



Australian Government

Department of the Environment and Water Resources

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

MAY, 2007

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Assistant Secretary
Marine Environment Branch
Department of the Environment and Water Resources
GPO Box 787
Canberra ACT 2601

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This document is an assessment carried out by the Department of the Environment and Water Resources of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. It forms part of the advice provided to the Minister for the Environment and Water Resources 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 Water Resources or the Australian Government.

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Table 1: Summary of the Heard Island and McDonald Islands Fishery

<p>Publicly available information relevant to the fishery</p>	<ul style="list-style-type: none"> • <i>Fisheries Management Act 1991</i> • <i>Fisheries Management Regulations 1992</i> • <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> • <i>Annual Status Report – Heard Island and McDonald Islands Fishery, March 2007</i> • <i>Environment Australia – 2002 Assessment of the Heard Island and McDonald Islands Fishery for the purposes of Part 10, Part 13 and Part 13A of the Environment Protection and Biodiversity Conservation Act 1999.</i> • <i>The Australian Fisheries Management Authority Annual Report 2005-06</i> • <i>Fishery Status Reports 2005: Status of Fish Stocks Managed by the Australian Government. Bureau of Rural Sciences, Canberra</i> • <i>Threat Abatement Plan for the Incidental Capture (or bycatch) of Seabirds during Oceanic Longline Fishing Operations (Seabird TAP)</i> • <i>Recovery Plan for Albatrosses and Giant Petrels</i> • <i>Antarctic Fisheries Bycatch Action Plan, 2003</i> • <i>The Antarctic Fisheries Strategic Ecosystem Data Plan 2003-2008</i> • <i>Antarctic Marine Living Resources Conservation Act 1981</i> • <i>Antarctic Marine Living Resources Conservation Regulations 1994</i> <p>Other international agreements including:</p> <ul style="list-style-type: none"> • <i>The United Nations Fish Stocks Agreement</i> • <i>The Food and Agriculture Organisation's (FAO) International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing</i> • <i>The Food and Agriculture Organisation's (FAO) International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds)</i> • <i>The FAO Code of Conduct for Responsible Fisheries and the Convention on the International Trade of Endangered Species</i>
<p>Area</p>	<p>The Heard Island and McDonald Islands (HIMI) Fishery lies in waters adjacent to the Islands of the same name. The Islands are Australia's most remote sovereign territory and are located on the Kerguelen Plateau in the south Indian Ocean, about 4,000 kilometres south-west of Perth. The HIMI Fishery extends from 12 nautical miles offshore to the edge of the Australian Exclusive Economic Zone (EEZ), which extends to 200 nautical miles, or to the maritime boundary with Iles Kerguelen.</p> <p>These islands are the only unmodified example of a sub-Antarctic island ecosystem in the world. They provide valuable breeding and feeding areas for many species of marine mammals and birds, while supporting a vast array of endemic invertebrates. They are included on the register of the National Estate and the World Heritage List.</p> <p>No fishing is allowed within the Marine Reserves and only limited</p>

	<p>fishing activities have been allowed within the Conservation Zones. The conservation and fishery values of the Conservation Zones are currently being assessed and a decision by the Minister for the Environment and Water Resources is expected shortly. See the Australian Fisheries Management Authority's (AFMA's) "<i>Annual Status Report – Heard Island and McDonald Islands Fishery, March 2007</i>" (AFMA's 2007 submission) for further information on the area covered by the HIMI Fishery.</p>
Fishery status	<p>Both target species: Patagonian toothfish and mackerel icefish were assessed by the Bureau of Rural Sciences (BRS) in the Fishery Status Reports, 2005 as not overfished. The status of bycatch species were assessed as uncertain.</p>
Target Species	<p>The HIMI Fishery's two target species are Patagonian toothfish (<i>Dissostichus eleginoides</i>) and mackerel icefish (<i>Champsocephalus gunnari</i>). All other species are considered bycatch and may not be targeted.</p> <p>A description of the target species biology can be found in AFMA's 2007 submission. Information on the biology of these species can be found in the Department of the Environment and Water Resource's (DEW's) initial assessment of the fishery - <i>Environment Australia – 2002 Assessment of the Heard Island and McDonald Islands Fishery for the purposes of Part 10, Part 13 and Part 13A of the Environment Protection and Biodiversity Conservation Act 1999</i> (the 2002 Assessment Report), which can be found at: http://www.environment.gov.au/coasts/fisheries/commonwealth/heard-mcdonald/report/pubs/ea-himi.pdf</p>
Byproduct Species	<p>The term byproduct is not used in the HIMI Fishery, with reference just made to target species toothfish and mackerel icefish and bycatch species.</p>
Gear	<p>Demersal otter board trawling, midwater trawling and demersal longlining are the only fishing methods permitted in the HIMI Fishery. Mackerel icefish can only be caught by trawl fishing methods.</p> <p>Gear restrictions exist for mesh sizes and bobbin diameter:</p> <p>Demersal trawl - nets are limited to a minimum mesh size of 120mm when targeting Patagonian toothfish and 90mm when targeting mackerel icefish, to enable juvenile fish to escape the net.</p> <p>Midwater trawl – nets are primarily used to target mackerel icefish and net mesh sizes are limited to a minimum of 90mm.</p> <p>Demersal longlining – AFMA had not previously permitted longlining within the HIMI Fishery, because of the potential of seabird bycatch. Since 2002, and in line with action 5.2 of the Seabird TAP a range of suitable mitigation measures were developed and trialled in the HIMI</p>

