



Australian Government

Department of the Environment, Water, Heritage and the Arts

Assessment of the
Western Australia Shark Bay Scallop Fishery

DECEMBER, 2007

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Disclaimer

This document is an assessment carried out by the Department of the Environment, Water, Heritage and the Arts 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, Heritage and the Arts 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, Heritage and the Arts or the Australian Government.

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Table 1: Summary of the Western Australia (WA) Shark Bay Scallop Managed Fishery (SBSMF)

<p>Publicly available information relevant to the fishery</p>	<ul style="list-style-type: none"> • WA <i>Fish Resources Management Act 1994</i> (FRM Act) • WA <i>Fish Resources Management Regulations 1995</i> (FRM Regulations) • WA <i>Shark Bay Scallop Management Plan 1994</i> • <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) • Department of Fisheries WA (DFWA) Application to Environment Australia for the SBSMF, July 2002 • Department of Environment and Heritage Assessment Report 2002 • DFWA State of the Fisheries Report 2003/04 • DFWA State of the Fisheries Report 2004/05 • DFWA State of the Fisheries Report 2005/06.
<p>Area</p>	<p>Shark Bay in WA (see <i>Shark Bay Scallop Management Plan 1994</i> for specific coordinates). The boundaries for the Class A (scallop only) boats are the waters of Shark Bay and Denham Sound west of longitude 113°30'36" E and north of a line running due east from the northern extremity of Cape Bellefin to Peron Peninsula.</p>
<p>Fishery status</p>	<p>The target species is fully fished.</p> <p>Scallop landings have varied over the last 15 years depending primarily on the strength of recruitment.</p>
<p>Management arrangements</p>	<p>The fishery is managed under the WA <i>Shark Bay Scallop Management Plan 1994</i>, the FRM Act and the FRM Regulations.</p> <p>Management of the fishery is based on input controls which include limited entry, seasonal and area closures, gear controls including bycatch reduction devices (grids) and crew limits.</p> <p>A catch sharing arrangement between the Class A and B Shark Bay Scallop Managed Fishery Licence holders is being trialled in 2007 and 2008. Under this arrangement, the Class A licensees (dedicated scallop fishers) are managed on the basis of taking 72% of the estimated sustainable catch, while the Class B licensees (whom predominantly target prawns in the Shark Bay prawn fishery but may also retain scallops) are managed around taking 28%. The longer term future of this catch sharing arrangement is being examined as part of a broader strategic review of the Shark Bay Prawn and Scallop Managed Fisheries.</p>
<p>Target Species</p>	<p>Saucer scallops (<i>Amusium balloti</i>).</p> <p>Information on the biology of this species can be found in the 2002 Assessment Report of the fishery located on the Department of the Environment, Water, Heritage and the Arts' (DEWHA) website.</p>
<p>Byproduct Species</p>	<p>Crabs, squid, cuttlefish and bugs.</p>
<p>Gear</p>	<p>Twin gear otter trawl with 10mm ground chain.</p> <p>Class A vessels currently tow two 7 fathom nets. A proposed Fisheries</p>

