

**APPLICATION TO THE DEPARTMENT OF THE ENVIRONMENT,
WATER, HERITAGE AND THE ARTS ON THE
WESTERN AUSTRALIAN ABALONE FISHERY**

*Against the Guidelines for the
Ecologically Sustainable Management of Fisheries*

June 2009



Department of Fisheries
Government of Western Australia



Fish for the future

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1. BACKGROUND

The purpose of this report is to update the Department of the Environment, Water, Heritage and the Arts (DEWHA) on changes in the Western Australian Abalone Managed Fishery (the Fishery) to enable the re-assessment of the Fishery against the *Guidelines for Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Previous Assessment

In November 2002, the WA Department of Fisheries (DOF) submitted an application to DEWHA (then Environment Australia) for assessment of the Fishery against the *Guidelines for the Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the EPBC Act.

On 17 August 2004, the (then) Minister for the Environment and Heritage amended the list of exempt native specimens to include product taken in accordance with the *Abalone Management Plan 1992*, effectively declaring the Fishery as exempt from Part 13 and 13A of the EPBC Act for a period of 5 years. The exemption will expire on 10 September 2009.

The exemption came with 12 recommendations, focused on ensuring continued good management practices in the Fishery.

A copy of the DOF application and the DEWHA assessment report and letter of approval are available on the DEWHA website

<http://www.environment.gov.au/coasts/fisheries/wa/abalone/index.html>

Re- Assessment Process

A risk assessment workshop, attended by management, compliance, research and industry representatives was conducted on 28 April 2009.

The aim of the workshop was to revisit the risk ratings identified in the 2002 report and determine whether they were still relevant or whether they require amendment. In addition, consideration was given to whether new risks existed. The workshop outcomes were sent to stakeholders for their comments in May 2009.

This report provides the outcomes of the workshop and details the progress in meeting the 12 recommendations arising from the original ESD assessment, outlining what has been achieved in addressing each recommendation.

The following documentation has been attached to this application to assist the re-assessment process:

1. Copies of the Abalone fisheries annual reports, published in the [State of the fisheries reports](#) (2002/03-2006/07);
2. [Fisheries Research Report No.185](#) – ‘Performance indicators, biological reference points and decision rules for WA abalone fisheries’;
3. Copy of research paper ‘Digital video surveys of abalone (*Haliotis* sp.) stocks by commercial fishers in WA’ – Hart AM, Fabris FP, Brown J, Murphy D (2008). *Fisheries Research*. 93: 305-314 (please note that no direct public link is available to this document).

4. Copy of the [IFAAC Allocation report](#) for the Perth metropolitan area Roe's abalone resource.

Contact

This report should provide sufficient information for DEWHA to re-assess the Fishery against the guidelines for *Guidelines for the Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the *EPBC Act 1999*. However, should you require any further information regarding the details of the contents of this report please contact Martin Holtz on (08) 9482 7367 or via email martin.holtz@fish.wa.gov.au

2. CHANGES IN THE FISHERY

Other than routine adjustments to total allowable catches within the various zones of the fishery, there have been no substantial changes to management arrangements during the past five years. The high level of fisheries management, compliance and research services has been maintained in the fishery since the initial ESD exemption in 2004.

Since 2004, the Department and the abalone industry have cooperatively undertaken a number of management initiatives with a view to ensuring a sustainable fishery and abalone industry well into the future. While these initiatives may not be directly relevant to this assessment application or the ongoing DEWHA assessment process, it is useful that they are documented. In summary:

- Management Plan Amendments

Amendment (No.1) 2008 was the only management plan amendment since the 2002 assessment application. The matters it dealt with were only minor operational issues. These were:

1. Changing the conversion factor for roes abalone from 3 to 2.67.

Roes abalone quota is set as a whole weight. When roes abalone from remote regional areas is delivered to a processor shucked, a conversion factor is used to convert the meat weight back to whole weight. The previous conversion factor of 3 assumed a recovery of 33.3% meat weight when the abalone is shucked. However the actual average recovery was shown to be 37.5%. The conversion factors listed in Schedule 6 of the Management Plan were amended to 2.67 to reflect this recovery for all areas of the fishery (except the Perth metropolitan area where shucking of abalone is not carried out).

