megalops*).

While some non-target shark species are retained, many animals with low commercial value are discarded at sea. Not all non-target species are subject to formal management arrangements such as annual quota 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 Commonwealth Southern and Eastern Scalefish and Shark Fishery is also known to interact with a number of shark species listed under the *Environment Protection and Biodiversity Conservation Act 1999*, including grey nurse (*Carcharias taurus*), white (*Carcharodon carcharias*), shortfin mako (*Isurus oxyrinchus*), and porbeagle (*Lamna nasus*). In addition to being listed as "Migratory" under the *Environment Protection and Biodiversity Conservation Act 1999*, many shark species, including white shark, are listed as "Threatened". Species that are listed as

Condition 8

The Australian Fisheries Management Authority must:

- a) continue to monitor catch and effort data and implement programs to improve the accuracy of identification and recording of all non-target shark species
- b) continue to refine risk assessment processes for target, byproduct and bycatch shark stocks, seeking to include all available data and to include consideration of cumulative impacts
- c) by 12 August 2024, finalise Ecological Risk Assessments for all major Commonwealth Southern and Eastern Scalefish and Shark Fishery sectors to identify high risk shark species and develop appropriate mitigation responses. These are to be reviewed annually, including fishery indicator data as a means of monitoring ongoing risk to shark species.

<p>“Threatened” under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> 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: http://www.environment.gov.au/resource/recovery-plan-white-shark-carcharodon-carcharias.</p> <p>The Department of Agriculture, Water and the Environment considers it important the Australian Fisheries Management Authority continue to refine risk assessment processes for target, byproduct and bycatch shark stocks, to inform the development of appropriate mitigation responses.</p>	
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Table 2: Conditions under Part 13 – Protected species

Issue	Part 13 Conditions
<p><u>Australian sea lions</u></p> <p>Australian Sea Lions are listed as vulnerable under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> 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 Commonwealth Southern and Eastern Scalefish and Shark Fishery 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. Additional management measures include:</p> <ul style="list-style-type: none"> • area closures of 18,500 km² to gillnet fishing around Australian Sea Lion colonies in South Australia • independent monitoring (observers or cameras) to cover 100% of gillnet fishing offshore of South Australia • mortality limits that act to trigger additional closures if unacceptable levels of interactions occur • provisions to allow some gillnet fishers to switch to using hooks off South Australia, including in areas now closed to gillnets. <p>The strategy also describes an Australian Sea Lion Management Zone within the area of the fishery (divided into 7 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 Lions. The Department of Agriculture, Water and the Environment 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</p>	<p>Condition A</p> <p>The Australian Fisheries Management Authority must:</p> <ol style="list-style-type: none"> a) continue to maintain management measures clearly directed toward limiting the impact of fishing activity on Australian Sea Lions to levels which will help enable the recovery of the species, including all sub-populations b) continue to monitor and review the Australian Sea Lion Management Strategy, including the adequacy of the management measures, consistent with the review framework in the Strategy, in consultation with marine mammal experts.

Issue	Part 13 Conditions
<p>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 of Agriculture, Water and the Environment 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><u>Dolphins</u></p> <p>A number of dolphin species occur within the area of the Commonwealth Southern and Eastern Scalefish and Shark Fishery, including Common and Bottlenose Dolphins.</p> <p>To address a high number of dolphin interactions reported in the fishery, the Australian Fisheries Management Authority 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.</p> <p>A routine review of the strategy is scheduled to start in 2022 and will be informed by consultation with experts, the South East Management Advisory Committee and the public. The outcome of the review will be incorporated into an updated mitigation strategy.</p> <p>The strategy is supported by high levels of monitoring through the Australian Fisheries Management Authority's electronic monitoring program.</p> <p>The Department of Agriculture, Water and the Environment considers the dolphin strategy to be an important step in the management and understanding of dolphin bycatch within the fishery.</p>	<p>Condition B</p> <p>The Australian Fisheries Management Authority must:</p> <ul style="list-style-type: none"> a) collect and report data on dolphin interactions, where possible to species level, and continue to refine management measures to minimise the bycatch of dolphins in gillnets b) continue to monitor and review the Gillnet Dolphin Mitigation Strategy, including the adequacy of the management measures, consistent with the review framework in the Strategy, in consultation with marine mammal experts.

Seals

Interactions with seals (Australian Fur Seal and Long-nosed Fur Seal) in the Commonwealth Trawl sector has been an ongoing issue in the Commonwealth Southern and Eastern Scalefish and Shark Fishery. There have been between 130–250 interactions annually since 2010, with a general trend of increase in reported interactions. 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.

The Department of Agriculture, Water and the Environment understands that the increase in reported interactions may be attributed to improved reporting or increases in the abundance of fur seals in Australian waters, including expansions of range as fur seals recolonise new areas where populations were historically extirpated by commercial sealing.

The Australian Fisheries Management Authority 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. The Australian Fisheries Management Authority has advised that it continues to work with industry to investigate alternative methods of reducing seal bycatch in the fishery. The South East Trawl Fishery Industry Association is trialling mitigation options to mitigate seal interactions with trawling gear under formal co-management arrangements.

The Australian Fisheries Management Authority has indicated that a Seal Management Strategy is under development. The Australian Fisheries Management Authority has completed a literature review and desktop analysis to inform the development of the strategy.

While acknowledging the significant efforts made by the Australian Fisheries Management Authority 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.

Condition C

The Australian Fisheries Management Authority must:

- a) 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
- b) by 12 August 2024, develop a seal mitigation strategy in an effort to minimise seal interactions. The strategy should be developed in consultation with marine mammal experts.

Seabirds

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.

The Australian Fisheries Management Authority 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”.