	<p>Research and Development Corporation (FRDC) project, intends to trial larger mesh and square mesh cod ends, which could potentially further reduce bycatch.</p> <p>Class B vessels have traditionally towed two 8 fathom nets. However, over the past two fishing seasons, they have been fishing with four 5.5 fathom nets under a quad gear trial. Following this trial, the ongoing use of quad gear, along with unitization of head rope length, and removal of the 375 boat unit rule are to be formalised through management plan amendments and other relevant approvals for Class B vessels during 2008.</p>
Season	<p>Opening and closing dates vary each year depending on the pre-season predictions of recruitment dynamics, moon phase and environmental conditions. Fishing in Denham Sound commences prior to the opening of the Shark Bay prawn fishery season while the northern grounds of the fishery are formally closed in line with the Shark Bay prawn fishery (generally closed November to April/May), but fishing usually ceases once the catch rate threshold has been reached.</p> <p>The catch rate cut-off threshold for the season is determined following pre-season research surveys (which determine the size and abundance of scallops in the fishing grounds) and through discussion with industry. The pre-spawning catch rate level is chosen to ensure that up to 40% of the standing scallop stock will be left to spawn. When recruitment of scallops is low, the SBSMF will only open for a short period of time. DFWA's Research Division monitors the catch rate throughout the season, and when the fleet reaches the threshold catch rate over two consecutive days, the boats cease fishing for scallops. This allows spawning to occur with the remaining stock. The Class B licensees (prawn fleet) then continue fishing after the spawning period (July in 2006 and August - September in 2007) until either the catch rate cut off, or the proportional scallop catch sharing limit, is reached.</p>
Commercial harvest 2006	<p>The total scallop landings for both Class A and B vessels in 2006 was 1,068 t whole weight, of which the Class A boats landed 636 t (59.5%) and the Class B boats landed 432 t. The total landings were below the predicted catch. The November 2005 scallop survey provided a catch forecast of 1,550– 2,330 t for the Shark Bay scallop fishery for 2006.</p> <p>Scallop landings fluctuate from year to year due to variations in recruitment success, as demonstrated by the range in catches from the previous three seasons – 2005 the total catch was 1,923 tonnes whole weight, 1,665 t in 2004, and 775 t in 2003.</p>
Value of commercial harvest 2005	Estimated annual value (to fishers) for 2005 was \$6.5 million.
Take by other sectors	No take by other sectors.
Commercial licences issued	<p>14 Class A licenses and 27 Class B licenses.</p> <p>In 2007 only 18 of the 27 Class B licences for the fishery were active. Industry is currently investigating re-structure options to bring about a permanent reduction in the size of the Class B fishing fleet.</p>

Export	Frozen scallop meat is exported to Asian markets.
Bycatch	<p>Class A vessels - Owing to the legislated mesh size of the nets (100 mm) and the relatively short time spent by boats in this fishery, the total bycatch of fish is low.</p> <p>Class B vessels - All vessels are required by way of a condition on the managed fishery licence to fish with a bycatch reduction device (BRD) and a fish escapement device (FED) in each net.</p>
Interaction with Protected Species	<p>Protected species, occasionally captured, are released alive due to the relatively short duration of trawls. During 2003, BRDs were installed in all nets to minimise the capture of large animals on Class A scallop boats. The risk to these animals is negligible now that grids have been fully implemented.</p> <p>Class B boats are also required to have BRD and FED in each net, which has generally eliminated the occasional capture of turtles in trawl nets. Although protected species including whales, dolphins, dugongs, turtles and sea snakes are particularly abundant in Shark Bay, only sea snakes are seen regularly in the trawl catches in certain areas, and these are mostly released alive.</p>
Ecosystem Impacts	<p>A recent FRDC project compared the faunal composition between trawled and untrawled areas within Shark Bay. Preliminary outcomes of the FRDC project suggest that faunal composition was similar in trawled and untrawled areas in general and therefore it is sufficient that the principal form of monitoring (and indeed management) of species diversity matters in the Shark Bay fisheries is the extent of the trawled areas. Furthermore, preliminary results also suggest that the percentage of the area trawled should not exceed that observed in recent years (approximately 40% of area of the fishery open to trawling).</p> <p>The permanent area closures and other temporal closures that are applied in the Fishery provide protection to the key life history stages of the majority of the bycatch species caught. The project identified that the 10-20 most common species of fish and invertebrates could be used as indicator species (for trends in abundance and diversity measures) in Shark Bay. These are all relatively short-lived, abundant and widespread in both trawled and untrawled areas.</p>
Impacts on World Heritage property	<p>The previous assessment considered the possible impacts on the World Heritage values of the Shark Bay World Heritage Area. The Shark Bay region was declared a World Heritage Area in 1991 and this fishery operates within the declared area. Fishing for scallops in this area has occurred since the late 1960s, well before the World Heritage declaration.</p> <p>Shark Bay's listed World Heritage values are located primarily in areas that are protected from or unsuited to trawling. On this basis DEWHA considers that an action taken by an individual fisher, acting in accordance with the <i>WA Shark Bay Scallop Management Plan 1994</i> would not be expected to have a significant impact on a matter protected under the EPBC Act.</p>

Table 2: Progress in implementation of recommendations made in initial assessment of the SBSMF

