



Australian Government

Department of the Environment and Energy

Assessment of the
**Commonwealth Heard Island and McDonald Islands
Fishery**

October 2016

© Copyright Commonwealth of Australia, 2016.



Assessment of the Commonwealth Heard Island and McDonald Islands Fishery October 2016 is licensed by the Commonwealth of Australia for use under a Creative Commons By Attribution 3.0 Australia licence with the exception of the Coat of Arms of the Commonwealth of Australia, the logo of the agency responsible for publishing the report, content supplied by third parties, and any images depicting people. For licence conditions see: <http://creativecommons.org/licenses/by/3.0/au/>.

This report should be attributed as '*Assessment of the Commonwealth Heard Island and McDonald Islands Fishery October 2016*, Commonwealth of Australia 2016'.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment and Energy on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Energy or the Australian Government.

While reasonable efforts have been made to ensure that the contents of this report are factually correct, the Australian Government does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this report. You should not rely solely on the information presented in the report when making a commercial or other decision.

CONTENTS

Section 1: Summary of the Assessment for the Commonwealth Heard Island and McDonald Islands Fishery Against the Guidelines for the Ecologically Sustainable Management of Fisheries (2nd Edition)	3
Section 2: Detailed Analysis of the Commonwealth Heard Island and McDonald Islands Fishery Against the Guidelines for the Ecologically Sustainable Management of Fisheries (2nd Edition)	7
Section 3: Assessment of the Commonwealth Heard Island and McDonald Islands Fishery Against the Requirements of the EPBC Act	16

SECTION 1: SUMMARY OF THE ASSESSMENT FOR THE COMMONWEALTH HEARD ISLAND AND MCDONALD ISLANDS FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

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

Summary: Overview of Heard Island and McDonald Islands Fishery against the relevant requirements of the Guidelines and the EPBC Act.

	Meets	Partially meets	Does not meet	Details
Guidelines				
Management regime	8 of 9	1 of 9	0	<p>Management is precautionary, well documented, transparent and publicly accessible.</p> <p>Although meetings are not open to the general public, management is consultative, transparent and draws on a wide range of expertise and interests.</p> <p>The arrangements are strategic, with clear objectives and performance management processes.</p> <p>Harvest is well controlled and compliance and enforcement appears to be effective.</p>
Principle 1 (target stocks)	9 of 9	0	0	<p>A reliable information collection system informs assessment of fishery dynamics and status.</p> <p>The harvest strategy appears precautionary and has a high chance of achieving the objective.</p>
Principle 2 (bycatch and TEPS)	7 of 9	2 of 9	0	<p>Bycatch is within set limits but appears to be increasing.</p> <p>Reporting arrangements for rajids may not be sufficient to determine the catch and therefore scale of impact if post release mortality is an issue. Stock assessments and limits for these species have been unchanged for almost two decades and may need review.</p> <p>Stock assessments for mackerel icefish are reviewed each year and assessment of unicorn icefish, grey rock cod, grenadier and rajid species were undertaken in 2015. Prior to this, the last assessments were between 13 and 19 years ago.</p> <p>Move-on provisions apply when bycatch limits are reached or interactions with vulnerable marine ecosystems occur but these are not monitored so it is unclear whether they can trigger a timely response.</p> <p>Risks to protected species have been assessed for all methods except trap fishing which is currently considered to be economically unviable.</p>

Principle 2 (ecosystem impacts)	5 of 5	0	0	Management arrangements are in place to ensure significant damage to ecosystems does not arise. Information on gear loss and interactions with vulnerable marine ecosystems is collected. Risks have been assessed for species and habitats, but not ecological communities.
EPBC requirements				
Part 12	-	-	-	Not applicable. No Marine Bioregional Plan for the South-east Marine Region.
Part 13	11 of 12	1 of 12	0	Although interactions with protected species have occurred, interaction rates and total interactions are relatively low and within prescribed limits. Ecological risk assessments found no species to be at high risk and precautionary measures are in place to mitigate risks.
Part 13A	3 of 3	0	0	This fishery is managed consistent with the Objects of Part 13A of the Act and consultation has been sufficient for LENS amendment.
Part 16	1 of 1	0	0	Precautionary catch limits are set annually for target and bycatch species. Stock assessments for mackerel icefish are reviewed each year and assessment of unicorn icefish, grey rock cod, grenadier and rajid species was last undertaken in 2015. However, previous assessments were undertaken between 13 and 19 years ago. Regular review and where necessary, assessment are considered important to ensure catch limits remain sustainable.
Conclusion: The fishery appears to be relatively well managed and consistent with the objects of the EPBC Act. However, more regular review of some management arrangements could further improve confidence in the sustainability of the fishery.				
Final recommendation for 2016 assessment of Heard Island and McDonald Islands Fishery: The fishery is considered low risk and is recommended for 10 year approval (2016 to 2026).				