AFMA mandated the use of bird bafflers or sprayers in the Commonwealth Trawl sector and Great Australian Bight Trawl sector of the Commonwealth Southern and Eastern Scalefish and Shark Fishery from the commencement of the 2016–17 fishing season. To further ensure interactions with seabirds are minimised, additional management arrangements have now been introduced that require zero discharge of biological material for otter board trawl boats in the Commonwealth Trawl sector of the Commonwealth Southern and Eastern Scalefish and Shark Fishery when fishing gear is in the water while fishing in high risk areas.

These new arrangements were phased in across 2 stages to allow industry time to prepare and develop new mitigation approaches. From 1 November 2019, new rules were introduced specifying that all biological material be retained when fishing gear is in the water south of latitude 39 degrees South and west of longitude 147 degrees East, during daylight hours. Then from 1 July 2020, these requirements were extended to include south of 38 degrees South.

The department considers it important the Australian Fisheries Management Authority continue to develop and implement appropriate mitigation measures, and to monitor and act on compliance issues in the trawl fishery regarding seabird interactions.

Measures to mitigate seabird interactions are described in mandatory Seabird Management Plans for all trawl vessels in the Commonwealth Trawl sector and all automatic longline vessels in the Gillnet Hook and Trap sector of the Commonwealth Southern and Eastern Scalefish and Shark fishery. Seabird Management Plans 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 of Agriculture, Water and the Environment has been advised that operators’

Condition D

The Australian Fisheries Management Authority must:

- a) continue to ensure efficient and effective seabird management plans remain in place for the Commonwealth Trawl sector and Gillnet Hook and Trap sector automatic longline vessels
- b) ensure adequate monitoring is in place to ensure compliance with seabird management plans
- c) continue to work with industry and relevant experts to develop and implement management measures to minimise mortality of seabirds in the Commonwealth Trawl sector and for Gillnet Hook and Trap sector automatic longline vessels.

<p>concession conditions have been amended to include the mandatory use of Australian Fisheries Management Authority approved Seabird Management Plans on all trawl vessels prior to fishing.</p> <p>Condition D requires the Australian Fisheries Management Authority continue to ensure that effective Seabird Management Plans 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.</p>	
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Assessment history:

Information on previous assessments for the Commonwealth Southern and Eastern Scalefish and Shark Fishery is available on the Department's website:

<http://www.environment.gov.au/marine/fisheries/commonwealth/scalefish>.

1st assessment finalised September 2003 – Exempt from export approval until 22 December 2006 while an approved wildlife trade operation (WTO) was in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 18 recommendations.

2nd assessment finalised December 2006 – Exempt from export approval until 22 December 2009 while an approved wildlife trade operation (WTO) was in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 6 conditions and 5 recommendations.

3rd assessment finalised February 2010 – Exempt from export approval until 30 July 2012 while an approved wildlife trade operation (WTO) was in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 8 conditions and 5 recommendations.

4th assessment finalised February 2013 – Exempt from export approval until 25 February 2016 while an approved wildlife trade operation (WTO) was in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 10 conditions and 4 recommendations.

5th assessment finalised February 2016 – Exempt from export approval until 21 February 2019 while an approved wildlife trade operation (WTO) was in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 9 conditions and 3 recommendations.

6th assessment finalised February 2019 – Exempt from export approval until 12 February 2022 while an approved wildlife trade operation (WTO) is in place for the fishery. The list of exempt native specimens (LENS) was amended. Export approval was subject to 10 conditions.

Fishery reporting:

Annual report

[Annual reports for Commonwealth fisheries](#)

Key links:

Fishery information

[Southern and Eastern Scalefish and Shark Fishery information](#)

[Fishery management policies](#)

[Management Advisory Committees, Resource Assessment Groups, and the Commonwealth Fisheries Marine Mammal Working Group](#)

[AFMA bycatch and discarding workplans](#)

[Seabird bycatch operational guidelines for Commonwealth fisheries](#)

[Protected species information \(turtles, seals, dolphins, seabirds, sharks, and Australian sea lions\)](#)

[AFMA's protected species interaction reports](#)

[Protected species management strategies for Australian sea lion, dolphin, seabirds, and dogfish](#)

[Overfished stocks rebuilding strategies](#)

[Southern and Eastern Scalefish and Shark Fishery management arrangements booklet](#)

[Boat operating procedures manual for the Great Australian Bight Trawl sub-fishery](#)

Management plan

[Southern and Eastern Scalefish and Shark Fishery Management Plan 2003](#)

[Directions and Determinations for the Southern and Eastern Scalefish and Shark Fishery](#)

Enforcing legislation

[Fisheries Management Act 1991](#)

[Fisheries Management Regulations 2019](#)

Harvest strategy

[Harvest strategy framework for the Southern and Eastern Scalefish and Shark Fishery](#)

Ecological Risk Assessment

[Ecological risk management strategy for the Southern and Eastern Scalefish and Shark Fishery](#)

[Risk assessments for the Commonwealth South East Trawl, the Gillnet, Hook and Trap, and the Great Australian Bight Trawl Sectors](#)

Stock assessments

[Stock assessments and annual catch reports](#)

SECTION 3: DETAILED ANALYSIS AGAINST THE GUIDELINES

Guidelines criteria	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent.	<p>Partially meets</p> <p>The Southern and Eastern Scalefish and Shark Fishery (SESSF) is managed by the Australian Fisheries Management Authority (AFMA) in accordance with the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 (SESSF Management Plan), made under the <i>Fisheries Management Act 1991</i> (Cth). The fishery is regulated by the Fisheries Management Regulations 1992 (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 SESSF Management Arrangements Booklet 2021 and the Boat operating procedures manual for the Great Australian Bight Trawl sub-fishery, 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 (OCS) agreements with the Queensland, New South Wales, Victorian, Tasmanian, South Australian and Western Australian governments. 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.</p> <p>The ERM framework is under review and will be replaced by a Fishery Management Strategy (FMS) that will incorporate key aspects from relevant fishery management arrangements, workplans, and policies. AFMA is in the process of developing an FMS for this fishery. As part of its review of the ERM</p>