2. Amending Clause 17B to extend the period within which minor quota over-runs (up to 5kg meat weight or 15 kg whole weight) must be reported to DFWA from 90 minutes to 7 working days. This change was necessary given that there is no provision for real time reporting of catch landing and weighing, and that the weight used for determining quota usage is based on the weight determined in the processing facility. This time extension was approved as there would be no increase in compliance risk as a consequence.

- Performance indicators and decision rules for TACC assessment

As required under DEWHR recommendation 3, research and development of performance indicators, biological reference points and decision rules for setting the annual abalone TACC's in WA has been a significant undertaking. This work, has recently culminated in the publication of Fisheries Research Report 185 (*Attachment 2*)

The performance indicators, biological reference points and decision rules set out in this report have been successfully used during the past two years TACC setting processes. Importantly they appear to have been generally embraced by industry stakeholders resulting in an improved level of confidence in TACC outcomes.

- Voluntary size limits

Since the 2002 ESD assessment application was submitted, abalone licensees have adopted self-imposed size limits for greenlip and brownlip abalone that are in excess of the minimum legal limits.

The minimum legal size of 140mm shell length applies across the fishery. Although this size is significantly higher than size of maturity of both species, and set to allow animals to spawn twice before they enter the fishery, fishers have recognised the benefits in respect to both stock sustainability and financial return to the fishery of harvesting only larger animals.

Industry has imposed a general 145mm minimum size limit across Area 2 of the fishery. In Area 3 industry has set a 153mm minimum shell length for the faster growing parts of the fishing grounds and 150mm minimum size across the remainder.

- Integrated Fisheries Management Catch Share Allocation

In recent months the WA Minister for Fisheries approved the recommendations of the Integrated Fisheries Allocation Advisory Committee (IFAAC) regarding catch-sharing arrangements for the Perth metropolitan roes abalone resource (Area 7). (*Attachment 4*)

The IFAAC was established under section 42 of the Fish Resources Management Act 1994 to investigate and make recommendations to the Minister for Fisheries on resource allocation issues.

Although the commercial fishing sector has had a total catch limit via TACC's for many years, this has not been the case for the recreational fishing sector. The key recommendation approved by the Minister was the setting of explicit catch shares for this area of the fishery for the recreational, commercial and indigenous fishing sectors that ensures the total harvest will remain within sustainable fishing levels.

3. PROGRESS IN IMPLEMENTING RECOMMENDATIONS

1. DFWA to ensure, where appropriate, that any relevant community, conservation and recreational interests in the fishery are considered through consultative mechanisms.

Currently Status: **Ongoing**

Until recently the community, conservation and recreational interests were represented on the Abalone Management Advisory Committee (AbMAC). However the DFWA is currently undertaking a comprehensive review of its consultative processes and structures, and, as a consequence, the AbMAC is in abeyance pending the outcome of this review.

In the interim the DFWA is referring any fishery management issue or proposed change to relevant stakeholders including the peak fishing and conservation bodies, identifiable indigenous groups and the community generally when appropriate. All relevant stakeholders were also invited to the 28 April risk assessment workshop.

- 2. DFWA, in its annual State of the Fisheries Report, to report on the performance of the fishery against performance measures that relate to the ecological sustainability of the fishery.**

Currently Status: **Completed** (Extracts from the State of the fisheries reports (2002/03-2006/07 at Attachment 1).

- 3. DFWA, in consultation with other abalone fishery agencies, to further develop appropriate biological parameters and reference points for abalone harvesting within the WA abalone performance assessment system, and pursue with other agencies a national process for developing, adopting and reviewing these performance indicators, and for periodically reviewing abalone stock assessment processes.**

Current Status: **Completed**

A nationally funded research project has been approved (FRDC 2007/020. Identification and evaluation of biological performance indicators for abalone fisheries), and Western Australian performance indicators have been developed (see report below).