Notes:

Assessment history:

1st assessment finalised 2002 – LENS with 4 recommendations.

2nd assessment finalised 2007 – LENS with 4 recommendations.

3rd assessment finalised 7 May 2012 – [LENS with 4 recommendations, until 9 May 2017](#). [Part 13 accreditation](#) open ended.

Fishery reporting:

Annual report to the Department – last provided in September 2014.

AFMA annual (corporate) reports include a summary of fishery performance: <http://www.afma.gov.au/about/corporate-publications/>

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Fishery Report 2015: *Dissostichus eleginoides* Heard Island (Division 58.5.2): <https://www.ccamlr.org/en/document/publications/fishery-report-2015-dissostichus-eleginoides-heard-island-division-58-5-2>

Protected species interactions: Publicly available via the Australian Fisheries Management Authority (AFMA) website at: <http://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports/> (accessed 14 September 2016).

Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations:

<http://www.antarctica.gov.au/environment/plants-and-animals/albatrosses-and-giant-petrels/threat-abatement-plan-seabirds> (accessed 14 September 2016)

Threat abatement plan for the impacts of marine debris on vertebrate marine life 2009–2014:

<https://www.legislation.gov.au/Details/F2009L02532> (accessed 5 September 2016).

Subantarctic Fur Seal and Southern Elephant Seal Recovery Plan 2004–2009:

<https://www.legislation.gov.au/Details/F2007B00291> (accessed 5 September 2016).

Review of 2004–2009 Recovery Plan for Subantarctic Fur Seal (*Arctocephalus tropicalis*) and Southern Elephant Seal (*Mirounga leonina*). Department of the Environment. Unpublished report February 2016.

Key links:

AFMA website: <http://www.afma.gov.au/fisheries/heard-island-mcdonald-island-fishery/> (accessed 14 September 2016).

CCAMLR website (refer CCAMLR statistical area 58.5.2) <https://www.ccamlr.org/> (accessed 14 September 2016).

Heard Island and McDonald Islands Fishery Management Plan 2002:

<https://www.legislation.gov.au/Details/F2016C00640> (accessed 14 September 2016).

CCAMLR conservation measures (outline the harvest strategy and control rules for the fishery, and are administered by AFMA): <https://www.ccamlr.org/en/conservation-and-management/browse-conservation-measures> (accessed 14 September 2016).

Australian sub-Antarctic fisheries bycatch and discarding workplan 2013: <http://www.afma.gov.au/wp-content/uploads/2014/11/Bycatch-and-discard-workplan-2013-2.pdf> (accessed 21 September 2016).

Fisheries Management Act 1991: <https://www.legislation.gov.au/Details/C2015C00407> (accessed 21 September 2016).

Fisheries Management Regulations 1992: <https://www.legislation.gov.au/Details/F2016C00617> (accessed 21 September 2016).

Antarctic Marine Living Resources Conservation Act 1981: <https://www.legislation.gov.au/Details/C2016C00476> (accessed 21 September 2016).

Ecological Risk Assessment (ERA) and Ecological Risk Management (ERM):

Trap fishing although allowed is considered economically unviable and is not currently undertaken in the fishery. On this basis it was excluded from AFMA's ecological risk assessments (AFMA pers. comm. 2016).

AFMA has advised that any future trap fishing will be subject to 100% monitoring by on-board scientific observers. This will allow AFMA to quickly detect and respond to potential ecological risks. A more formal ecological risk assessment will then be undertaken for trap fishing once sufficient data is collected (AFMA pers. comm. 2016).

Mid-water trawl (2007): Ecological Risk Assessment for the Effects of Fishing: Report for the Midwater Trawl Sub-fishery of the Heard and McDonald Islands Fishery.

http://www.afma.gov.au/wp-content/uploads/2014/12/ERA_HIMI-Midwater-trawl_Fishery-report_280607.doc (accessed 23 August 2016).