	<p>Fishery. These trials proved successful and longlining was formally introduced into the HIMI Fishery on 25 November 2005. Gear restrictions for demersal longlining include integrated weight line and the use of blue snoods.</p> <p>Any other fishing method that may be trialled, must be carried out under a Scientific Permit issued in accordance with the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> (the HIMI Management Plan). Pot fishing operations started in the HIMI Fishery on a trial basis, under a Scientific permit, in December 2005.</p>																		
Season	<p>The fishing season extends from 1 December to 30 November each year for trawling and pot operation and has been in operation since 1997 when exploratory fishing in the region began. The longline season runs from 1 May to 31 August, and has been progressively extended (for 2006/07 from 15 April to 30 September 2007) in recent seasons in recognition of adoption of successful seabird mitigation measures.</p>																		
Commercial harvest	<p>The 2006/2007 total allowable catch (TAC) for the HIMI Fishery is:</p> <ul style="list-style-type: none">▪ 2427 tonnes Patagonian toothfish▪ 42 tonnes mackerel icefish <p>Since the last assessment in 2002, seasonal catch of target species in the HIMI Fishery are detailed in the table below (CCAMLR statistical Bulletin).</p> <table><tr><th>Fishing season (1 December to 30 November)</th><th>Patagonian toothfish (tonnes)</th><th>Mackerel icefish (tonnes)</th></tr><tr><td>2001/2002</td><td>2756</td><td>865</td></tr><tr><td>2002/2003</td><td>2844</td><td>2345</td></tr><tr><td>2003/2004</td><td>2864</td><td>78</td></tr><tr><td>2004/2005</td><td>2744</td><td>1851</td></tr><tr><td>2005/2006</td><td>2497</td><td>663</td></tr></table> <p>AFMA report that the impacts of illegal, unregulated and unreported (IUU) catches are reflected in the lowering of TACs for Patagonian toothfish. The fluctuations in icefish catches are natural and are based on annual survey data predicting availability of fish for the following season. Apart from tagged toothfish, all the catch of target species is retained.</p>	Fishing season (1 December to 30 November)	Patagonian toothfish (tonnes)	Mackerel icefish (tonnes)	2001/2002	2756	865	2002/2003	2844	2345	2003/2004	2864	78	2004/2005	2744	1851	2005/2006	2497	663
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Value of commercial harvest	<p>To maintain operator confidentiality AFMA is unable to release this information.</p>																		
Take by other sectors	<p>Due to the remote location, the HIMI Fishery is purely a commercial Fishery with no recreational or Indigenous sectors.</p> <p>In the 2002 assessment of the HIMI Fishery, IUU fishing was raised as a significant area of concern in a number of public submissions and DEW considered IUU fishing as the most serious threat to the long term sustainability of the HIMI Fishery. Illegal demersal longliners almost</p>																		

	<p>exclusively target Patagonian toothfish. Poor information about IUU catches seriously undermines efforts to apply agreed precautionary stock-assessment methods.</p> <p>AFMA's 2007 submission states that in recent years there has been a significant decline in the estimate of IUU catches being taken from the HIMI Fishery. AFMA attribute this decline largely to the commitment of \$217.2 million by the Australian Government in May 2005 to a full-time armed patrol program in the Southern Ocean to stamp out Patagonian toothfish poachers at HIMI, which followed the success of an original Australian Government commitment of \$99 million in 2004. AFMA report that there have been no sightings of illegal foreign fishing vessels in the HIMI EEZ since the apprehension of the Maya V in January 2004.</p> <p>Other initiatives the Australian Government has adopted or agreed to since 2004, to combat IUU fishing in the HIMI region include:</p> <ul style="list-style-type: none"> • supporting the adoption of a centralised vessel monitoring system by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) in November 2004; • in July 2005, AFMA fisheries officers and CCAMLR staff provided training to Mauritian officials on the CCAMLR catch documentation scheme for toothfish. The training provided Mauritian officials with the practical experience needed to validate the catch documentation received at the point of unloading. This initiative has resulted in a significant reduction in the amount of IUU catch being processed through Mauritius. Widespread adoption of the catch documentation scheme is a key step in clamping down on trade in illegally caught toothfish; and • the <i>Fisheries Management Act 1991</i> was amended to increase the fines for offences committed by the owners and operators of foreign fishing vessels. The amendments also permit AFMA to include the cost of pursuit and apprehension by Australian authorities in any security bonds applied to detained vessels.
Commercial licences issued	<p>The number of operators in the HIMI Fishery at any one time is restricted to three. Statutory Fishing Rights (SFRs) govern access to the fishery. The TACs for the target species are divided among SFR holders in proportion to their holdings for each species.</p>
Management arrangements	<p>The HIMI Fishery falls within the CCAMLR Convention area, and is managed by AFMA (in close cooperation with the Australian Government Antarctic Division [AAD]) in accordance with CCAMLR Conservation Measures. Given the environmental significance of the area, AFMA and CCAMLR are committed to minimising the impacts of fishing on the marine environment. AFMA has adopted a precautionary approach to management and exceeds the environmental standards required by CCAMLR. This approach considers the effects of harvesting on target, dependent and associated species, and ecological relationships, to ensure sustainability of target species stocks and the broader marine environment.</p>

	<p>The HIMI Fishery is managed under the HIMI Management Plan and supporting instruments, developed under the <i>Fisheries Management Act 1991</i>.</p> <p><u>Output controls</u> are the primary means of controlling the level of catch, and are set as annual TACs for target and some bycatch species, with catch limits set for all other species.</p> <p><u>Input controls</u> are used to minimise bycatch and the impact of the HIMI Fishery on the broader marine environment. The key input controls include:</p> <ul style="list-style-type: none"> • limiting the number of vessels accessing the HIMI Fishery at any one time to three; • placing two observers on board all trips to monitor compliance with management arrangements and collect environmental, ecological and fisheries data; • prohibiting discharge of offal and other bycatch to avoid incidental interactions with seabirds and mammals; • imposing 'move-on' provisions such that vessels are required to move away from certain areas should a defined level of bycatch be taken in one fishing shot; • gear restrictions for trawl (bobbin diameter and mesh size) and longline (integrated weight line and the use of blue snoods); and • minimum size limit for mackerel icefish of 24cms.
Export	The main markets are the United States of America and Japan.
Bycatch	<p>All species, other than the two target species, are referred to as bycatch. A catch limit is set by AFMA for each bycatch species each season in line with limits determined by CCAMLR. For the 2006/07 season the catch limits for bycatch species are:</p> <ul style="list-style-type: none"> • skates and rays - 120 tonnes • macrourids - 465 tonnes • unicorn icefish - 150 tonnes • grey rockcod - 80 tonnes • each other species - 50 tonnes <p>In order to minimise bycatch, SFR conditions specify that operators must move on from a fishing area if, in any one haul, the bycatch of:</p> <ul style="list-style-type: none"> • unicorn icefish, grey rock cod or sleeper shark is equal to or greater than two tonnes; or • any other species is equal to or greater than one tonne. <p>The HIMI Management Plan requires that all bycatch be retained (with some exceptions) in order to limit possible interactions with marine mammals and seabirds.</p> <p>All retained bycatch is processed into fish meal and sold on return to port, with the exception of grey rockcod and unicorn icefish, which are</p>