Hart AM, Fabris FP, Caputi N (2009). Performance indicators, biological reference points, and decision rules for Western Australian abalone fisheries (*Haliotis* sp.): (1) Standardised catch per unit effort. Fisheries Research Report No 185, Department of Fisheries, Western Australia, 40 p (Attachment 2)

- 4. The ESD report, including all performance measures, responses and information requirements, to be formally incorporated into the management regime and decision making process.**

Current Status: **Ongoing.**

The Department has recognised the need to develop formal mechanisms to incorporate objectives and performance measures into the management processes for all of its commercial fisheries. The initial intention was to do this through Ministerial Policy Guidelines (MPG's), given there was no legislative capacity to incorporate them into management plans. However, it became apparent that MPG's not suitable for this purpose.

DFWA has been exploring other options to link objectives and performance indicators to formal management arrangements and is now progressing the development of formal policy guidelines for all Western Australian commercial fisheries. Policy guidelines will include ecological, economic and social objectives and performance indicators.

In the interim, DFWA reports against performance indicators in the annual State of the Fisheries Report.

- 5. If there is a breach in performance measure, this will be reported in the State of the Fisheries Report. If a breach materially affects the sustainability of the target species or negatively impacts on by-product, by catch, protected species or the habitat, the breach will be reported to the Minister for Fisheries within 3 months for subsequent management review and action with timeframes for implementation.**

Current Status: **Ongoing.**

- 6. DFWA to advise DEH of any material change to the fisheries legislated management plan and/or arrangements that could affect the criteria on which EPBC decisions are based, within three months of that change being made.**

Current Status: **Ongoing.**

DFWA will continue to advise DEWHA of any material changes to management of the fishery.

- 7. DFWA, within 2 years (August 2006), to develop and implement enhanced fishery independent monitoring programs across the fishery, representative of species distribution and catch across the various Areas of the fishery, to improve the understanding of the relevant stock structures and abundance. Data from the independent monitoring programs should also be used to inform the further development of reference points and performance indicators required under Recommendation 3.**

Current Status: **Completed.**

A total of 170 fishery independent survey sites have been implemented for all species across the fishery and data from these are being used to assist in quota decisions. All major abalone producing areas have been covered and representative sites have also been placed in sanctuaries (no fishing zones). Temporal (time) data is currently available for 40% of the sites (60 sites), and when an established time series becomes available in the next 2 – 4 years, these data will be used to assist the development of performance indicators.

In addition, a digital video survey site program has been initiated using commercial divers to film abalone stocks. This program will generate cost-effective fishery independent survey data in some regions of the fishery. For further details see the following scientific publication at *Attachment 3*.

Hart AM, Fabris FP, Brown J, Murphy D (2008). Digital video surveys of abalone (*Haliotis* sp.) stocks by commercial fishers in Western Australia. *Fisheries Research*. 93: 305-314

- 8. DFWA, within 2 years (August 2006) to further develop biological sampling programs, representative of species distribution and catch across all Areas of the fishery, to provide necessary data to inform the range of biological performance measures developed in accordance with Recommendation 3 and enhance the stock assessment process.**

Current Status: **Completed.**

A catch sampling program, that includes measuring the size of animals commercially harvested has been implemented, and the information is being used to enhance existing performance indicators.

9. DFWA, to take account of all abalone removals, including best estimates of recreational and illegal harvesting in the stock assessment process and the determination of the annual TACC.

Current Status: **Ongoing.**

Estimates of illegal abalone harvest (see strategies detailed 11 below) and recreational abalone harvest (obtained via creel and telephone survey methodologies) are routinely obtained and used in the stock assessment process.

10. DFWA, to investigate and establish, over the next 3 years (August 2007), appropriate decision rules or strategies, relevant to the scale of management required, to prevent serial depletion of brownlip and greenlip abalone stocks in the fishery.