Demersal trawl (2007): Ecological Risk Assessment for the Effects of Fishing: Report for the Demersal Trawl Sub-fishery of the Heard and McDonald Islands Fishery.

http://www.afma.gov.au/wp-content/uploads/2014/11/ERA_HIMI-Demersal-trawl_Fishery-report.pdf (accessed 23 August 2016).

Demersal longline (2007): Ecological Risk Assessment for the Effects of Fishing: Report for Demersal Longline Sub-fishery of the Heard and McDonald Islands Fishery.

http://www.afma.gov.au/wp-content/uploads/2014/12/ERA_HIMI-Longline_Fishery-report_290607.doc (accessed 23 August 2016).

Mid-water trawl, demersal trawl and demersal longline (2009, fish species only): Rapid quantitative risk assessment for fish species in seven Commonwealth fisheries.

<http://www.afma.gov.au/wp-content/uploads/2014/11/Sustainability-Assessment-for-Fishing-Effect-SPF-April-2009.pdf> (accessed 23 August 2016).

Habitats: Demersal fishing interactions with marine benthos in the Australian EEZ of the Southern Ocean: an assessment of the vulnerability of benthic habitats to impact by demersal gears

<http://www.frdc.com.au/research/final-reports/Pages/2006-042-DLD.aspx> (accessed 14 September 2016).

Communities: The community component was not assessed at Level 2 for this sub-fishery, but is expected to be considered when assessment methods are more fully developed.

Stock assessments:

CCAMLR Fishery Reports: Include stock assessments undertaken by Australian scientists, reviewed by CCAMLR: <https://www.ccamlr.org/en/publications/fishery-reports> (accessed 21 September 2016).

ABARES Fishery Status Reports 2015: Not overfished or subject to overfishing.

http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr15d9abm_20151030/26_FishStatus2015HeardIsAndMcDonaldIs_1.0.0.pdf

SECTION 2: DETAILED ANALYSIS OF THE COMMONWEALTH HEARD ISLAND AND MCDONALD ISLANDS FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Guidelines for the Ecologically Sustainable Management of Fisheries (2nd edition)	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent	<p>Management arrangements are well documented, transparent and publicly available via the AFMA and CCAMLR websites.</p> <p>Meetings where management arrangements are developed are also well documented on these websites.</p> <p>Information on fishery performance, including catch of target and bycatch species, and compliance with CCAMLR conservation measures is published on the CCAMLR website and in AFMA annual (corporate) reports.</p>
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	<p>Management is consultative and transparent but not open to the general public.</p> <p>Although meetings of the CCAMLR Consultative Forum, and AFMA's Sub-Antarctic Resource Assessment Group and Sub-Antarctic Fisheries Management Advisory Committee are not open to the general public, they include Commonwealth government, research, environment and fishing industry representatives.</p>
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	<p>Management draws on a wide range of expertise and interests.</p> <p>CCAMLR draws on a wide range of scientific, fisheries management and other expertise in developing its management arrangements. Australia's delegation to CCAMLR includes Commonwealth, state and territory government representatives, fishing industry and conservation interests. These interests and expertise are also represented in Australian fora through the CCAMLR Consultative Forum, Sub-Antarctic Resource Assessment Group and Sub-Antarctic Fisheries Management Advisory Committee.</p> <p>The Department's Australian Antarctic Division (AAD) undertakes the stock assessments for target and bycatch species in this fishery. Results are reviewed by SARAG and CCAMLR.</p>
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	<p>Management is strategic, with clear objectives and performance management processes.</p> <p>Catch limits and triggers are based on available information and aim to deliver the information required to better understand the fisheries' potential. Information requirements are regularly reviewed and defined in CCAMLR research and data collection plans.</p>