	<p>generally retained whole. Skates, sharks, jellyfish, sponges, crabs and coral are returned to the ocean as these species either have a high chance of survival, do not attract seabirds and marine mammals when discarded or cannot be effectively processed through the meal plant.</p>
Interaction with Protected Species	<p>As stated in the 2002 Assessment Report, there is a high level of confidence on the reliability of information collected on protected species interactions in the HIMI Fishery. A range of information gathering systems are in place, including mandatory reporting of interactions to AFMA and reports by the two independent observers.</p> <p>Observers are also required to monitor the deployment and retrieval of trawl gear and observe a high percentage of trawling operations. Information is collected on abundance of species in the vicinity of the vessel, the nature of interaction and the results of interactions. Reports from the observers are provided to AAD for analysis.</p> <p>As detailed in the 2002 Assessment Report, Black-browed albatross, light-mantled albatross and southern giant petrel, all breed on the Heard and McDonald Islands. Antarctic fur-seals, sub-Antarctic fur-seals and southern elephant seals are known to occur in the region of the fishery.</p> <p>The HIMI Fishery has a range of management arrangements to minimise the levels of interaction. These include:</p> <ul style="list-style-type: none"> • no offal discharge requirement which limits provisioning opportunities for wildlife; • limit (up to three) on the number of boats allowed to operate in the HIMI Fishery at any one time; • in longline operations - using integrated weight line, paired streamer lines, blue snoods, brickle curtains and seasonal closures all designed to avoid seabirds attending the baits; • in midwater trawl operations - no midwater trawling occurs during the period 1 February to 31 March each year. At all other times midwater trawling can only occur at night; • minimising of lighting on fishing boats to reduce the risk of seabirds colliding with boats; and • prohibition on the use of plastic packaging bands. <p>The 2002 Assessment reports that from 1997-2002, there were eight interactions with seabirds, only three of which resulted in death due to fishing activity. A total of six seals (Antarctic fur-seals) were caught and died in the HIMI Fishery from 1997-2002. These were all considered unavoidable accidents. Vessels operating in the HIMI Fishery adhere to a code of conduct for the minimisation of seal interactions, including nil offal discharge to minimise attracting marine mammals and seabirds. The 2002 Assessment Report, noted that following the increased number of seals captured in the HIMI Fishery, operators voluntarily modified their code of conduct for the minimisation of seal interactions, which now includes the following</p>

when seals are observed:

- the winch must not be stopped whilst shooting net and bridles. If the winch is stopped the net must be haled back to the boat to ensure that no seals have been trapped;
- the net must be checked for gilled fish and all fish removed before shooting the net; and
- deployment of the net is not to take place from one hour before twilight until one hour after twilight.

During the period of exemption of the previous strategic assessment (April 2002 to date), as a result of interactions with fishing vessels, there have been 14 seabird interactions and nine seabird deaths; and no interactions or deaths of marine mammals. (Interactions with fishing vessels includes collisions with the gantry and superstructure).

As a result of interactions with fishing gear, there have been 23 interactions with seabirds and 18 deaths; and there have been 24 interactions with marine mammals and 24 deaths of marine mammals (all seals). (Interactions with fishing gear covers wildlife being caught or entangled in fishing gear).

This results in a total of 27 seabird deaths and 24 seal deaths in the HIMI Fishery since April 2002. In March 2005, 12 seabirds (seven black-browed albatross and five white chinned petrels) were killed in midwater trawl operations in the HIMI icefish fishery. AFMA report that this was unprecedented as midwater trawling had been widely used previously at that time of year, without incident. All the birds were taken in daylight hours. The Company (there is currently only one midwater trawl operator in the HIMI Fishery) immediately implemented new fishing arrangements to mitigate future catches of seabirds, later considered and agreed by AFMA.

The following condition was placed on the SFRs for midwater trawl operations targeting mackerel icefish as a result:

‘The SFR holder shall ensure that no midwater trawling occurs during the period 1 February to 31 March each year. At all other times midwater trawling can only occur at night (ie: during the hours of darkness between the times of nautical twilight)’.

Additional measures adopted by the Company include the removal of the ‘stickers’ from the net prior to the trawl being shot away, ensuring the trawl deck is swept clean of any fish, aiming to keep the meshes closed when the net is on the surface by maintaining a practical speed, monitor the number of birds around the boat and not shoot away where there is a significant risk of seabirds becoming entangled. No seabird interactions have been reported in trawl operations since that time.