Recommendation	Progress	Recommended Action
<p>1. Opportunity should be provided to conservation, community, recreational fishing and world heritage area management interests to participate in the processes of the main advisory body to the WA Fisheries Minister for this fishery. DFWA should also ensure that any relevant indigenous interests are considered through appropriate consultative mechanisms.</p>	<p>The Joint Trawl Management Advisory Committee (MAC) was established in January 2002 to provide advice to the Minister on matters relating to the Shark Bay Prawn, Shark Bay Scallop and Exmouth Gulf Prawn Managed Fisheries.</p> <p>Commercial, conservation and recreational interests are included in the consultative process through membership of the MAC. The committee meets 1 to 2 times per year.</p> <p>Currently, the structure of the committee is as follows:</p> <ul style="list-style-type: none"> • Independent chair • 8 members with expertise in the commercial prawn and scallop fishing industry • 1 member with recreational fishing sector expertise • 1 member with community sector expertise • 1 member with conservation sector expertise • Chief Executive Officer (ex officio) or nominee <p>The Committee does not include a specific position for a World Heritage area representative or a member of the Indigenous sector. However, to ensure that World Heritage and Indigenous interests are included in the MAC consultation process, when relevant or deemed appropriate they are consulted. DFWA is also represented at World Heritage scientific and community advisory committee meetings, providing the opportunity for World Heritage interests to raise any issues of concern with DFWA.</p>	<p>Ongoing. DEWHA encourages DFWA to continue to provide opportunity for conservation, indigenous, recreational fishing and community groups and world heritage area management interests to participate in the processes of the Joint Trawl MAC for the SBSMF.</p>

<p>2. The ESD report, including all performance measures, responses and information requirements, should be formally incorporated into the management regime and decision making process within one year, with a clear timeframe for implementation.</p>	<p>DFWA reports against the performance measures for the Fishery in the annual <i>State of the Fisheries Report</i>. DFWA liaises with Industry on an annual basis to determine the fishing arrangements and catch rate thresholds for the coming year. This regular review ensures management arrangements are conducive with maintaining resource sustainability.</p>	<p>Met. DFWA have formally published the management objectives and performance measures for the fishery as part of its ESD report series on its website (http://www.fish.wa.gov.au/docs/esd/index.php?0605)</p>
<p>3. DEWHA should be informed of any changes to the management plan or managerial commitments in the ESD report.</p>	<p>There have been no changes to the management plan since accreditation.</p> <p>A trial of quad gear has been underway for the past 2 years for Class B licensees under a FRM Act exemption.</p> <p>In association with unitization of head rope, the 375 boat unit rule is to be formally abolished by a management plan amendment. Currently, a FRM Act exemption allows vessels greater than 375 boat units to operate within the SBSMF.</p> <p>DFWA and industry are currently working together to undertake strategic management reviews of the Shark Bay Prawn and Shark Bay Scallop Managed Fisheries. The Steering Committee formed to undertake the review has released a draft report in the form of <i>Fisheries Management Paper 222</i> (Appendix 5) which can be downloaded from http://www.fish.wa.gov.au/docs/mp/. It is anticipated that the review will be finalized in the coming months.</p>	<p>Ongoing (Recommendation 2, Table 4).</p>
<p>4. The ESD report should be amended to incorporate</p>	<p>Over the last 3 years, the fishery has developed a real time management response program to ensure sustainability and</p>	<p>Met and ongoing.</p>

<p>timeframes for all management responses to breaches of performance measures.</p>	<p>also to enhance economic return to the SBSMF through maximising scallop meat weight and condition.</p> <p>DFWA undertakes an annual pre season abundance survey and, based on the outcomes of the survey, DFWA works with industry to set catch rate thresholds and fishing arrangements for the coming year within the context of the management objectives for the SBSMF. Based on real time information on catch and catch rates immediate action is taken to control operations in the SBSMF.</p> <p>The annual DFWA-industry meetings to set catch rate thresholds and fishing arrangements for the coming year provide opportunity to review and address management responses to breaches in performance measures.</p> <p>DFWA have advised that breaches in a performance measure will be reported in the <i>State of the Fisheries Report</i>. If a breach materially affects the sustainability of the target species or negatively impacts on byproduct, bycatch, protected species or the ecosystem, the breach will be reported to the Minister for Fisheries within 3 months for subsequent management review and action with timeframes for implementation.</p>	
<p>5. The implementation of a decision rule to close the fishery or prevent commencement of the fishing season, when recruitment of scallops is sufficiently low, should be pursued as a priority.</p>	<p>Over the past 2 years the SBSMF has moved from post spawning fishing with a pre-determined season closing date to a combination of pre and post spawning fishing using a catch rate cut-off threshold to close the SBSMF as well as setting different catch rate thresholds for different parts of the SBSMF (ie Denham Sound catch rate threshold is higher than north Shark Bay due to only daylight fishing being permitted in this area).</p>	<p>Ongoing. (Recommendations 4 and 5, Table 4).</p>