	The fishery's performance is measured against CCAMLR's objectives and is monitored by AFMA and reported by CCAMLR.
Be capable of controlling the level of harvest in the fishery using input and/or output controls	Harvest is managed using a mixture of both input and output controls. These controls are considered precautionary.
Contain the means of enforcing critical aspects of the management arrangements	Effective enforcement has been demonstrated. Licensed fishers comply with management arrangements and illegal, unreported and unregulated fishing has been virtually eliminated since 2007. This is supported by high levels of monitoring by on-board observers. Compliance with management arrangements is monitored by AFMA, reported to and reviewed by CCAMLR for all CCAMLR members.
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria	Performance is assessed and reported annually by both AFMA and CCAMLR. Performance measures are included in the Heard Island and McDonald Islands Fishery Management Plan 2002 , as well as CCAMLR arrangements.
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	AFMA monitors and assesses risk to the wider marine environment and implements precautionary risk management measures. CCAMLR conservation measures include a range of protections for vulnerable marine ecosystems, non-target species including bycatch and protected species. These include area closures and gear restrictions. These measures are implemented and further supported by the management arrangements administered by AFMA. Ecological risk assessments for this fishery are expected to be reviewed during 2017.
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy	Requirements of the following threat abatement plans are reflected in management arrangements for the fishery: <ul style="list-style-type: none"> • Threat abatement plan 2006 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations • Threat abatement plan for the impacts of marine debris on vertebrate marine life 2009–2014 • Recovery plan for subantarctic fur seal (<i>Arctocephalus tropicalis</i>) and southern elephant seal (<i>Mirounga leonine</i>).
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	

<p>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.</p>	<p>There is a reliable information collection system in place appropriate to the scale of the fishery.</p> <p>CCAMLR logbooks are required to be completed for all fishing activities. Scientific observers also monitor all fishing activity and collect additional data. Vessel Monitoring Systems must also be used at all times.</p>
<p>Assessment</p>	
<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>There is a robust assessment of the dynamics and status of the fishery and periodic review of the process and the data collected.</p> <p>Assessment of Patagonian toothfish is undertaken biennially, and reviewed by SARAG and CCAMLR's Working Group on Fish Stock Assessment (WG-FSA). Stock assessments for mackerel icefish are reviewed each year and periodic assessments are undertaken for some other bycatch species. Stock assessments for unicorn icefish, grey rock cod, grenadier and rajid species were last undertaken in 2015. However, previous assessments were undertaken between 13 and 19 years ago. Regular review and where necessary, assessment are considered important to ensure catch limits remain sustainable.</p>
<p>1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.</p>	<p>The distribution and spatial structure of the stock has been established and factored into management.</p> <p>Stock structure has been established for mackerel icefish and to a large extent, also for Patagonian toothfish.</p> <p>Additional research is being undertaken on toothfish on the Kerguelen Plateau to refine population models and management in this area (ABARES 2015).</p> <p>Annual random stratified trawl surveys, tag-recapture, length-frequency and other catch analyses are also used to inform assessment of target species in the fishery. Some analysis is also extended to frequently caught bycatch species (CCAMLR 2015).</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>There are reliable estimates of all removals, including commercial (landings and discards). There is no recreational or indigenous activity in this fishery.</p> <p>Estimates of removals are considered reliable given the high levels of monitoring and validation during fishing and unloading.</p> <p>These estimates, as well as estimates of illegal, unreported and unlicensed (IUU) fishing when available, are factored into stock assessments.</p> <p>AFMA provides an estimate of IUU to CCAMLR each year, but problems estimating IUU fishing more broadly have meant that IUU has not been estimated and published by CCAMLR since 2010. Increased surveillance in the area has not detected any IUU fishing since 2007 however.</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>Sound estimates of productivity are available and are used in stock assessments.</p> <p>Stock assessments are informed by random stratified trawl surveys, tag-recapture studies, robust fishing logbook data and data collected by on-board scientific observers, including information on age, length and sexual maturity of fish.</p> <p>The CCAMLR harvest strategy is also highly precautionary.</p>
<p>Management responses</p>	
<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>The CCAMLR harvest strategy appears precautionary and includes catch limits for target and bycatch species.</p> <p>Stock assessments consider maximum sustainable yields and are informed by a data collection programme for both target and common bycatch species (CCAMLR 2015).</p> <p>Catches of bycatch species appear low, and at least for unicorn icefish and grey rock cod, the species are considered widespread. Unicorn icefish, grey rock cod, grenadier and rajid stocks were last assessed in 2015. However the previous assessments were undertaken between 13 and 19 years ago. Regular review and where necessary, assessment are considered important to ensure catch limits remain sustainable.</p>
<p>1.1.7 There are management strategies in place capable of controlling the level of take.</p>	<p>Input and output controls are used to control the level of take in the fishery.</p> <p>Catch limits exist for target and bycatch species. There is strong compliance with these arrangements, with only three relatively minor exceptions for the toothfish in the 18 years since the fisheries inception in 1997 to 2014.</p> <p>Catches of icefish and bycatch species have consistently been below established catch limits (CCAMLR 2015).</p> <p>The fishery management plan includes provisions to deal with any over-quota catches.</p>
<p>1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.</p>	<p>Fishing is conducted in a manner that does not threaten stocks of byproduct species.</p> <p>CCAMLR conservation measures do not allow targeted fishing for any species other than the target species, bycatch limits apply to incidentally caught species and move-on provisions apply if limits for any one haul are exceeded. Catches of non-target species are generally low (less than 10 per cent for trawl and between 11 and 26 per cent for line, including cut-offs, CCAMLR 2015).</p>
<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.	The management arrangements have a high chance of achieving the objective.
If overfished, go to Objective 2: If not overfished, go to PRINCIPLE 2:	
Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	
Management responses	
1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.	Not applicable.
1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.	Not applicable.
PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.	
Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.	
Information requirements	
2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	Information on all catches, including bycatch is collected using CCAMLR logbooks and by scientific observers who monitor all fishing activity. However, reported catches of skates and rays do not include animals that are tagged or returned to the sea in a live and vigorous state (approved CCAMLR protocol). Research suggests higher than expected post-release mortality may be occurring for these species (Bulman et al. 2007), meaning this information may be important for assessing impacts. While the CCAMLR fishery reports do not differentiate all bycatch species, CCAMLR does have access to species specific data (AFMA pers. comm. 2016).
Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	Ecological risk assessments (ERAs) have been completed for demersal and midwater trawl and demersal longline, but not trap fishing. These include bycatch species.