Fishers are required to submit detailed reports of each wildlife interaction within 24 hours of the occurrence. Each report must also include a detailed response to the wildlife interaction, which must be

	<p>implemented immediately by the fisher to minimise the likelihood of similar interactions. The reports are submitted by AFMA to the Protected Species Unit at DEW.</p> <p>Incidence and response reports are reviewed regularly at the Sub-Antarctic Fisheries Resource Assessment Group (SARAG) meetings. Stakeholders are encouraged to contribute innovation and the application of enhanced technology to minimise any future wildlife interactions. There are continuing discussions between DEW, AFMA and the trawl operator in the HIMI Fishery, regarding further measures to reduce bycatch of EPBC listed migratory seabirds.</p> <p>Strategy 3 of the <i>Antarctic Fisheries Bycatch Action Plan, 2003</i> (BAP) states that if the number of reported incidents of seabird or marine mammals increases substantially, AFMA will review mechanisms to reduce the level of interactions.</p> <p>In regards to the 24 seal deaths from 2002 - present, which occurred as a result of interactions with fishing gear in the HIMI Fishery, AFMA report that the HIMI trawl operator is currently trialling seal excluder devices in the trawl nets to help mitigate the risk of further seal deaths.</p> <p>The Fisheries Research and Development Corporation (FRDC) has approved a four year project (commenced 1 July 2006) to investigate 'Demersal fishing interactions with marine benthos in the Australian EEZ of the Southern Ocean: an assessment of the vulnerability of benthic habitats to damage by demersal gears'. The development of underwater camera technology which can be attached to the fishing gear (trawl, longline and pot) is a key aim of the project along with assessment of benthic interactions of the differing gear types. AFMA have raised the potential to use this technology to observe seal behaviour and to help develop measures to minimise any future seal interactions.</p>
<p>Ecosystem Impacts</p>	<p>No fishing is permitted within the HIMI Marine Reserve and management arrangements stipulate an additional one nautical mile buffer zone around the Reserve region of each Island. The HIMI Marine Reserve is the world's largest protected marine reserve and provides representative ecosystem protection across the physiological classifications, setting aside over 39% of all waters shallower than 1000 metres in the EEZ.</p> <p>The management of the HIMI Fishery is based on CCAMLR's ecosystem management principles with additional controls imposed by AFMA. The CCAMLR management approach incorporates ecosystem components. Information on predators, prey and the environment are currently considered by the CCAMLR Working Group on Fish Stock Assessment. This information is then incorporated into the management arrangements for the HIMI Fishery.</p>

AFMA has commissioned CSIRO to conduct an “Ecological Risk Assessment for Commonwealth Fisheries”. One of the objectives of the project is to determine the relative sustainability risks in Commonwealth managed fisheries, considering target, bycatch and broader ecological impacts where possible. The project is being undertaken in close cooperation with SARAG and a draft report was provided to SARAG and AFMA in November 2006, with a final report expected to be completed in mid to late 2007. Should the project identify risks to bycatch or the environment not already being mitigated, appropriate management responses will be implemented.

Impacts on benthic communities are an issue for bottom trawl fisheries. While recognising that these impacts occur in the HIMI Fishery, AFMA considers that, based on current knowledge, the HIMI Fishery does not significantly impact on the benthos for the following reasons:

- a relatively small proportion of the HIMI EEZ is fished and within the fished areas benthic bycatch rates are low by comparison to total catch rates;
- preliminary assessment work indicates there are sufficient unfished areas (including marine protected areas) in each physiological classification of invertebrate assemblages in the HIMI Fishery (ongoing risk assessment will provide more information in this regard); and
- trawl gear used in the HIMI Fishery is designed to minimise benthic impacts.

The majority of the EEZ around HIMI is not trawled because it is unsuitable trawl ground, due largely to the excessive depth. Of the areas that are shallow enough to trawl, operators tend to concentrate on areas that are known to hold assemblages of either of the two target species.

As mentioned above, the FRDC has approved a four year project to investigate ‘Demersal fishing interactions with marine benthos in the Australian EEZ of the Southern Ocean: an assessment of the vulnerability of benthic habitats to damage by demersal gears’. The development of underwater camera technology which can be attached to the fishing gear (trawl, longline and pot) is a key aim of the project along with assessment of benthic interactions of the differing gear types.

Longlining is an approved fishing method (since November 2005) and is likely to have less impact on the benthos than bottom trawling. Pot fishing has also been trialled and the trial is expected to continue in the 2007/08 season.

Other management arrangements in place in the HIMI Fishery to reduce the impacts of the fishery on the ecosystem is a restriction on the discharge of poultry products or brassicas (broccoli, cabbage, brussel sprouts or kale) to avoid the introduction of avian diseases and non-native plants.

<p>Impacts on World Heritage property</p>	<p>The assessment also considered the possible impacts on the World Heritage values of the Heard Island and McDonald Islands World Heritage Property.</p> <p>The World Heritage status, the presence of the Heard Island Wilderness Reserve, and the high conservation value of the Island's flora and fauna, promoted the introduction of strategies to minimise the impact of the fishery on the Island's biota. As reported in the 2002 Assessment Report, there are a number of measures that have been implemented, which DEW considers appropriate for the management of a fishery operating in close proximity to a World Heritage Area. These management measures include the prohibition of fishing within 13 nautical miles of the Islands. The restriction prohibits fishing in the Wilderness Reserve, which has a further one nautical mile buffer zone, and limits the impact of the fishery on water quality, benthic communities and provides a refuge for target and non-target species.</p> <p>On this basis DEW considers that an action taken by an individual fisher, acting in accordance with the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i>, would not be expected to have a significant impact on a matter of World Heritage, as protected by the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act).</p>
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Table 2: Progress in implementation of recommendations made in initial assessment of the Heard Island and McDonald Islands Fishery