	<p>The catch rate cut-off threshold for the season is determined following pre-season research surveys (which determine the size and abundance of scallops in the fishing grounds) and through discussion with industry. The pre-spawning catch rate level is chosen to ensure that up to 40% of the standing scallop stock will be left to spawn. When recruitment of scallops is low, the SBSMF will only open for a short period of time. DFWA's Research Division monitors the catch rate throughout the season, and when the fleet reaches the threshold catch rate over two consecutive days, the boats cease fishing for scallops. This allows spawning to occur with the remaining stock. The Class B licensees (prawn fleet) then continue fishing after the spawning period (July in 2006 and August - September in 2007) until either the catch rate cut off, or the proportional scallop catch sharing limit, is reached.</p> <p>Legislatively, the <i>Shark Bay Scallop Management Plan 1994</i> allows for the DFWA Chief Executive Officer to make a determination to prohibit fishing in the SBSMF at any time, when it is in the better interest of the fishery to do so, thereby providing a quick and efficient mechanism for giving effect to season opening and closing times.</p>	
<p>6. Permitted byproduct should be limited to species currently harvested, with a robust system developed to add or remove species as appropriate. Suitable catch triggers should be developed to ensure any change in</p>	<p>A draft Fisheries Management Paper titled "Managing the Take of Byproduct in Managed Fisheries in Western Australia" is being developed as part of the process of meeting this recommendation (and dealing with byproduct issues generally in WA Fisheries).</p> <p>It is proposed to manage the take of byproduct in managed fisheries by including a schedule within the management</p>	<p>Ongoing. DEWHA encourages DFWA to continue to develop strategies to manage byproduct in the SBSMF.</p>

<p>targeting behaviour can be detected and addressed as it occurs. Management responses should be clarified, with timeframes for implementation, to address such changes, so that the management arrangements are able to minimise threats to byproduct species.</p>	<p>plan which specifies a list of byproduct species historically caught in the fishery where the take of those species is not otherwise prohibited as well as catch limits for each species. The Minister has given his in-principal support for this strategy to deal with the take of byproduct. DFWA's Research Division is in the process of examining byproduct catch data for all of the trawl fisheries in order to produce schedules specific to each fishery.</p> <p>The results of the FRDC Biodiversity project (see Recommendation 8) have also provided an inventory of bycatch (including byproduct) species caught at fixed sites throughout Shark Bay and provides information on the spatial distribution of byproduct species. The final report on this project will be submitted to FRDC in early 2008.</p>	
<p>7. DFWA should participate in any cross-jurisdictional activities regarding relevant target and byproduct species, including squid.</p>	<p>DFWA currently participates in various cross-jurisdictional activities in order to ensure sustainability of the State's fish stocks. For example, DFWA regularly engages DEWHA regarding interaction with protected species and also consults with the Department of Agriculture, Fisheries and Forestry and regarding the Offshore Constitutional Settlement and with the Australian Fisheries Management Authority on cross-jurisdictional fishery issues.</p> <p>DFWA indicates that it has not had the need to consider any cross-jurisdictional activities regarding species taken or activities within the SBSMF.</p>	<p>Ongoing. DEWHA encourage the participation in cross-jurisdictional activities to ensure the ongoing ecological sustainable management of the SBSMF.</p>
<p>8. Ongoing monitoring should be implemented sufficient to identify long-term trends in bycatch between fished and unfished</p>	<p>The FRDC Biodiversity project is working toward meeting this recommendation. The final report will be forwarded to FRDC in early 2008 but preliminary results indicate high species richness in trawled and untrawled sites. The maximum fish and invertebrate species richness was found</p>	<p>Ongoing (Recommendation 7, Table 4).</p>