	<p>framework, AFMA is looking to make changes to the content and form of FMS, to support easier development and implementation. The FMS will be made publicly available when completed.</p>
<p>Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public.</p>	<p>Meets</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).</p> <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.</p>
<p>Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process.</p>	<p>Meets</p> <p>SEMAC and GABMAC are statutory bodies formed under the <i>Fisheries Administration Act 1991</i>, 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 Groups (including 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 GHAT sector, the South East RAG (SERAG) contributes to the management of the CTS sector, and the Great Australian Bight RAG (GABRAG) contributes to the management of the GABT sector.</p> <p>The SESSFRAG, SharkRAG, SERAG and GABRAG include members with expertise in fisheries science and management, fisheries economics, and the fishing industry. These bodies also contribute to the development of the FMS for this fishery.</p>

	<p>The Fishing Industry Policy Council was established under the <i>Fisheries Administration Act 1991</i> to consult with key stakeholders, and report information to the minister responsible for Commonwealth fisheries.</p>
<p>Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured.</p>	<p>Meets</p> <p>Strategic objectives and performance measures are broadly defined in the <i>Fisheries Management Act 1991</i>. The SESSF Management Plan contains fishery-specific objectives, performance measures, and performance criteria.</p> <p>Management actions to achieve these objectives are identified in the risk management strategy and harvest strategy for this fishery. The Commonwealth Fisheries Harvest Strategy Policy and Guidelines provide the basis for developing the harvest strategy for this fishery, which includes objectives, harvest control rules, reference/trigger points, performance measures, and decision rules.</p> <p>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. 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>
<p>Be capable of controlling the level of harvest in the fishery using input and/or output controls.</p>	<p>Meets</p> <p>The fishery extends from Fraser Island in Queensland to Cape Leeuwin in Western Australia. The fishery has 4 main sectors – East Coast Deepwater Trawl (ECDT), Commonwealth Trawl (CTS), Great Australian Bight Trawl (GABT), and Gillnet Hook and Trap (GHAT) sectors. The GHAT sector has a further 4 sub-sectors – Scalefish Hook, Shark Gillnet, Shark Hook, and Trap sub-sectors. Harvesting is managed through a range of input (effort) and output (catch) controls including:</p> <ul style="list-style-type: none"> • Limited entry – licences and permits include conditions such area of operation, permitted species, as well as gear and other restrictions. • Area restrictions – concession holders must operate within defined areas, and are notified of closed areas (permanent or temporary). • 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).

	<ul style="list-style-type: none"> • Statutory fishing rights (SFRs) – are 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"> ◦ Quota SFRs allow concession holders to take an agreed amount of fish for a specified quota species. ◦ Boat SFRs allow the nominated vessel and specified methods to be used subject to restrictions. • Catch limits – apply to most target and byproduct species. Incidental catch limits apply to some species. The fishery harvest strategy framework guides the setting of total allowable commercial catches (TACC). Trip limits apply for certain species that are also targeted by fisheries in other jurisdictions. • 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. • 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. <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>Meets</p> <p>Electronic monitoring is the primary method for monitoring fishing activities. AFMA regularly analyses 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. Priority risks are identified for ongoing investigation including 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 sector. 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	<p>Meets</p>

arrangements and the management strategies, objectives and criteria.

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.

AFMA facilitates regular stock assessments for key species and species groups. Stock assessment findings and other peer reviewed research and studies are analysed by the SESSFAG 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.

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 was to be reviewed in 2019 to align with the harvest strategy policy and guidelines for Commonwealth fisheries, which was revised in 2018. The review will be informed by the FRDC Project *Development and evaluation of multi-species harvest strategies in the SESSF*. This project has been delayed due to the Covid-19 global pandemic and the final report is now due at the end of 2022.

The AFMA Commission will consider minor updates to the 2009 SESSF Harvest Strategy Framework at its March 2022 meeting. The proposed amendments are based on SESSF Resource Assessment Group advice, and a review by AFMA, CSIRO and Tony Smith (consultant). It is unclear on the outcome of this process to date.

The proposed amendments are:

- address technical and editorial errors throughout the document
- enable multispecies considerations in setting TACCs
- include considerations about what to do when a species falls outside the MYTAC period without an updated stock assessment
- enable application of discount factors for lower tier assessments to be the default process, and that exceptions are only made where the relevant resource assessment group is satisfied there are alternative equivalent precautionary measures in place
- include the use of the FishPath tool to determine 'preferred' Tier 5 methods
- include how RBCs are calculated at each assessment Tier level using harvest control rules (HCRs).

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. 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.
Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates.	<p>Meets</p> <p>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 CTS and GABT sectors, by Danish seine in the CTS sector, and by auto-longline and shark gillnet in the GHAT sector. The ECDT sector was assessed as part of the ERA for the CTS. The assessments included analyses of risks posed by fishing methods to target and non-target species, protected species, habitats, and communities.</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>Meets</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, and are periodically revised and updated. In 2018, the Bycatch Policy and Guidelines and the Harvest Strategy Policy and Guidelines for Commonwealth-managed fisheries were revised. AFMA has indicated that existing bycatch and discard workplans and the fishery harvest strategy will be periodically reviewed to ensure they continue to meet standards.</p> <p>The fishery complies with the <i>Threat abatement plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations 2018</i>, and the <i>Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans</i>.</p>

PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover.

Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.

Information requirements

1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.

Partially meets

Over 30 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. Several species stocks are classified as overfished, and listed as conservation dependent under the EPBC Act. These overfished stocks are subject to recovery plans. However, there is minimal recent data collected and available to determine the status of these stocks and if they are on a rebuilding trajectory.

Key target species include alfonsino (*Beryx splendens*), bight redfish (*Centroberyx gerrardi*), blue-eye trevalla (*Hyperoglyphe artartica*), blue grenadier (*Macruronus novaezelandiae*), blue warehou (*Seriola lalandi*), deepwater flathead (*Platycephalus conatus*), deepwater sharks (Order: Squaliformes), elephantfish (*Callirhynchus milii*), other flathead (*Neoplatycephalus* sp.), gemfish (*Rexea solandri*), gummy shark (*Mustelus antarcticus*), jackass morwong (*Nemadactylus macropterus*), john dory (*Zeus faber*), mirror dory (*Zenopsis nebulosa*), ocean perch (*Helicolenus barathri* and *H. percoides*), orange roughy (*Hoplostethus atlanticus*), smooth oreo (*Pseudocyttus maculatus*), other oreodory (Family: Oreosomatidae), pink ling (*Genypterus blacodes*), redfish (*Centroberyx affinis*), ribaldo (*Mora moro*), royal red prawn (*Haliporoides sibogae*), sawsharks (*Pristiophorus cirratus*, *P. nudipinnis*), school shark (*Galeorhinus galeus*), school whiting (*Sillago flindersi*), silver trevally (*Pseudocaranx georgianus*), and silver (spotted) warehou (*Seriola punctata*). Harvest also includes a wide range of byproduct species that are not managed under quota, including blue swimmer crab (*Portunus armatus*), and ocean jacket (*Nelusetta ayraud*).

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.

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 SSIA, in consultation with AFMA, has developed a biological sampling program for gillnet and longline vessels that allows trained crew members and port based personnel to collect biological samples.

	<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). However, there is no validation of discards or protected species interactions when observers are not present.</p>
Assessment	
<p>1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and /or reproductive capacity. Review should take place at regular intervals but at least every three years.</p>	<p>Meets</p> <p>AFMA facilitates independent assessments for quota-managed species and other key stocks. The TACC's for these species are set in accordance with the fishery's harvest strategy.</p> <p>The ABARES <i>Fishery status reports 2021</i> classified five stocks as <i>uncertain</i> with regard to stock biomass. These stocks are oreo dory (basket) (warty – <i>Allocyttus verrucosus</i>, spikey – <i>Neocyttus rhomboidalis</i>, rough – <i>N. psilorhynchus</i>, black – <i>A. niger</i>, other – <i>Neocyttus spp.</i>), john dory (<i>Zeus faber</i>), deepwater sharks in the eastern and western zones, and orange roughy stock in the GAB sector.</p> <p>Seven stocks are classified as <i>overfished</i>. These overfished stocks are blue warehou (<i>Seriola lalandi</i>), eastern gemfish (<i>Rexea solandri</i>), gulper sharks (<i>Centrophorus harrissoni</i>, <i>C. moluccensis</i>, <i>C. zeehaani</i>), school shark (<i>Galeorhinus galeus</i>), redfish (<i>Centroberyx affinis</i>) and orange roughy (<i>Hoplostethus atlanticus</i>) in 2 zones (southern and western).</p> <p>There were 10 stocks classified as <i>uncertain</i> if overfishing is occurring. These stocks are orange roughy (<i>Hoplostethus atlanticus</i>) in 2 zones (southern and western), oreo dory (basket), john dory (<i>Zeus faber</i>), gulper sharks (<i>Centrophorus harrissoni</i>, <i>C. moluccensis</i>, <i>C. zeehaani</i>), eastern gemfish (<i>Rexea solandri</i>), deepwater sharks in the eastern and western zones, blue warehou (<i>Seriola lalandi</i>) and school shark (<i>Galeorhinus galeus</i>).</p> <p>The SAFS report 2020, assessed 24 species stocks taken in this fishery, and considered that blue warehou, redfish, school shark, gemfish (eastern), and orange roughy (southern and western zones) stocks are depleted. The remaining stocks are considered to be sustainably fished.</p>
<p>1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.</p>	<p>Partially meets</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 oreo dory are currently managed as single stock units, although research indicates there may be two separate biological stocks for each.</p> <p>Little is known about the individual stock structure of the 18 deepwater shark species harvested in the fishery. The available catch data does not readily identify deepwater sharks to species level, and stock</p>

	<p>assessments consider these species as one unit. Deepwater sharks are 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.</p> <p>Fishery status reports and the SAFS reports 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>1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.</p>	<p>Partially meets</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.</p> <p>An electronic recording system has been introduced that allows fish receivers to record catches for each vessel. This system should improve data quality. On-board scientific observers are used randomly in most sectors, but are not used in the GHAT sector, where electronic monitoring in the form of onboard cameras is used.</p> <p>When setting the TACC, the SESSFRAG also considers the available data from state-managed fisheries (commercial and recreational catches and discards).</p> <p>However, there is some uncertainty in relation to reliable reporting for discards.</p>
<p>1.1.5 There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.</p>	<p>Partially meets</p> <p>Mandatory reporting of catch and effort is a key aspect of the management arrangements.</p> <p>Productivity has been calculated for target species and key byproduct species through regular fishery dependent and independent assessments.</p> <p>Stock assessments were undertaken during the 2019 and 2020 fishing seasons. New stock assessments are being undertaken in 2021 for blue grenadier, blue eye trevalla, deepwater shark east and west, jackass morwong, john dory, mirror dory, orange roughy-east, oreo smooth – other, pink ling, silver trevally and silver warehou, as well as an update to the tiger flathead assessment. The SERAG will consider these assessments and provide advice on Recommended Biological Catch levels at its November 2021 meeting.</p>