Current Status: **Completed.**

Decision rules for quota adjustment have been developed for all 7 management zones of the fishery, and are used to set TACs. See Hart et. al., (2009) at *Attachment 2* for further information.

11. DFWA, to work with other jurisdictions to develop effective strategies and response measures to quantify and reduce the extent of illegal take of abalone in WA.

Current Status: **Ongoing**

The following arrangements have been implemented with interstate, Commonwealth and Western Australian compliance agencies to maximise efforts to detect the illegal harvest of abalone:

- MOU and joint operational arrangement with W.A. Police (WAPOL)
- MOU and operational arrangement with CUSTOMS
- Membership of WA officers on National Fisheries Compliance Committee (NFCC)
- MOU with the South Australian Fisheries agency (PIRSA) with cross authorisation of select Fisheries Officers in both jurisdictions.
- Development of an MOU with all states and territories is being progressed to consolidate on the strong co-operation amongst compliance agencies in joint operations or tracking product and persons of interest.

Intelligence Sub Committee established through NFCC involving authorities from all abalone producing states. The sub committee meets annually to review compliance and intelligence strategies, enhance and exchange intelligence and facilitate cross-jurisdictional operations.

Some examples of benefits flowing from these arrangements are:

A new initiative to introduce legislation under the *Fish Resources Management Act 1994* to provide powers to assist other jurisdictions in operations dealing with organised crime. Through the NFCC intelligence sub committee access to the Australian Criminal Intelligence database is being pursued.

Regular joint operations with WAPOL targeting organised crime and fish theft. A recent joint operation has resulted in two convictions and three pending cases for illegal dealing in commercial quantities of abalone.

An ongoing operation at Perth International airport involving Customs, AQIS, AFP and DFWA targeting carry on luggage has resulted in a number of minor abalone possession limit offences.

DFWA staff assisted Victoria in the extradition of an offender from WA to face charges relating to illegal dealing in abalone.

In terms of quantity of illegal take, these strategies have enabled an estimate to be made. The information suggests that it is reasonable to assume at least 3 tonnes of abalone per year is taken for the black-market on the South Coast. On the West Coast small quantities of excess possession limit metro roes abalone are taken overseas as hand luggage or baggage to Hong Kong, Singapore etc.

Overall, intelligence operations have revealed that Greenlip is the most highly desirable black-market abalone and is easily sold and on sold, Roes abalone is of limited desirability, some local black-market and trade in metro area, and brownlip abalone is not highly sought and very limited black-market.

The proposed National Docketing System (NDS) has not been supported by the Western Australian Abalone industry and as a consequence two previous Ministers have not supported progressing its implementation in WA. The initial set up and ongoing management costs of a NDS are high and industry claim that it will provide little benefit in controlling illegal dealing in abalone. Whilst the proposed legislation may better regulate the movement within WA of abalone sourced from other jurisdictions the existing compulsory documentation trail for WA caught abalone is robust and provides a high level of confidence in the integrity of the management of the abalone quota.

12. DFWA, to provide a mechanism that allows fishers to record interactions with protected listed species.

Current Status: **Complete**

Daily Catch and Disposal Records (CDR's) have been amended to include a section for the reporting of protected species interactions. The new CDR's were developed in consultation with industry to streamline the reporting process and highlight the need for accurate reporting of all interactions.

4. ERA RISK RATING RE-ASSESSMENT

The risk ratings of all risks identified in the previous assessment were re-assessed at the workshop taking into account changes (if any) in fishing practices and any other relevant external influences in the fishery since 2002.

As a result of the re-assessment of the risk ratings, the rating of all the risks have remained unchanged. Please refer to the justification and performance reports in the initial application to DEWHA. This can be found at:

<http://www.environment.gov.au/coasts/fisheries/wa/abalone/index.html>

Table 1 provides a summary of the key changes to the risk ratings identified during the workshop. Justification and additional comments are outlined below.