<p>areas to ensure that information used in the risk assessment for the fishery remains based on accurate and current data.</p>	<p>in the northern and southern extremes of the scallop trawl grounds, and the minimum was found at the northern limits of Shark Bay. Similarly, no consistent patterns were observed with species evenness and diversity indices when comparing trawled and untrawled sites. Differences in diversity measures were observed both between sites and sites within assemblages at a given point in time (spatial differences), and from year to year at each sample location (temporal differences). However these differences were not consistent and were not attributable to whether a site was trawled or not. This indicates that many other factors in addition to trawl impacts are important in species richness and diversity.</p> <p>One of the main objectives of the FRDC project was to compare the faunal composition between trawled and untrawled areas and if the faunal composition was similar, then it was highly likely that closed areas act as refuges for the majority of those species impacted by trawling. Faunal composition was similar in trawled and untrawled areas in general and therefore it is sufficient that the principal form of monitoring (and indeed management) of species diversity matters in the Shark Bay fisheries is the extent of the trawled areas. The FRDC study suggested that the percentage of area trawled should not exceed that observed in recent years (5-25% of area of the fishery open to trawling).</p> <p>Furthermore, the bycatch in the SBSMF is relatively low due to the Class A boats using larger mesh size (100mm). (Note: issues related to bycatch by Class B licensees [i.e. prawn licensees] are considered in the context of that</p>	
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	<p>fishery). Fishers in the Shark Bay Prawn Managed Fishery are required to use BRDs and FEDs, and DFWA is currently finalising a Bycatch Action Plan for this fishery.</p> <p>A proposed FRDC project intends to trial larger mesh and square mesh cod ends in the scallop fishery. If these net configurations are ultimately adopted in the SBSMF, this will potentially reduce bycatch even further.</p>	
<p>9. The importance of specific areas and habitats to applicable bycatch species during all stages of their life cycle should be considered when applying the results of biodiversity research to management arrangements.</p>	<p>The FRDC Biodiversity project addresses this recommendation. It is considered that the substantial permanent area closures and other temporal closures that are applied in the SBSMF provide protection to the key life history stages of the majority of the bycatch species. The project identified that the 10-20 most common species of fish and invertebrates could be used as indicator species (for trends in abundance and diversity measures) in Shark Bay. These are all relatively short-lived, abundant and widespread in both trawled and untrawled areas.</p> <p>The FRDC project indicates that the permanently closed nursery areas and other closures already in place in the SBSMF will afford protection to habitats important for key bycatch species.</p>	<p>Ongoing. DFWA to advise the WA Minister on the outcomes of the <i>Fisheries Management Paper 222</i>, and any other relevant research, in order to ensure the ongoing ecological sustainable management of the SBSMF (Recommendation 4, Table 4).</p>
<p>10. A mechanism should be developed to enable the amendment of management arrangements to respond to new information or future Government plans and policies.</p>	<p>Section 65 of the FRM Act provides for the amendment of management plans.</p> <p>The <i>Shark Bay Scallop Management Plan 1994</i> also provides for the ability to alter the management arrangements (season opening and closing dates, area closures, etc.) from year to year according to what is considered to be in the better interests of the fishery.</p>	<p>Met.</p>
<p>11. All protected species interactions by commercial</p>	<p>The Research logbooks completed by licence holders within the fishery allow fishers to report any interactions</p>	<p>Met.</p>

<p>operations should be reported and coupled with an education program to ensure industry has the capacity to make accurate reports.</p>	<p>with protected species.</p> <p>Reporting requirements are included as a standing item on the agenda for annual pre-season briefings. Fishers' are also given a Protected Marine Species Identification Guide that contains:</p> <ul style="list-style-type: none">• pictures and a brief description of relevant protected species; and• specific details to include in logbooks.	
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Table 3: The Department of the Environment, Water, Heritage and the Arts (DEWHA) assessment of the SBSMF against the requirements of the EPBC Act related to decisions made under Parts 13 and 13A

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Parts 13 and 13A. A complete version of the EPBC Act can be found on the DEWHA website.