Recommendation	Progress	Recommended Action
<p>1. AFMA, in conjunction with other relevant agencies, is investigating the extent to which the HIMI Fishery and neighbouring island groups, including Iles Kerguelen, share a single, or straddling, Patagonian toothfish stock. Completion of this work should be a high priority. In the event that a shared, or straddling, stock is confirmed, AFMA should ensure that the HIMI Fishery stock assessment of the species will take into account removals from neighbouring areas with which the HIMI stock is shared.</p>	<p>AFMA, in conjunction with the Australian Antarctic Division (AAD) continue to work towards establishing whether the HIMI toothfish stock is shared or straddles into the adjacent areas. To date this work involved:</p> <ul style="list-style-type: none"> • the tagging and release of toothfish within the HIMI Fishery. This tagging program has resulted in a small number of tagged fish being recaptured in Kerguelen and Crozet; • the collection and analysis of toothfish samples from HIMI, Kerguelen, Crozet and Williams Ridge for genetic testing; • the signing of a joint Australia/France Compliance and Research Treaty agreement. Some preliminary discussions have taken place between Australian and French scientists with further talks scheduled. <p>Discussions between AAD scientists and French scientists continued at the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) meeting in November 2006. The French have completed a trawl survey and have started a tagging program to complement similar activity in the Australian EEZ around HIMI. Haul by haul data from the French fleet will be provided to AAD scientists.</p>	<p>AFMA report that the joint research being undertaken by Australia and France to determine the extent to which the Patagonian toothfish stock is shared is ongoing and will take several years to resolve. AFMA report that cooperation to date has been good, with joint work currently being undertaken. The results of the work will determine the management actions required, including the possibility of setting a TAC for the Kerguelen Plateau.</p> <p>Therefore, DEW has recommended that <i>AFMA, in conjunction with other relevant agencies, continues investigating the extent to which the HIMI Fishery and neighbouring Island groups including Iles Kerguelen, share a single, or straddling, Patagonian toothfish stock. In the event that a shared, or straddling, stock is confirmed, AFMA and AAD should ensure that the HIMI Fishery stock assessment of the species will take into account removals from neighbouring areas with which the HIMI stock is shared.</i> (Recommendation 3, Table 4)</p>

<p>2. AFMA, in conjunction with other relevant agencies, is conducting risk assessments of sleeper shark, skates and rays. Completion of this work should be a high priority. Investigation of potential bycatch mitigation strategies in conjunction with this research should be undertaken. In the event that significant risks are identified, AFMA should implement appropriate mitigation measures.</p>	<p>AFMA report that this recommendation has been met. During 2002/03 a risk assessment of sleeper shark bycatch was completed by AAD and CSIRO and reviewed by the CCAMLR Scientific Committee. The study concluded there is not a serious risk to the sustainability of this species if numbers caught do not exceed current levels (which has generally been less than 10 annually). During 2002, AAD undertook a stock assessment for skates and rays. This assessment was reviewed and endorsed by the CCAMLR Scientific Committee. The assessment resulted in the total allowable bycatch limit for these species being raised from 50 tonnes in 2001/02 to 120 tonnes in 2002/03, 2003/04, 2004/05 and 2005/06. The data gathered in recent years, including data from longline operations, may be used to update the assessment for the 2007/08 year. This is dependent on competing work priorities at AAD, where there is focus on an integrated assessment for the HIMI toothfish stocks. In addition SouthMAC has introduced review procedures if a bycatch trigger is approached. These trigger points are at substantially lower levels than the catch recommended by CCAMLR and set by AFMA annually. CCAMLR has encouraged the release of skates and rays that are alive and vigorous, and agreed these will not be counted against the catch limit set. AFMA, as required under the Antarctic Fisheries Bycatch Action Plan 2003, continues to regularly monitor and review the bycatch levels and to implement appropriate mitigation measures.</p>	<p>None. DEW notes that as required under the Antarctic Fisheries Bycatch Action Plan 2003, AFMA is to continue to regularly monitor and review the bycatch levels and to implement appropriate mitigation measures. If the bycatch trigger for these species is approached, particularly for sleeper shark (which is generally less than 10 annually), the SouthMAC review procedures will be triggered.</p>
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<p>3. Prior to the introduction of longlining in the HIMI Fishery:</p> <ul style="list-style-type: none"> • suitable seabird bycatch mitigation measures will be developed in accordance with the Threat Abatement Plan, for implementation by AFMA; • AFMA will conduct an evaluation, limited to assessing the deleterious effects of longlining on the environment; and • approval for the introduction of longlining from the Minister for the Environment and Heritage will be obtained. 	<p>AFMA report that this recommendation has been met.</p> <p>In September 2005 following the trial, a report on the 'Effects of Longlining' was prepared by AFMA. The report was discussed by the Sub-Antarctic Resource Assessment Group (SARAG) & the Sub-Antarctic Fisheries Management Advisory Committee (SouthMAC). SARAG and SouthMAC endorsed and supported the recommendation that longlining become a prescribed fishing method under the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i>.</p> <p>The AFMA Board endorsed the report and it was finalised and provided to the Minister for the Environment and Heritage on 4 October 2005. On 14 November 2005, the Minister advised AFMA that he supported the introduction of longlining as a prescribed fishing method in the HIMI Fishery. On 25 November 2005 a Direction allowing longlining was made by AFMA</p>	<p>None. DEW is satisfied that this recommendation has been met.</p>
<p>4. AFMA is monitoring seal interactions, with a view to determining if seals are beginning to habituate to fishing vessels. In the event that seal interactions increase, AFMA should review existing mitigation measures and implement appropriate responses in a timely manner.</p>	<p>AFMA through their observer program continue to monitor seal interactions with fishing vessels. There is currently no conclusive evidence that indicates seals are beginning to habituate to vessels. In May 2003 the Sub-Antarctic Fur Seal and Southern Elephant Seal Recovery Team concluded that fishing was not having a significant effect on the recovery of these species.</p> <p>The number of seal interactions with fishing vessels has varied over recent years.</p> <p>2002/03 season – 9 deaths</p>	<p>In recognition of the increase in the number of seal interactions in the HIMI Fishery in the last 5 years. DEW has recommended that <i>AFMA to continue to monitor seal interactions. AFMA to review existing mitigation measures and to investigate the need for the use of additional measures to mitigate against interactions with protected species, particularly seals.</i> (Recommendation 4, Table 4.)</p>

	<p>2003/04 season – 3 deaths 2004/05 season – 3 deaths 2005/06 season – 5 deaths SARAG and SouthMAC continue to monitor these interactions in line with the requirement of the Antarctic Fisheries Bycatch Action Plan 2003.</p>	
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Table 3: DEW's assessment of the HIMI Fishery against the requirements of the EPBC Act related to decisions made under Parts 13 and 13A