	<p>The SEMAC will consider the outputs of the assessments and SERAG advice and recommend Total Allowable Catch levels at its Jan/Feb 2022 meeting. The AFMA Commission will consider the SERAG and SEMAC advice at its March 2022 meeting.</p> <p>There is some uncertainty in relation to the potential productivity of overfished stocks, given their levels of depletion and inability to recover.</p>
Management responses	
<p>1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.</p>	<p>Meets</p> <p>Robust reference points are in place. The harvest strategy policy for Commonwealth fisheries sets the default limit biomass reference point (B_{LIM}) at 20% (B_{20}) of the unfished spawning biomass. The default maximum sustainable yield (B_{MSY}) proxy is 40% (B_{40}) of the unfished spawning biomass. The default target biomass (B_{TARG}) is generally equal to B_{MEY}, and is calculated at approximately 48% (B_{48}) of the unfished spawning biomass.</p> <p>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. Stocks that are assessed as being below the limit reference point of the estimated unfished biomass are considered overfished.</p>
<p>1.1.7 There are management strategies in place capable of controlling the level of take.</p>	<p>Meets</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.</p> <p>Performance measures are also in place for key species stocks, including some non-quota species. In the ECDT sector, the TACC is set at 200 t for boarfish (<i>Paristioporus labiosus</i>), and 50 t incidental catch for orange roughy. These TACC's act as a trigger, which results in the sector being closed if the trigger is reached.</p> <p>OCS agreements also contain measures such as catch limits per trip for some species that are also targeted by other jurisdictions.</p>
<p>1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.</p>	<p>Partially meets</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 catch is 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 and have been implemented for certain species in different sectors of the fishery if they are identified as high risk through analysis of mandatory reporting, stock assessments and ERA framework. However, seven stocks, made up of six species, are classified as overfished, of these seven stocks, all six species are listed as conservation dependent under the EPBC Act.</p>
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)	
<p>1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Partially meets</p> <p>Notwithstanding efforts to mitigate the effects of fishing on target and byproduct stocks, seven stocks, made up of six species, are classified as overfished, of these seven stocks, all six species are listed as conservation dependent under the EPBC Act. AFMA has implemented appropriate measures that are likely to improve the stock status for these species over different timeframes.</p> <p>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>If overfished, go to Objective 2:</p> <p>If not overfished, go to PRINCIPLE 2:</p>	
<p>Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.</p>	
<p>Management responses</p>	
<p>1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery</p>	<p>Partially meets</p> <p>Precautionary recovery strategies are in place for seven overfished stocks. However, there has been no change in their stock status since 2014, and no scientific evidence that stocks are recovering. In each case, the stock biomass is classified as overfished.</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</p>

<p>within a specific time period appropriate to the biology of the stock.</p>	<p>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, eastern gemfish, southern and western zones stocks of orange roughy, redfish, dogfish species, and school shark stocks. These strategies are precautionary with timeframes based on biological characteristics for the relevant species.</p> <p>A management strategy is also in place to rebuild populations of Harrison's dogfish and southern dogfish to above B_{LIM} of 25% 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.</p>
<p>1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.</p>	<p>Meets</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 5 years. Some of these stocks are classified uncertain if overfishing is occurring (Fisheries Status Reports 2021).</p> <p>Rebuilding Strategy management actions include no-take, temporal and spatial closures and move on provisions.</p>
<p>PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.</p>	
<p>Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.</p>	
<p>Information requirements</p>	
<p>2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.</p>	<p>Partially meets</p> <p>Information about bycatch or discard species is recorded in daily logbooks, and reported to AFMA each month. Discard information for the top 10 landed quota species for each vessel is collected and maintained through the Independent Scientific Monitoring Program (ISMP). Information is also obtained</p>

	<p>through electronic monitoring such as surveillance cameras. Misreporting may be identified through an analyses of bycatch records, and management actions taken accordingly.</p> <p>Species level reporting is required, where possible, across all sectors. However, management arrangements allow operators in the CTS to record discards for non-quota species at the family level in an attempt to improve overall bycatch reporting.</p> <p>There are limited means to independently verify bycatch and discard 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>
Assessment	
<p>2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.</p>	<p>Meets</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 ERA process.</p> <p>AFMA has developed and implemented bycatch and discard workplans for 4 fishing methods in 3 sectors of the fishery – otter board trawl and Danish seine in the CTS, otter board trawl in the GABT sector, scalefish automatic longline, and shark gillnet in the GHAT sector.</p> <p>The ERA's identified 21 species (or species groups) as being at risk from fishing. At risk species (or species groups) include dolphins, and seven chondrichthyans (sharks, rays, and skates). Albatrosses and Blue Petrel are the only seabirds identified as high risk, although the fishery is known to interact with many seabirds including other petrels, prions, and shearwaters.</p> <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.</p>
Management responses	
<p>2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available.</p>	<p>Meets</p> <p>A number of management responses are in place. Bycatch and discarding workplans are reviewed every 2 years, although action items are reviewed at 6-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"> • AFMA's <i>Bycatch strategy: Mitigating protected species interactions and general bycatch</i> contains 5 principles for managing bycatch in a consistent manner across the fishery. Bycatch