Part 13

<p>Division 1 Listed threatened species Section 208A Minister may accredit plans or regimes</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ol style="list-style-type: none"> i. made by a State or self-governing Territory; and ii. in force under a law of the State or self-governing Territory; <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy 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; and</p> <p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p>	<p>The SBSMF will be managed under the:</p> <ul style="list-style-type: none"> • <i>WA Fish Resources Management Act 1994</i> • <i>WA Fish Resources Management Regulations 1995</i> • <i>WA Shark Bay Scallop Management Plan 1994.</i> <p>The Management Plan for the SBSMF was accredited in February, 2003. The management arrangements for the SBSMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time. DEWHA considers the current operation of the SBSMF is not likely to adversely affect the conservation status of a listed threatened species or a population of that species.</p>

<p>Division 2 Migratory species Section 222A Minister may accredit plans or regimes</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p>i. made by a State or self-governing Territory; and</p> <p>ii. in force under a law of the State or self-governing Territory;</p> <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy 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>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed migratory species or a population of that species.</p>	<p>The SBSMF will be managed under the:</p> <ul style="list-style-type: none"> • <i>WA Fish Resources Management Act 1994</i> • <i>WA Fish Resources Management Regulations 1995</i> • <i>WA Shark Bay Scallop Management Plan 1994.</i> <p>The Management Plan for the SBSMF was accredited in February, 2003. The management arrangements for the SBSMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time. DEWHA considers the current operation of the SBSMF is not likely to adversely affect the conservation status of a migratory species or a population of that species.</p>
<p>Division 3 Whales and other cetaceans Section 245 Minister may accredit plans or regimes</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p>i. made by a State or self-governing Territory; and</p> <p>ii. in force under a law of the State or self-governing Territory;</p> <p>if satisfied that:</p>	<p>The SBSMF will be managed under the:</p> <ul style="list-style-type: none"> • <i>WA Fish Resources Management Act 1994</i> • <i>WA Fish Resources Management Regulations 1995</i> • <i>WA Shark Bay Scallop Management Plan 1994.</i>

<p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p> <p>(g) the fishery to which the plan, regime or policy 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 Management Plan for the SBSMF was accredited in February, 2003. The management arrangements for the SBSMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time. DEWHA considers the current operation of the SBSMF is not likely to adversely affect the conservation status of whales and other cetaceans or a population of whales and other cetaceans.</p>
<p>Division 4 Listed marine species Section 265 Minister may accredit plans or regimes</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p>i. made by a State or self-governing Territory; and</p> <p>ii. in force under a law of the State or self-governing Territory;</p> <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy 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>(g) the fishery to which the plan, regime or policy 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>The SBSMF will be managed under the:</p> <ul style="list-style-type: none"> • <i>WA Fish Resources Management Act 1994</i> • <i>WA Fish Resources Management Regulations 1995</i> • <i>WA Shark Bay Scallop Management Plan 1994.</i> <p>The Management Plan for the SBSMF was accredited in February, 2003. The management arrangements for the SBSMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time. DEWHA considers the current operation of the SBSMF is not likely to adversely affect the conservation status of listed marine species or a population of listed marine species.</p>
<p>Section 303AA Conditions relating to accreditation of plans, regimes and policies</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) This section applies to an accreditation of a plan, regime or policy</p>	<p>DEWHA recommends that SBSMF be accredited under sections 208A,</p>

under section 208A, 222A, 245 or 265.	222A, 245 and 265.
(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: <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	No condition has been imposed on SBSMF to satisfy section 208A 222A, 245 and 265 under Part 13.
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	

Part 13A

Section 303DC Minister may amend list	DEWHA assessment of the SBSMF
(1) Minister may, by instrument in published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by: <ul style="list-style-type: none"> (a) including items in the list. 	
(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister: <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 DFWA submission sought comment on the annual reports and submission for the SBSMF and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>A letter to the WA Minister for Fisheries, the Hon Jon Ford MLC advises him of the intention to declare the fishery exempt from the export provisions of the EPBC Act.</p>
(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.	The instrument for the SBSMF made under section 303DC will be gazetted and made available on the DEWHA website.
Section 303FR Public consultation	DEWHA assessment of the SBSMF
(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:	Under the EPBC Act, a decision to amend the List of Exempt Native Specimens (LENS) does not require a public consultation period.