	<p>Although allowed, trap fishing is considered economically unviable and is not currently undertaken in the fishery. On this basis it was excluded from AFMA's ERAs (AFMA pers. comm. 2016). The ERAs for this fishery are expected to be reviewed in 2017.</p> <p>Skates are particularly susceptible to fishing and can only sustain very low impact due to their low productivity and high endemism. The ERA found no species at high risk, but fishing mortality for three skate species (<i>Bathyraja irrasa</i>, <i>B. Murrayi</i> and <i>B eatonii</i>) was estimated to be higher than the maximum sustainable fishing mortality (Zou et al. 2009). Subsequent research found skates were widely distributed across the Kerguelen Plateau, catch rates were relatively low, and didn't show any signs of depletion in the main fishing grounds (AFMA 2013) but post-release mortality may be higher than expected (Bulman et al. 2007).</p> <p>The ERA recommends monitoring the catch of porbeagle sharks (listed migratory species) to ensure they are sustainable. While the CCAMLR fishery reports do not differentiate bycatch species enough to do this, CCAMLR has access to species specific data (AFMA pers. comm. 2016).</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>Bycatch is within set limits but appears to be increasing.</p> <p>Catch limits apply to all bycatch, but do not account for the particular susceptibilities of different species.</p> <p>The assessments used to inform these limits were last undertaken for unicorn icefish, grey rock cod, grenadier and rajid stocks in 2015. However the previous assessments were undertaken between 13 and 18 years ago. Regular review and where necessary, assessment are considered important to ensure catch limits remain sustainable.</p> <p>CCAMLR conservation measure 32-18 (2006) prohibits targeted shark fishing, other than for scientific research, and requires any bycatch of shark, especially juveniles and gravid females, to be released alive.</p> <p>The bycatch and discard workplan considers that CCAMLR conservation measures in conjunction with the marine reserves provide effective protection for skates in the fishery, but there is some uncertainty. The workplan also notes the ERAs were due for review in 2014; this work is currently underway (AFMA pers. comm. 2016).</p> <p>A bycatch and discarding workplan is in place for demersal trawl, midwater trawl and longline, but not for trap methods.</p> <p>Although allowed, trap fishing is considered economically unviable and is not currently undertaken in the fishery (AFMA pers. comm. 2016). A review undertaken by AAD and CSIRO (van Wijk et al. 2002) recommended data collection continue to better understand the biology, distribution and</p>