	<p>and discarding workplans have been developed for vessels using otter board trawl, Danish seine, gillnet, and automatic longline in the CTS, GABT and GHAT sectors. These workplans describe actions that aim to minimise bycatch in the fishery. 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. In the GHAT sector the workplan contains 6 action items of which 5 are completed.</p> <ul style="list-style-type: none"> • AFMA has improved mitigation measures for seabirds and chondrichthyans, and continues to develop an electronic monitoring program for automatic longline vessels. • 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. • In the CTS 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 CTS sector. <p>Incidental catch limits are in place for overfished species (see above). Under a revised OCS agreement between the Commonwealth and SA, AFMA prohibited the retention of snapper (<i>Chrysophrys auratus</i>) taken in the West Coast, Spencer Gulf and Gulf of St Vincent until 31 January 2023 and snapper in the South East region from 1 November to 31 January each year until January 2023. These arrangements are complementary to the SA Government management measures introduced in November 2019 to enable the rebuilding of snapper stocks in waters adjacent to SA to a sustainable level in response to stock assessments that indicated a decline in these stocks.</p>
<p>2.1.4 An indicator group of bycatch species is monitored.</p>	<p>Meets</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 Seal Management Strategy is still under development. AFMA has completed a literature review and desktop analysis to inform the development of the strategy. Oceanic longline and trawl vessels are required to report seabird bycatch.</p>

	A 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).
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	<p>Meets</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>
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	<p>Meets</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>
Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.	
Information requirements	
2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.	<p>Partially meets</p> <p>Information on discarded catch and interactions with protected species is collected via daily logbooks. Electronic monitoring (e.g. cameras and satellite tracking) is the primary means to verify records in the GHAT sector. Information may also be gathered through research studies and surveys. In the CTS independent scientific observers board vessels at random to collect bycatch/discard data. Reliable information in the CTS would be improved by the introduction of electronic monitoring.</p> <p>Protected species reporting is mandatory for all sectors. Species level reporting is required where possible. In the CTS 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</p>

	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.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	<p>Meets</p> <p>AFMA use the ERA process to identify high risk species. The ERA process considers impacts on protected species using the same process identified above for target and non-target species.</p>
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	<p>Not applicable</p> <p>The 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>
Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	<p>Partially meets</p> <p>Risks to protected species 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. However, protected species interactions and mortality are still occurring in the fishery.</p> <p>The fishing industry supports 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 2). 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). AFMA has indicated that a management strategy for seals will be developed.</p>

2.2.5 There are measures in place to avoid impact on threatened ecological communities.	Not applicable Risk is considered low. See item 2.2.3 above.
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets 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.
Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	
Information requirements	
2.3.1 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.	Partially meets 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. ERM applies to potential impacts of the main fishing gear and methods used in the fishery – otter board trawl in the GABT and CTS sectors, Danish seine in the CTS 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.
Assessment	
2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery.	Meets 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 <i>Fisheries Management Act 1991</i> mandates that fishing is conducted in a manner consistent with the

<p>1. Impacts on ecological communities</p> <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities <p>2. Impacts on food chains</p> <ul style="list-style-type: none"> • Structure • Productivity/flows <p>3. Impacts on the physical environment</p> <ul style="list-style-type: none"> • Physical habitat • Water quality 	<p>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.</p> <p>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 700 m and 1500 m.</p> <p>Danish seine gear is unlikely to have a major impact on the marine environment, the ERM strategy identified 3 outer shelf benthic habitats as high risk. Automatic longline is not likely to have a major impact on the marine ecosystem, although there is 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>Management responses</p>	
<p>2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.</p>	<p>Meets</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 GABT and CTS sectors, Danish seine in the CTS sector, and scalefish automatic longline and shark gillnet in the GHAT sector). 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 700 m 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>2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.</p>	<p>Meets</p> <p>There are decision rules, triggers and performance measures 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>

2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.

Meets

The management arrangements have a medium to high chance of achieving the objective to conduct the fishery in a manner that minimises the impact of fishing operations on the ecosystem generally.

SECTION 4: ASSESSMENT AGAINST 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 10 – Strategic assessments

Division 2 Assessment of Commonwealth-managed fisheries Section 153 Minister must make declaration if he or she endorses plan or policy	The Department's assessment of the Commonwealth Southern and Eastern Scalefish and Shark Fishery
<p>(1) This section applies if:</p> <ul style="list-style-type: none"> (a) the Minister makes an agreement under section 146 as required by this Division and endorses under the agreement: <ul style="list-style-type: none"> (i) a plan of management under the Fisheries Management Act 1991 (CTH) for a fishery; or (ii) policies of the Australian Fisheries Management Authority for managing a fishery for which there is not a plan of management under the Fisheries Management Act; or (iii) a plan of management under the <i>Torres Strait Fisheries Act 1984</i> (CTH) for a fishery; or (iii) policies for managing fishing under the Torres Strait Fisheries Act; and (b) the Minister accredits, under subsection 33(3) of this Act, as an accredited arrangement a management plan or regime consisting of the endorsed plan or policies. <p>(2) The Minister must make a declaration under section 33 that actions approved in accordance with the accredited arrangement do not require an approval under Part 9 for the purposes of subsection 23(1), (2) or (3) or subsection 24A(1), (2), (3), (4), (5) or (6).</p>	<p>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 Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, as amended, would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area.</p> <p>Consequently, the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, as amended by the Southern and Eastern Scalefish and Shark Fishery Management Plan Amendment 2006 (No.2), 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.</p>

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>Partially meets</p> <p>The area of the fishery encompasses the South-east Marine Region, the South-west Marine Region, and the Temperate East Marine Region.</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 8 key ecological features (KEFs). The region also provides foraging and nursery habitat for over 45 EPBC Act-listed species, and a number of protected places including marine reserves, and ecological communities.</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 of concern in the temperate east marine region. Specific measures are in place in the fishery that mitigate the impact of these pressures, including a closure, mandatory use of bycatch reduction devices, and trigger limits.</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 of concern 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</p>