<p>(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>	<p>However, a public notice, which set out the proposal to grant export approval to the SBSMF and included the submission and annual reports for the SBSMF was released for public comment which closed on 12 November 2007 with 1 submission received.</p>
<p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to grant export approval to the SBSMF and included the submission and annual reports for the SBSMF was released for public comment on 15 October 2007 and closed on 12 November 2007, a total of 20 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>The DEWHA assessment has considered the public comment received on the submission.</p>

Part 16

<p>Section 391 Minister must consider precautionary principle in making decisions</p>	<p>DEWHA assessment of the SBSMF</p>
<p>(1) 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>(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>	

Objects of Part 13A

- (a) to ensure that Australia complies with its obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (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 DFWA for the SBSMF

The material submitted by DFWA indicates that the SBSMF operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries 2nd Edition*. DEWHA 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. Overall, DEWHA recognises that the sophisticated management regime of real time monitoring, gear restrictions and a seasonal closure based on stock levels are conservative and suggest that the fishery is being managed in an ecologically sustainable way.

In making its assessment, DEWHA 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 combination of management arrangements, data collection systems and defined acceptable catch ranges, DEWHA considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem. Management of the fishery has a history of reacting appropriately to threats to sustainability and DEWHA is confident that DFWA will continue to provide this high quality management.

DEWHA is satisfied that the 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. DEWHA believes that product taken in the fishery should be exempt from the export controls of Part 13A of the EPBC Act, with that exemption to be reviewed in 5 years.

DEWHA considers that 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. DEWHA also considers that under the management plan operators are required to take all reasonable steps to avoid the killing or injuring of protected species, and the level of interaction under current fishing operations is low.

For these reasons, the management plan was accredited under Part 13 of the EPBC Act in February, 2003. Since there have been no changes to the management arrangements since the initial assessment of the fishery, DEWHA considers that the existing Part 13 accreditation remains valid.

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: SBSMF Assessment – Summary of Issues, and Recommendations December, 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 and export approval continues uninterrupted, DEWHA needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes legislated amendments that may affect sustainability of the target species or negatively impact on by-product, bycatch, protected species or the ecosystem.</p>	<p>Recommendation 1: Operation of the fishery will be carried out in accordance with the <i>Shark Bay Scallop Management Plan 1994</i> made under the <i>Western Australian Fish Resources Management Act 1994</i>.</p> <p>Recommendation 2: DFWA to advise DEWHA of any intended material change to the SBSMF legislated management regime and management arrangements that could affect the criteria on which EPBC Act decisions are based.</p>
2	<p><u>Annual reporting</u></p> <p>It is important that reports be produced and presented to DEWHA annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration.</p> <p>Annual reports should include: a description of the fishery; management arrangements in place; research and monitoring outcomes; recent catch data for all sectors of the fishery; status of target stock; interactions with protected species; impacts of the fishery on the ecosystem in which it operates; and, information outlining progress in implementing conditions and recommendations resulting from the previous accreditation of the fishery (for a complete description of annual reporting requirements, see Appendix B of the <i>Guidelines for the Ecologically Sustainable</i></p>	<p>Recommendation 3: DFWA to produce and present reports to DEWHA annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

	<p><i>Management of Fisheries - 2nd Edition</i> available from the DEWHA website at http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html).</p>	
3	<p><u>Review of management arrangements</u></p> <p>DFWA has released a draft review report on the Shark Bay Prawn and Scallop Fisheries in the form of <i>Fisheries Management Paper 222</i> (FMP). The paper reviewed management arrangements and identified research requirements to ensure an appropriate scientific basis for decision-making into the future.</p> <p>DEWHA commends DFWA for undertaking the review and now considers the fishery is in an excellent position to implement identified management options to ensure the long term ecological sustainability of the fishery. The outcomes of the review paper recommended management options that address, but are not limited to, the timing of the scallop season, potential closures on the main scallop grounds, and reconsideration of the mesh sizes and gear used in the fishery.</p> <p>Accordingly, DEWHA recommends DFWA to progress the review process and to implement Ministerial decisions on its findings.</p> <p>DFWA's Research Division recommended in the FMP that an assessment of the spawning stock indicators should be undertaken to determine if the current levels are still within the range that have previously produced good recruitment. The decision rule framework (i.e. catch rate thresholds) associated with the change in the pattern of fishing also needs to be re-assessed to ensure adequate breeding stock protection.</p> <p>DEWHA recommends that DFWA review and assess management arrangements to provide for ongoing protection of the spawning stock during the peak spawning period. For example, if during the pre-season research survey recruitment is discovered to be low, consideration should be given to seasonal closures if fishing is going to reduce spawning stock to very low levels during the season.</p>	<p>Recommendation 4: By mid 2008, DFWA to advise the WA Minister for Fisheries on the outcomes of the Shark Bay Prawn and Scallop Fisheries Review process, and to commence implementing subsequent Ministerial decisions arising from the Review findings.</p> <p>Recommendation 5: DFWA to review, and adjust if necessary, the spawning stock indicator and performance measure for scallops to ensure the ongoing ecological sustainability of the SBSMF.</p>
4	<p><u>Investigation of recruitment issues</u></p>	<p>Recommendation 6: DFWA to continue to</p>