	abundance of sleeper sharks. It is unclear whether this work has been completed.
2.1.4 An indicator group of bycatch species is monitored.	Not applicable. No indicator species have been identified.
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Move-on provisions apply when bycatch limits are reached or interactions with vulnerable marine ecosystems occur. However, given these catches are not actively or regularly monitored, it is unclear whether they can trigger a timely response. These measures are contained in CCAMLR conservation measures 33-02 (2015) and 22-07 (2013) respectively.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Measures are in place to manage risks to bycatch species but should be reviewed. This review is expected to occur in 2017.
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.	Data collected through logbooks and on-board scientific observers provides a reliable record of interactions with protected species and vulnerable marine ecosystems.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	The fishery's impacts on endangered, threatened and protected species have been assessed for demersal trawl, midwater trawl and demersal longline, but not trap fishing. Although allowed, trap fishing is considered economically unviable and is not currently undertaken in the fishery. On this basis it was excluded from AFMA's ecological risk assessments (AFMA pers. comm. 2016). No species were found to be at high risk from trawl or longline fishing. Ecological risk assessments for this fishery are expected to be reviewed during 2017.
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	Not applicable. There are no listed threatened ecological communities in the area of the fishery.
Management responses	

<p>2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.</p>	<p>Measures are in place to avoid capture and or mortality of endangered, threatened and protected species.</p> <p>Fifty eight interactions have been reported between 1 January 2012 and 31 March 2016, including endangered and vulnerable seabirds and pinnipeds. However interaction rates are low and within prescribed limits. Low levels of sperm whale depredation has also been observed since 2011.</p> <p>CCAMLR conservation measures and AFMA management arrangements afford protection in accordance with the following threat abatement plans:</p> <ul style="list-style-type: none"> • Threat abatement plan 2006 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations • Threat abatement plan for the impacts of marine debris on vertebrate marine life 2009–2014 • Recovery plan for subantarctic fur seal (<i>Arctocephalus tropicalis</i>) and southern elephant seal (<i>Mirounga leonine</i>).
<p>2.2.5 There are measures in place to avoid impact on threatened ecological communities.</p>	<p>Not applicable.</p> <p>There are no listed threatened ecological communities in the fishery.</p>
<p>2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>The management arrangements have a high chance of achieving the objective but should be regularly reviewed and updated to account for any new information and changes in the fishery.</p>
<p>Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>	
<p>Information requirements</p>	
<p>2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fisheries impact on the ecosystem and environment generally.</p>	<p>Information on gear loss as well as interactions with vulnerable marine ecosystems is reported through CCAMLR logbooks.</p> <p>Information on compliance with CCAMLR conservation measures and other AFMA requirements is collected by scientific observers on all fishing trips and regularly reviewed by CCAMLR and AFMA.</p>
<p>Assessment</p>	
<p>2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery.</p> <ol style="list-style-type: none"> 1. Impacts on ecological communities <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains <ul style="list-style-type: none"> • Structure 	<p>Information is collected and risks have been assessed for species and habitats but not ecological communities. There are however no threatened ecological communities in the area of the fishery.</p> <p>Measures prescribed in the fishery management plan and CCAMLR conservation measures seek to minimise impacts to benthic environments, including vulnerable marine ecosystems.</p> <p>Ecological risk assessments for this fishery are expected to be reviewed during 2017.</p>

<ul style="list-style-type: none"> • Productivity/flows <p>3. Impacts on the physical environment</p> <ul style="list-style-type: none"> • Physical habitat • Water quality 	
Management responses	
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>Management actions are in place to ensure significant damage to ecosystems does not arise.</p> <p>A range of protections are afforded by CCAMLR conservation measures and AFMA management arrangements for the fishery. These are further supported by significant marine protected areas that are closed to fishing. These measures are considered sufficient given the scale of the fishery at this time.</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>CCAMLR conservation measures and AFMA arrangements include triggers for management of vulnerable marine ecosystems, bycatch and protected species.</p> <p>Compliance with these arrangements is monitored by on-board scientific observers and reported through CCAMLR logbooks.</p>
2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Management has a high chance of achieving the objective.

SECTION 3: ASSESSMENT OF THE COMMONWEALTH HEARD ISLAND AND MCDONALD ISLANDS FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a checklist of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A.

Part 12

	Comment
Section 176 Bioregional Plans	
(5) Minister must have regard to relevant bioregional plans	Not applicable. There is currently no marine bioregional plan for the South-east Marine Region.