Part 13

Section 208A Minister may accredit plans or regimes	DEW assessment of the HIMI Fishery
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(d) the plan or regime requires persons engaged in fishing under the plan or regime to take all reasonable steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing; and</p> <p>(e) the fishery to which the plan or regime relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p>	<p>The HIMI Fishery will be managed under the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> and supporting instruments, developed under the <i>Fisheries Management Act 1991</i>.</p> <p>The Management Plan for the HIMI Fishery was accredited in May, 2002. AFMA advised DEW of minor amendments to the management Plan for the HIMI Fishery in November 2004 and August, 2005. DEW agreed that the amendments did not significantly affect the sustainability of the HIMI Fishery and a new Part 13 declaration was signed in March, 2006.</p> <p>The number of interactions with listed threatened species (including seabirds and seals) in the HIMI Fishery has increased since the last DEW assessment. However, with the precautionary bycatch management arrangements, as well as the implementation of a new recommendation to investigate the need for the use of additional measures to mitigate against interactions with protected species, DEW considers the operation of the HIMI Fishery is not likely to adversely affect the survival or recovery in nature of any threatened species.</p>

Section 222A Minister may accredit plans or regimes	DEW assessment of the Heard Island and McDonald Islands Fishery
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(b) the plan or regime requires persons engaged in fishing under the plan or regime to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing; and</p> <p>(c) the fishery to which the plan or regime relates does not, or is not likely to, adversely affect the survival or recovery in nature of a listed migratory species.</p>	<p>The HIMI Fishery will be managed under the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> and supporting instruments, developed under the <i>Fisheries Management Act 1991</i>.</p> <p>The Management Plan for the HIMI Fishery was accredited in May, 2002. AFMA advised DEW of minor amendments to the management Plan for the HIMI Fishery in November 2004 and August, 2005. DEW agreed that the amendments did not significantly affect the sustainability of the HIMI Fishery and a new Part 13 declaration was signed in March, 2006.</p> <p>The report provided by AFMA indicates that there have been interactions with migratory species such as seabirds. Active management of seabird interactions, such as trawling only permitted at night, no midwater trawling between the period 1 February to 31 March each year and ensuring the trawl deck is swept clean of any fish, has been effective in minimising the risk to these species. No seabird interactions have been reported in trawl operations since the introduction of these management measures.</p> <p>With the precautionary bycatch management arrangements, the implementation of a new recommendation to investigate the need for the use of additional measures to mitigate against interactions with protected species, as well as further discussions between DEW, AFMA and the trawl operator in the HIMI Fishery to develop further measures to reduce bycatch of migratory seabirds, DEW considers the operation of the HIMI Fishery is not likely to adversely affect the survival or recovery in nature of any listed migratory species.</p>

Section 245 Minister may accredit plans or regimes	DEW assessment of the HIMI Fishery
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(b) the plan or regime requires persons engaged in fishing under the plan to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p> <p>(c) the fishery to which the plan relates does not, or is not likely to, adversely affect the conservation status of a species of cetacean or a population of that species.</p>	<p>The HIMI Fishery will be managed under the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> and supporting instruments, developed under the <i>Fisheries Management Act 1991</i>.</p> <p>The Management Plan for the HIMI Fishery was accredited in May, 2002. AFMA advised DEW of minor amendments to the management Plan for the HIMI Fishery in November 2004 and August, 2005. DEW agreed that the amendments did not significantly affect the sustainability of the HIMI Fishery and a new Part 13 declaration was signed in March, 2006.</p> <p>The report provided by AFMA indicates that there have not been any interactions with cetaceans in the HIMI Fishery. Therefore, DEW considers the current operation of the HIMI Fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p>

Section 265 Minister may accredit plans or regimes	DEW assessment of the HIMI Fishery
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(c) the plan requires persons engaged in fishing under the plan to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</p>	<p>The HIMI Fishery will be managed under the <i>Heard Island and McDonald Islands Fishery Management Plan 2002</i> and supporting instruments, developed under the <i>Fisheries Management Act 1991</i>.</p> <p>The Management Plan for the HIMI Fishery was accredited in May, 2002. AFMA advised DEW of minor amendments to the management Plan for the HIMI Fishery in November 2004 and August, 2005. DEW agreed that the amendments did not significantly affect the</p>

<p>(d) the fishery to which the plan relates does not, or is not likely to, adversely affect the conservation status of a listed marine species or a population of that species.</p>	<p>sustainability of the HIMI Fishery and a new Part 13 declaration was signed in March, 2006.</p> <p>The number of interactions with listed marine species (including seabirds and seals) in the HIMI Fishery has increased since the last DEW assessment. However, with the precautionary bycatch management arrangements, as well as the implementation of a new recommendation regarding investigating the use of additional measures to mitigate against interactions with protected species, DEW considers the operation of the HIMI Fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p>
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Part 13A

Section 303DC Minister may amend list	DEW assessment of the HIMI Fishery
<p>Minister may, by instrument in published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <p>(a) including items in the list;</p>	
<p>In deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery, 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>The HIMI Fishery was assessed under Part 10 of the EPBC Act in May, 2002. In conducting this assessment, DEW considered that actions taken in the fishery would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area over a period of 5 years while AFMA implemented recommendations to improve the management of the fishery. Consequently, the draft management plan [<i>Heard Island and McDonald Islands Fishery Management Plan 2002</i>] was accredited under section 33 of the EPBC Act.</p> <p>Since accreditation of the HIMI Fishery in 2002 the following amendments have been made to the Plan and associated legislation:</p> <ul style="list-style-type: none"> accreditation of longlining as an approved method (Direction No.