	<p>are prone to bycatch. The marine bioregional plan indicates that these pressures are either not well understood or expected to increase.</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.</p> <p>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>
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Part 13 – Species and communities

Accreditable plan, regime or policy (Divisions 1, 2, 3 and 4)	Comment
<p>s. 208A(1)(a-e), s.222A(1)(a-e), s.245 (1) (a-e), s.265 (1) (a-e)</p> <p>Does the fishery have an accreditable plan of management, regime or policy?</p>	<p>Yes - meets</p> <p>There is an accreditable management regime. The fishery will be managed by AFMA in accordance with the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, made within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>, and the Fisheries Management Regulation 2019.</p>
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	Comment
<p>(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing?</p>	<p>Yes – meets</p> <p>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</p>

	<p>pathway for fishing operators and crews regarding protected species interactions.</p> <p>The management regime for the fishery was accredited under Part 13 of the EPBC Act in February 2019. AFMA advise the department of minor amendments to the management regime as they occur, and through annual reports.</p> <p>The department assessed the amended management regime and determined that a new Part 13 accreditation was required for the fishery subject to several conditions.</p> <p>The department considers the conditions attached to the new Part 13 accreditation are appropriate to help ensure the ongoing protection for threatened species listed under the EPBC Act.</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 threatened species.</p>
<p>(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species?</p>	<p>Partially meets</p> <p>There were interactions reported since the most recent assessment in February 2019.</p> <p>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.</p> <p>Although interactions do occur, given the management arrangements in place in the fishery, 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.</p>

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 - meets</p> <p>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 2019. AFMA advise the department of minor amendments to the fishery's management regime as they occur, and through annual reports.</p> <p>The department assessed the amended management regime and determined that a new Part 13 accreditation was required for the fishery subject to several conditions.</p> <p>The department considers the conditions attached to the new Part 13 accreditation are appropriate to help ensure the ongoing protection for species listed as migratory under the EPBC Act.</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>Partially meets</p> <p>There were interactions reported since the most recent assessment in February 2019. 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, 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
<p>(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>	<p>Yes - meets</p> <p>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 2019. AFMA advise the department of minor amendments to the management regime for the fishery as they occur, and through annual reports.</p> <p>The department assessed the amended management regime and determined that a new Part 13 accreditation was required for the fishery subject to several conditions.</p> <p>The department considers the conditions attached to the new Part 13 accreditation are appropriate to help ensure the ongoing protection for cetaceans.</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>Partially meets</p> <p>There were interactions reported since the most recent assessment in February 2019. 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 GHAT sector of the fishery.</p> <p>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>, the strategy was revised in 2019. The strategy aims to minimise dolphin interactions with gillnets in the SESSF by adopting an individual responsibility approach to create incentives for fishers to innovate and</p>

	<p>adopt best practices. Under the individual responsibility approach, fishers are responsible for their actions to minimise interactions and stay within defined performance criteria. 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>
Division 4 Listed marine species, Section 265 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 marine species are not killed or injured as a result of the fishing?	<p>Yes - meets</p> <p>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 2019. AFMA advise the department of minor amendments to the management regime for the fishery as they occur, and through annual reports.</p> <p>The department assessed the amended management regime and determined that a new Part 13 accreditation was required for the fishery subject to several conditions.</p> <p>The department considers the conditions attached to the new Part 13 accreditation are appropriate to help ensure the ongoing protection for species listed as marine under the EPBC Act.</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>
(g) And, is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?	<p>Partially meets</p> <p>There were interactions reported since the most recent assessment in February 2019. The department is informed of interactions with listed</p>

	<p>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
<p>(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.</p>	<p>To satisfy the requirements of sections 208A, 222A, 245, and 265, the Department recommends the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 be accredited under Part 13 subject to conditions that require AFMA to continue to improve management of the fishery's impacts on Australian sea lions, dolphins, seals and seabirds.</p>
<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> <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. <p>In such a case, the instrument of accreditation is to specify the period, circumstances or condition.</p>	

Part 13A – International movement of wildlife specimens

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; 	<p>The management arrangements for the fishery have been assessed as consistent with the general guidance provided in the objects of Part 13A as:</p> <ul style="list-style-type: none"> • there are management arrangements in place to ensure that the harvest of any Convention on International Trade in Endangered

<ul style="list-style-type: none"> (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife. 	<p>Species of Wild Fauna and Flora (CITES) listed species is being managed in an ecologically sustainable way</p> <ul style="list-style-type: none"> • the operation of the fishery is unlikely to be unsustainable and threaten biodiversity within the next three years, and • the Environment Protection and Biodiversity Conservation Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.
Section 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> <ul style="list-style-type: none"> (a) the action or actions specified in the permit will not be detrimental to, or contribute to trade which is detrimental to: <ul style="list-style-type: none"> (i) the survival of any taxon to which the specimen belongs; or 	<p>Given the fishery's management arrangements in place to monitor and control the level of harvest of CITES listed species, 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. A condition on the WTO declaration for the fishery includes annual reporting requirements, which will allow the department to monitor the status of CITES specimens harvested in the fishery.</p>
<ul style="list-style-type: none"> (ii) the recovery in nature of any taxon to which the specimen belongs; or 	<p>The CITES species harvested from the fishery are not considered to be overfished in Australian waters, as concluded by non-detriment findings. 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 sharks in the shark gillnet sub-sector of the GHAT sector.</p>

(iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and	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.
Section 303DC Minister may amend list (non CITES species)	Comment
<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> <ul style="list-style-type: none"> (i) including items in the list; (ii) deleting items from the list; (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; (iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or <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 fishery, as defined in the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, in force under the <i>Fisheries Management Act 1991</i> and Fisheries Management Regulations 2019, but not including:</p> <ul style="list-style-type: none"> • specimens that belong to taxa listed under section 209 of the EPBC Act (Australia's List of Migratory Species) • specimens that belong to taxa listed under section 248 of the EPBC Act (Australia's List of Marine Species) • specimens that belong to eligible listed threatened species, as defined under section 303BC of the EPBC Act • specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES List), <p>be included in the list of exempt native specimens while the fishery is subject to a declaration as an approved wildlife trade operation.</p>
(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes an assessment under Part 10, Divisions 1 or 2	<p>Meets</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 Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, as amended by the Southern and Eastern Scalefish and Shark Fishery Management Plan Amendment 2006 (No. 2), would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area.</p>

	<p>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"> • mandatory requirement for trawl vessels to use approved seabird mitigation devices, • decision rules that trigger fishing zone closures to reduce protected species bycatch implemented, • ecological risk management framework developed and implemented, • decision rules to protect boarfish and orange roughy stocks implemented, • implement/revise management strategies for protected species, • implement dogfish management strategy, and a monitoring and assessment workplan to assess the effectiveness of the strategy, • implement fishery bycatch strategy, and revise bycatch and discarding workplans for the main fishing methods, • stock rebuilding strategies implemented for overfished species stocks, • negotiate industry co-management arrangements, • introduce electronic monitoring, and • mandatory catch disposal via a fish receiver.
<p>(1C) The above does not limit matters that may be considered when deciding to amend LENS.</p>	<p>Meets</p> <p>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.</p>
<p>(3) Before amending the LENS, the Minister must consult:</p> <p>(a) other Minister or Ministers as appropriate; and</p> <p>(b) other Minister or Ministers of each State and self-governing Territory as appropriate; and</p>	<p>Meets</p> <p>The submission from AFMA was made available on the department's website from 10 September 2021 to 15 October 2021. One comment was received.</p>

(c) other persons and organisations as appropriate.	
Section 303FN Approved wildlife trade operation	Comment
<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p> <p>(b) the operation will not be detrimental to:</p> <p>(i) the survival of a taxon to which the operation relates; or</p> <p>(ii) the conservation status of a taxon to which the operation relates; and</p> <p>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</p>	<p>Meets</p> <p>The fishery is consistent with objects of Part 13A of the Act – see above assessment against the Guidelines.</p> <p>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.</p>
<p>(c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and</p>	<p>Meets</p> <p>The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify Crustacea or fish as a class of animal in relation to the welfare of live specimens.</p>
<p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>Not applicable</p> <p>No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.</p>
<p>(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and</p>	<p>Meets</p> <p>The fishery will not have a significant impact on any relevant ecosystem within the next three years, given the management measures currently in place, which include the arrangements described above at s303FN 3(b).</p>
<p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>Meets</p> <p>The management arrangements that will be employed for the fishery as outlined in the assessment against the Guidelines (above), are likely to be effective.</p>

<p>(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates is in force in the State or Territory concerned; and</p> <p>(b) whether the legislation applies throughout the State or Territory concerned; and</p> <p>(c) whether, in the opinion of the Minister, the legislation is effective.</p>	<p>Meets</p> <p>The fishery will be managed under the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, the <i>Fisheries Management Act 1991</i> and Fisheries Management Regulations 2019.</p> <p>The <i>Fisheries Management Act 1991</i> applies throughout Commonwealth waters.</p> <p>The department considers that the legislation is likely to be effective.</p>
<p>(10) For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and:</p> <p>(a) the operation is a commercial fishery.</p>	<p>Meets</p> <p>The Commonwealth Southern and Eastern Scalefish and Shark Fishery is a commercial fishery.</p>
<p>(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.</p> <p>(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.</p>	<p>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 Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, as amended, would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area.</p> <p>Consequently, the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003, as amended by the Southern and Eastern Scalefish and Shark Fishery Management Plan Amendment 2006 (No.2), 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 those identified at section 303DC(1A) above.</p>

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> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. <p>(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>(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>Meets</p> <p>A public notice, which set out the proposal to declare the fishery an approved wildlife trade operation including the application from AFMA, was released for public comment on 10 September 2021 to 15 October 2021, a total of 26 business days.</p> <p>One public comment was received on the submission. The public comment expressed concerns about risks to threatened and protected species and habitats, recovery of conservation dependent listed species, endemic chondrichthyans at high risk from fishing and declines in key target stocks.</p> <p>The department's assessment has considered the public comments received on the submission and addressed the issue of risks to threatened and protected species and habitats through conditions A - D (Table 2, Section 2), recovery of conservation dependant listed species through Condition 5 (Table 1, Section 2) and risks to endemic chondrichthyans through Condition 8 (Table 1, Section 2).</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> <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	<p>The standard conditions applied to commercial fishery wildlife trade operations include:</p> <ul style="list-style-type: none"> • operation in accordance with the <i>Southern and Eastern Scalefish and Shark Fishery Management Plan 2003</i> made under the <i>Fisheries Management Act 1991</i>. • notifying the department of changes to the management regime, and

	<ul style="list-style-type: none"> annual reporting in accordance with the requirements of the Australian Government <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. <p>The wildlife trade operation instrument for the fishery specifies the standard and any additional conditions applied.</p>
(8) A condition may relate to reporting or monitoring.	One of the standard conditions (Condition 4) 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

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>Meets</p> <p>Having regard to:</p> <ul style="list-style-type: none"> 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 the requirement under the <i>Fisheries Management Act 1991</i> for all Commonwealth fisheries to be managed consistent with the precautionary principle, and the proposed conditions that would form part of the declaration as an approved wildlife trade operation. <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>

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