Table 1. Summary of the key changes to the risk ratings in the Fishery

RISK	RISK RATING – Nov 2002	RISK RATING – Apr 2009
Primary Species		
Greenlip Abalone – Area 1 (Page 54-55)	Impact on Breeding stock C1 L4 Low	No change to risk rating
Brownlip Abalone – Area 1 (Page 54-55)	Impact on Breeding stock C0 L3 Negligible	No change to risk rating
Greenlip Abalone – Area 2 (Page 56-62)	Impact on Breeding stock C3 L3 Moderate	No change to risk rating
Brownlip Abalone – Area 2 (Page 56-65)	Impact on Breeding stock C2 L5 Moderate	No change to risk rating
Greenlip Abalone – Area 3 (Page 56-65)	Impact on Breeding stock C3 L4 Moderate	No change to risk rating
Brownlip Abalone – Area 3 (Page 56-65)	Impact on Breeding stock C3 L4 Moderate	No change to risk rating
Greenlip Abalone – Area 4 (Page 65)	Impact on Breeding stock Negligible risk	No change to risk rating
Brownlip Abalone – Area 4 (Page 65)	Impact on Breeding stock Negligible risk	No change to risk rating
Roe's Abalone – Area 1 (Page 65-71)	Impact on Breeding stock C2 L5 Moderate	No change to risk rating
Roe's Abalone – Area 2 (Page 65-71)	Impact on Breeding stock C2 L3 Moderate	No change to risk rating
Roe's Abalone – Area 5 (Page 65-71)	Impact on Breeding stock C3 L3 Moderate	No change to risk rating
Roe's Abalone – Area 6 (Page 71-78)	Impact on Breeding stock C3 L3 Moderate	No change to risk rating
Roe's Abalone – Area 7 (Page 71-78)	Impact on Breeding stock C3 L4 Moderate	No change to risk rating

Roe's Abalone – Area 8 (Page 71-78)	Impact on Breeding stock C3 L3 Moderate	No change to risk rating
By-product Species		
N/A		
Non-Retained Species		
Piggy-Backers		
Piggy-Backers (80-81)	Impact on breeding stock	No change to risk rating
General environment		
Removal of all Organisms (Page 69-70)	Removal of abalone and piggy-back species on the ecosystem C1 L4 Low	No change to risk rating
Discarding undersize abalone (Page 85-86)	Impact on environment from discards C0 L1 Negligible	No change to risk rating
Discarding abalone gut (Page 86-87)	Impact on trophic structure C0 L2 Negligible	No change to risk rating
Non-native and disease introduction (Page 87)	Impact of translocation of organisms on vessel hulls C4 L0 Negligible	No change to risk rating
Stock Enhancement (Page 87-88)	No rating assigned – see comment below	
Scraping abalone from rocks (Page 88)	Impact of scraping abalone from rocks C0 L1 Negligible	No change to risk rating
Diver / diver gear (Page 88-89)	Impact of interaction between diver gear and habitat C0 L1 Negligible	No change to risk rating
Reef walking (Page 89)	Impact of reef walking C0 L1 Negligible	No change to risk rating
Indirect interactions (Page 90)	Impact on other wildlife C0 L1 Negligible	No change to risk rating

Stock Enhancement

In the 2002 application to DEWHA the issue of stock enhancement was discussed, however as there were no abalone stock enhancement projects operating in WA it was concluded that the risk associated with this activity would need to be considered once more operational details on any potential stocking exercise were determined.

Research into stock enhancement has progressed since 2002. In terms of disease issues, the Department has strict guidelines for aquaculture facilities with respect to quarantine and broodstock management and these are currently in place for all aquaculture operators. Any animals to be released into the wild or translocated across management boundaries require disease testing and this is provided by the Fish Health laboratories, which are NATA certified. Genetic zones for abalone have been established, based on research into stock structure by CSIRO.

DFWA is currently carrying out experimental investigations on growth and survival and ecological effects of stock enhancement. Experiments have been carried out with locally-bred animals from within the Augusta genetic region. At the completion of the experiments, the ecological risks of this activity will be evaluated with robust experimental data.