	<p>HIMIFD 9 – prohibition on the use of fishing methods other than trawling or longlining);</p> <ul style="list-style-type: none"> • Management Plan amendment of 16 November 2004 to: <ul style="list-style-type: none"> ○ change the southern boundary of the Fishery from 55°S to 56°S to reflect a decision by CCAMLR to alter the boundary of Statistical Division 58.5.2 • Management Plan amendments of 10 May 2006 to: <ul style="list-style-type: none"> ○ amend the date for allocating monitoring responsibilities, under the Fisheries Assessment Plan, from 1 December to 1 March; ○ provide AFMA with the capacity to determine catch limits for non-target species; ○ alter the overcatch provisions to make them consistent with the overcatch provisions proposed for the Macquarie Island Toothfish Fishery; and ○ specify the number of SFRs for Patagonian toothfish and mackerel icefish. <p>Each year the conditions on SFRs may be amended (as necessary), to reflect any changes in Conservation Measures determined by CCAMLR. For example, longline season extensions have been approved in recent years following the adoption of effective seabird mitigation strategies.</p> <p>The Management Plan for the HIMI Fishery was accredited in May, 2002. AFMA advised DEW of minor amendments to the management Plan for the HIMI Fishery in November 2004 and August, 2005. DEW agreed that the amendments did not significantly affect the sustainability of the HIMI Fishery and a new Part 13 declaration was signed in March, 2006.</p>
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<p>The above does not limit the matters that may be taken into account in deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery.</p>	<p>It is not possible to list exhaustively the factors that you may take into account in amending the List of Exempt Native Specimens (LENS). The objects of Part 13A, which are set out below this table, provide general guidance in determining factors that might be taken into account. A matter that is relevant to determining whether an amendment to the list is consistent with those objects is likely to be a relevant factor.</p> <p>DEW considers that the amendment of the LENS to include product taken in the HIMI Fishery would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> ▪ the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species; ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1); ▪ the operation of the HIMI Fishery is unlikely to be unsustainable and threaten biodiversity within the next 5 years; and ▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.
<p>Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. 	<p>The public comment period on the AFMA submission sought comment on the submission for the HIMI Fishery and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>Letters to Senator the Hon Eric Abetz, Minister for Fisheries, Forestry and Conservation, and the Hon Tony Rundle, Chairman, AFMA, advises them of the intention to declare the Fishery exempt from the export provisions of the EPBC Act.</p>

Section 303FR Public consultation	DEW assessment of the HIMI Fishery
<p>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>Under the EPBC Act, a decision to amend the LENS does not require a public consultation period. However, a public notice, which set out the proposal to grant export approval to the HIMI Fishery and included the submission for the HIMI Fishery, was released for public comment which closed on 18 April 2007 with 1 submission received.</p>
<p>A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to grant export approval to the HIMI Fishery and included the submission for the HIMI Fishery was released for public comment on 16 March 2007 and closed on 18 April 2007, a total of 21 business days.</p>
<p>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>The public comment received was in support of the HIMI Fishery. The DEW assessment has considered the public comment; however, DEW did not consider a response was required.</p>

Section 391 Minister must consider precautionary principle in making decisions	DEW assessment of the HIMI Fishery
<p>The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.</p>	<p>The precautionary principle must be considered when making a decision to include specimens on the LENS.</p>
<p>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>	

Objects of Part 13A

- (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.

Final recommendations to AFMA for the HIMI Fishery

The material submitted by AFMA indicates that the HIMI Fishery operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. DEW considers that the fishery is well managed and unlikely to have an unacceptable or unsustainable impact on the environment in the short to mid term. The AFMA submission states that the HIMI Fishery is one hundred percent compliant with the seabird TAP, recovery plans and CCAMLR requirements. The strict environmental measures in place in the HIMI Fishery are amongst the highest in the world and fisher's adherence to these measures is verified through the carriage of two observers on every trip.

Overall, DEW recognises the precautionary approach AFMA has adopted for managing the HIMI Fishery, which exceed standards set by CCAMLR. DEW considers that the management arrangements, including: an annually set TAC; area closures; bycatch limits; gear restrictions; and move-on provisions are conservative and suggest that the fishery is being managed in an ecologically sustainable way.

The *Heard Island and McDonald Islands Fishery Management Plan 2002* and associated legislation, outline measures that ensure there is a high level of compliance with management arrangements for the HIMI Fishery. The measures in place to monitor and ensure compliance include:

- the requirement to carry an Integrated Computerised Vessel Monitoring System (ICVMS), which enables monitoring of the movement of vessels within the HIMI Fishery. Information provided through the ICVMS includes the vessel's location, course and speed;
- the presence of two observers on board all voyages, which allows for monitoring and recording of all catch by an independent person. Observers are also able to monitor an operator's compliance with management arrangements, in particular input controls and environmental management measures;
- a formal process through which observers may raise any compliance related issues with the Master of the vessel to ensure operators are aware of and comply with management measures;
- at port monitoring of all catch unloads by an AFMA authorised officer. This further verifies catch records maintained by the observer, reported by the vessel's Master and ensures compliance with catch limits;
- requirement to complete the toothfish Catch Documentation Scheme (CDS) paperwork for unloading and export of all toothfish product; and
- completion of shot-by-shot daily logbooks and provision of that data to AFMA and AAD.

In making its assessment, DEW considers that the range of management measures are sufficient to ensure that the fishery is conducted in a manner that does not lead to over-fishing and that stocks are not currently overfished. Taking into account the TACs for the target species and limits on bycatch, limit of three vessels accessing the HIMI Fishery at any one time and strict logbook and CCAMLR inspection requirements, DEW considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem. Management of the HIMI Fishery has a history of reacting appropriately to threats to sustainability and DEW is confident that AFMA will continue to provide this high quality management.

DEW is satisfied that the HIMI Fishery will not be detrimental to the survival or conservation status of the taxon to which it relates in the short term. Similarly, it is not likely to threaten any relevant ecosystem in the short term. To contain and minimise the risks in the longer term the recommendations listed below have been made. DEW believes that product taken in the HIMI Fishery should be exempt from the export controls of Part 13A of the EPBC Act, with that exemption to be reviewed in 5 years.