	<p>Scallop landings have varied dramatically over the last 15 years depending primarily on the strength of recruitment. The recently released FMP highlighted three key areas that require further investigation that separately, or in combination, may have contributed to low recruitment. These are environmental conditions, inadequate spawning stock, and trawling negatively impacting on recruitment.</p> <p>The FMP suggests that a trawl closure on the main scallop grounds could be implemented to determine if trawl-induced mortality is the primary cause of recruitment failure in Shark Bay. The closure would need to determine the impact of trawling on emerging or juvenile scallop stocks.</p> <p>DFWA have advised that they are proposing to undertake a FRDC project that will investigate the effect of trawling on scallop recruitment. Outcomes of this proposed project could help optimise the use of these resources and assist to resolve the resource sharing conflicts between sectors within the region.</p> <p>DEWHA supports the implementation of adaptive management techniques, as identified in the FMP, such as trialling spatial closures within specific areas of the scallop fishery. This will provide key information about the usefulness of such management approaches and to assess the impact of the closures on the capture of migrating prawns.</p>	<p>investigate the causes contributing to the ongoing low recruitment of scallops, and develop and implement strategies where appropriate to ensure the ongoing ecological sustainable management of the SBSMF.</p>
5	<p><u>Gear Interactions and Fishery Inter-relationships</u></p> <p>The fishing grounds of the Shark Bay Prawn Fishery and Shark Bay Scallop Fishery overlap. The inter-relationship between trawling activity for the two target species (prawns and scallops) has created management challenges and industry conflict over time. The FMP stated the urgent need to further investigate the level of gear interaction between the prawn and scallop fisheries, and whether this may be a cause for the recent low scallop recruitment and subsequent catches in the fishery.</p> <p>This urgency was noted at a recent workshop that reviewed the research and management needs in the Shark Bay trawl fisheries. Both prawn and scallop sectors</p>	<p>Recommendation 7: DFWA to continue to investigate the impact of gear interaction in those areas of the Shark Bay Prawn and Scallop Fisheries where the distribution of the target species overlap, and where appropriate implement management responses to address and mitigate the impacts identified.</p>

	<p>support the need to fully and rigorously address the issue of gear interactions in those areas of the fishery where the distributions of the target species overlap.</p> <p>DEWHA therefore recommends that DFWA continue to investigate the impact of gear interactions between the Shark Bay Prawn and Scallop Fisheries, and other relevant Fisheries within Shark Bay, and to implement management responses to address the issues identified.</p>	
6	<p><u>Bycatch Action Plan</u></p> <p>DFWA have indicated they are developing a Bycatch Action Plan (BAP) for the SBSMF. DEWHA commend this action and consider its completion and implementation a key to the reduction and mitigation of impact to bycatch species. Given the recent and upcoming FRDC projects related to bycatch issues, DEWHA support the development of the BAP.</p>	<p>Recommendation 8: DFWA to finalise, adopt and implement the Bycatch Action Plan for the SBSMF, including ongoing review and progress reporting on it's implementation.</p>

References

Shark Bay prawn and scallop fisheries: Draft Review Report. Perth, WA: Department of Fisheries, April 2007. Fisheries Management Paper no. 222.

Acronyms

BAP	Bycatch Action Plan
BRD	Bycatch Reduction Device
CITES	Convention on International Trade in Endangered Species
DEWHA	Department of the Environment, Water, Heritage and the Arts
DFWA	Department of Fisheries, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESD	Ecologically Sustainable Development
FED	Fish Escapement Device
FMP	Fisheries Management Paper
FRM Act	<i>Fish Resources Management Act 1994</i>
FRM Regulations	<i>Fish Resources Management Regulations 1995</i>
FRDC	Fisheries Research and Development Corporation
LENS	List of Exempt Native Specimens
MAC	Management Advisory Committee
SBSMF	Shark Bay Scallop Managed Fishery
WA	Western Australia