Part 13

	Comment
Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	
s. 208A (1) (a-e) , s.222A (1) (a-e), s.245A (1) (a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	Yes. The Heard Island and McDonald Islands Fishery Management Plan 2002 is in force under the <i>Fisheries Management Act 1991</i> .
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	
(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?	Yes. Precautionary risk management measures are in place that require fishers to take all reasonable steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing.
(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species.	No. The fishery is not likely to adversely affect the survival or recovery in nature of the species. Although there have been interactions with endangered and vulnerable species, the ERAs found no species to be at high risk and interactions are relatively low and within prescribed limits. The ERAs for this fishery are expected to be reviewed in 2017.
Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	
(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?	Yes. Precautionary risk management measures are in place that 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>(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?</p>	<p>No. The fishery is not likely to adversely affect the survival or recovery in nature of the species. Ecological risk assessments (ERAs) found no species to be at high risk. Although there have been interactions with migratory species, the ERAs found no species to be at high risk and interaction rates and total interactions are relatively low. The ERAs for this fishery are expected to be reviewed in 2017.</p>
<p>Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes</p>	
<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. Fishers are required to report all interactions with protected species, and AFMA has demonstrated its responsiveness to emerging issues. CCAMLR has reported depredation of longlines by sperm whales in the fishery but there have been no reported interactions with cetaceans to date. Risks posed by trap fishing have not been assessed as this method is not currently considered viable. The ERAs are due to be reviewed in 2017 and consideration of all available methods would help ensure risks are proactively mitigated.</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>No. The fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species. There have been no reported interactions with cetaceans and ERAs found no species to be at high risk.</p>
<p>Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes</p>	
<p>(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?</p>	<p>Yes. A range of precautionary risk management measures are in place. Fishers are also required to report all interactions with protected species, and AFMA has demonstrated its responsiveness to emerging issues.</p>
<p>(g) And is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?</p>	<p>No. The fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species. Although there have been interactions with listed marine species, the ERAs found no species to be at high risk and interactions are relatively low and within prescribed limits. The ERAs for this fishery are expected to be reviewed in 2017.</p>
<p>Section 303AA Conditions relating to accreditation of plans, regimes and policies</p>	

(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	Accreditation is recommended for the Heard Island and McDonald Islands Fishery Management Plan 2002, in force under the <i>Fisheries Management Act 1991</i> .
(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: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	No conditions are considered necessary at this time.
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	Not applicable. There are no conditions applicable to the current accreditation.

Part 13A

Section 303BA Objects of Part 13A	
(1) The objects of this Part are as follows: (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) 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.	
	Comment
Section 303DC Minister may amend list (non CITES species)	
(1) Minister may amend the LENS by: (e) including items; (f) deleting items; or (g) imposing a condition or restriction to which the inclusion of a specimen is subject; or varying or revoking a condition or restriction to which the inclusion of a specimen is subject.	
(1A) In deciding to amend LENS, Minister must rely primarily on outcomes of Part 10, Div 1 or 2 assessment	The Minister endorsed the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> under Part 10 of the EPBC Act on 30 April 2002.

	<p>The Department considered that actions taken in the fishery would not have an unacceptable or unsustainable impact on the environment and the endorsement was not subject to any conditions.</p> <p>The management plan was subsequently amended by the Heard Island and McDonald Islands Fishery Management Plan Amendment 2011. The Department considered these amendments will not have significantly greater impact on the environment than actions previously approved.</p>
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	This fishery is managed consistent with the Objects of Part 13A of the EPBC Act.
<p>(3) Before amending LENS, Minister must consult:</p> <p>(a) other Minister or Ministers as appropriate; and</p> <p>(b) other Minister or Ministers of each State and self-governing Territory as appropriate; and</p> <p>(c) other persons and organisations as appropriate.</p>	Consultation with Commonwealth Fisheries Minister occurred in October 2014 (MS14-002367).

Part 16

	Comment
Section 391 Minister must consider precautionary principle in making decisions	
<p>(1) Minister must take account of precautionary principle</p> <p>(2) The precautionary principle is that lack of full scientific certainty should not be 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>Precautionary catch limits are set annually for target and bycatch species. However stock assessments and catch limits for bycatch species have been unchanged for almost two decades and may require review.</p>