There are some concerns regarding the increase in interactions with seals since the initial DEW assessment in 2002. However, DEW believes that with the precautionary bycatch management arrangements, as well as the development of a new recommendation regarding seal interactions, the operation of the fishery does not, or is not likely to, adversely affect the survival in nature of a listed threatened species or population of that species, or the conservation status of a listed migratory species, cetacean or listed marine species or a population of any of those species. DEW also considers that under the HIMI Management Plan and the *Antarctic Fisheries Bycatch Action Plan, 2003*, operators are required to take all reasonable steps to avoid the killing or injuring of protected species and that AFMA is taking steps to help mitigate the risk of further interactions.

The HIMI Management Plan was accredited in May, 2002. Since accreditation in 2002, amendments have been made to the HIMI Management Plan and associated legislation in November 2004 and May 2006. DEW agreed that the amendments did not significantly affect the sustainability of the HIMI Fishery and the latest Part 13 declaration was signed in March, 2007. The Notice of intent to accredit the HIMI Management Plan under s. 33 of the Act was tabled on 21 March 2007, with the 15 sitting days due to be completed on 20 June 2007. Once the disallowance period has elapsed, DEW will complete the formal accrediting of the amended HIMI Management Plan under section 33 of the EPBC Act.

Recommendations are provided below with a brief explanation of the related issue/intent. Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the declaration (5 years).

Table 4: HIMI Fishery Assessment– Summary of Issues and Recommendations May, 2007

	Issue	Recommendation
1	<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid, DEW needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p>	<p>Recommendation 1:</p> <p><i>AFMA to advise DEW of any material change to the HIMI management arrangements that could affect the criteria on which Environment Protection and Biodiversity Conservation Act 1999 decisions are based, within three months of that change being made.</i></p>
2	<p><u>Annual Reporting</u></p> <p>DEW considers it important that reports be produced and presented to DEW annually in order for the performance of the fishery and progress in implementing the recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration (5 years). Annual reports should include a description of the fishery, management arrangements in place, recent catch data for all sectors of the fishery, status of target stock, interactions with protected species, impacts of the fishery on the ecosystem in which it operates, progress in implementing DEW recommendations and research and monitoring outcomes.</p>	<p>Recommendation 2:</p> <p><i>Reports to be produced and presented to DEW annually, and to include:</i></p> <ul style="list-style-type: none"> <i>i. Information sufficient to allow assessment of the progress of AFMA in implementing the recommendations made in the Assessment of the HIMI Fishery, 2007; and</i> <i>ii. A description of the fishery management arrangements in place, recent catch data for all sectors of the fishery, status of target stock, interactions with protected species, impacts of the fishery on the ecosystem in which it operates and research and monitoring outcomes.</i> <p><i>Information should only be provided on those aspects which are relevant to the fishery and that articulate ‘changes’ since the last annual report.</i></p>

3	<p><u>Shared Stocks Research</u></p> <p>AFMA report that the joint research being undertaken by Australia and France to determine the extent to which the Patagonian toothfish stock is shared is ongoing and will take several years to resolve. AFMA report that cooperation to date has been good with joint work currently being undertaken. The results of the work will determine the management actions required, including the possibility of setting a TAC for the Kerguelen Plateau.</p> <p>Therefore, DEW would like to see this research continue, and for the outcomes of the research to inform future management arrangements in the HIMI Fishery.</p>	<p>Recommendation 3:</p> <p><i>AFMA, in conjunction with other relevant agencies, continues investigating the extent to which the HIMI Fishery and neighbouring Island groups including Iles Kerguelen, share a single, or straddling, Patagonian toothfish stock. In the event that a shared, or straddling, stock is confirmed, AFMA and AAD should ensure that the HIMI Fishery stock assessment of the species will take into account removals from neighbouring areas with which the HIMI stock is shared.</i></p>
4	<p><u>Increase in seal interactions</u></p> <p>AFMA, through their observer program, continue to monitor seal interactions with fishing vessels. AFMA report that there is currently no conclusive evidence indicating that seals are beginning to habituate to vessels. In May 2003, the Sub-Antarctic Fur Seal and Southern Elephant Seal Recovery Team concluded that fishing was not having a significant effect on the recovery of these species. SARAG and SouthMAC continue to monitor these interactions in line with the requirement of the Antarctic Fisheries Bycatch Action Plan 2003.</p> <p>DEW has some concerns regarding the increase in interactions with seals since the last DEW assessment. However, DEW believe that with the precautionary bycatch management arrangements, as well as the development of a new recommendation regarding seal interactions, the operation of the fishery does not, or is not likely to, adversely affect the survival in nature of a listed threatened species or population of that species, or the conservation status of a listed migratory species, cetacean or listed marine species or a population of any of those species. DEW also considers that under the management plan operators are required to take all reasonable steps to avoid the</p>	<p>Recommendation 4:</p> <p><i>AFMA to continue to monitor seal interactions. AFMA to review existing mitigation measures and to investigate the need for the use of additional measures to mitigate against interactions with protected species, particularly seals.</i></p>

	killling or injuring of protected species, and the level of interaction under current fishing operations is relatively low and that AFMA is taking steps to help mitigate the risk of further interactions.	
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References

Acronyms

AFMA	Australian Fisheries Management Authority
AAD	Australian Government Antarctic Division
BAP	Bycatch Action Plan
BRS	Bureau of Rural Sciences
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CDS	Catch Documentation Scheme
DEW	Australian Government Department of the Environment and Water Resources
EEZ	Exclusive Economic Zone
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FAO	Food and Agriculture Organisation
FRDC	Fisheries Research and Development Corporation
HIMI	Heard Island and McDonald Islands
ICVMS	Integrated Computerized Vessel Monitoring System
IUU Fishing	Illegal, unregulated and unreported Fishing
SARAG	Sub-Antarctic Fisheries Resource Assessment Group
TAC	Total Allowable Catch
TAP	Threat Abatement Plan