

INTEGRATED FISHERIES MANAGEMENT

Allocation Report – Roe’s Abalone Resource, Perth Metropolitan Region

*Prepared by the Integrated Fisheries Allocation
Advisory Committee for the Minister for Fisheries,
current as at August 2007*

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SECTION 1 SUMMARY OF RECOMMENDATIONS AND NOTES

1.1 Recommendations

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Allocations for abalone should only be considered for Roe's abalone within the Perth metropolitan region, that is the region between Moore River mouth and Cape Bouvard (currently Area 7 of the commercial fishery). 11

Recommendation 2

The metropolitan zone for the recreational fishery should be amended by extending the boundaries from Moore River to Cape Bouvard so that the commercial and recreational sectors have common metropolitan region boundaries. 24

Recommendation 3

The ban on commercial fishers fishing on the reef top between Cape Bouvard and Hillarys Boat Harbour should be extended further north to Burns Beach. IFAAC recommends that the ban should proceed in conjunction with advancing the other issues covered in this report. 25

Recommendation 4

That management on the basis of keeping sectors to proportional allocations for Roe's abalone in the Perth metropolitan area should be deferred until:

- (a) There is adequate information on the off-reef top recreational fishery so that its catch can be managed; and
- (b) There is adequate understanding of the relationships between the reef top and off-reef top fisheries that it is possible to manage all of the components of the fishery equitably through proportional allocations; and
- (c) Fishery managers have gained enough experience with managing the recreational sector to a total allowable recreational catch under new more flexible management arrangements as proposed in Recommendation 12. 31

Recommendation 5

Subject to sustainability constraints and until proportional allocations are introduced, sectors should be managed to ensure that the recreational catch is consistent with its average over the period 1999-2003 (40 tonnes) and the commercial sector has the opportunity to maintain its 36 tonne quota. 31

Recommendation 6

That should proportional allocations be made to the recreational and commercial sectors that firstly a priority allocation of 500 kg for Roe's abalone be made to the Customary sector in the Perth metropolitan region. 31

Recommendation 7

A regular estimate should be made of the amount of recreational fishing in the 'off reef top' component of the fishery. If this changes significantly, a review of the current arrangements will be necessary to separately manage each of the two components of the recreational fishery. 32

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(b) the reconstitution of the abalone management advisory committee to deal equitably with Customary, recreational and commercial issues, and enable negotiations within and between the sectors; and	
(c) the need to give effect to the Government’s IFM policies contained in Guiding principles vii and x (see section 3.1.2).	43

1.2 Notes

Note 1

The Minister for Fisheries’ has advised IFAAC that there should be an allocation for Customary fishing, and that Customary fishing access rights should be given priority over all other fishing access. 9

Note 2

The Minister is not seeking advice from IFAAC regarding an allocation for non-extractive users of the resource as this is taken account of in the setting of the SHL provided to the IFAAC 10

Note 3

The IFAAC does not expect that it will be providing advice on final allocations for abalone outside the Perth metropolitan region until at least 2010. 11

Note 4

IFAAC has included recreational fishing by indigenous people, as distinct from Customary fishing, as part of the broad recreational allocation consistent with the Ministerial advice referred to in Section 3.2.3. 17

Note 5

The IFAAC has no quantitative information suggesting that the quantity of Customary take of abalone in the Perth metropolitan area is significant. If there was demonstrated to be a significant Customary take, the demands of IFM (IFM Government Policy, paragraph 18, Appendix A) would necessarily require more research and monitoring of the Customary take by indigenous people. 21

SECTION 2 INTRODUCTION

This report, prepared by the Integrated Fisheries Allocation Advisory Committee (IFAAC), contains the Committee's advice and recommendations to the Minister for Fisheries on future allocations for the Metropolitan Roe's abalone resource.

The IFAAC, consistent with its terms of reference (see section 3.1.4), commenced its investigations of allocations in mid 2005.

2.1 Process/Consultation

The process the IFAAC has used to prepare this final report is summarized diagrammatically below.

Release of IFM Abalone resource report by the Department of Fisheries in September 2005



Investigation of allocation issues by IFAAC



Release of draft allocation report by IFAAC in August 2006



Public comment period August 2006 to January 2007



Review of Submissions from February 2007 including Stakeholder Workshop in March 2007



Report delivered to the Minister for Fisheries

Under the Integrated Fisheries Management (IFM) Government Policy (Paragraph 11, Appendix A), the Minister determines the process and timeframes for resolving allocations of each fish resource based on the advice of the IFAAC. The Minister has approved a four-stage IFM allocation process developed by the IFAAC (Appendix B).

The four stages involve:

- A. determining the need for a formal allocation process in a fishery;
- B. the development of an Integrated Fisheries Management Report on the resource by the Department of Fisheries;
- C. the integrated fisheries allocation process, which includes:
 - Step 1. Investigation of the allocation issue;
 - Step 2. IFAAC settling a draft allocation report and releasing it for public comment;
 - Step 3. IFAAC recommending allocations to the Minister for Fisheries;
 - Step 4. The Minister determining allocations; and
- D. determining mechanisms for future allocations between sectors.

In the case of Metropolitan Roe's abalone, the first stage (point A above) of the process was unnecessary, as the Minister for Fisheries had already requested that the IFAAC provide him with advice and recommendations on allocations.

The second stage of the process was completed in September 2005, when the Department of Fisheries released Fisheries Management Paper No.204, *Integrated Fisheries Management*

Report Metropolitan Roe's Abalone Resource (FMP No.204), (Department of Fisheries, 2005). Key information presented in this paper is contained in Sections 3 and 4 of this report.

During its initial investigation of allocation issues (Stage C, Step 1 of the process – see above) the IFAAC provided key stakeholders with FMP No. 204 and sought written submissions on issues related to allocation and provided an opportunity for them to make a verbal presentation to the committee. Stakeholder submissions in this step can be obtained from the sources provided in Appendix C. These are termed the ‘October 2005’ submissions to enable them to be identified separately from later submissions made to the Draft Allocation Report (FMP No. 214).

The IFAAC acknowledged in the Draft Report (FMP No. 204) that not all stakeholders had an opportunity to make submissions at this point. The IFAAC is mindful of advice by the stakeholders consulted that many recreational participants in this fishery may not be active in existing consultative arrangements and that great caution needs to be taken in relation to effective consultation.

The IFAAC's Draft Allocation Report was released in August 2006 to facilitate discussions and to encourage public comment on how the resource should be shared between competing users. The IFAAC also arranged for public meetings to brief fishers and interested members of the community on the Committee's recommendations during the public comment period. The approach taken to consultation is provided in detail in Appendix D.

The IFAAC received 12 submissions on its Draft Allocation Report for the Metropolitan abalone resource. A list of those people or organisations that made a submission is provided in Appendix E.

Following the receipt of submissions, the IFAAC convened a stakeholder workshop in March 2007 to provide further information on new and emerging issues arising from the public submissions process. The IFAAC has published on the Department of Fisheries website (www.fish.wa.gov.au) the submissions made to this process.

The public submissions, together with the outcomes of the stakeholder workshops provided invaluable inputs into the IFAAC's review of its draft recommendations and determination of final recommendations to the Minister for Fisheries.

Reference is only made to submissions in the text of this report where necessary to provide further background to the IFAAC's deliberations or where it led to the IFAAC changing a recommendation contained in its Draft Allocation Report.

SECTION 3 BACKGROUND

The introduction of Integrated Fisheries Management (IFM) is a recent development in the management of fisheries in Western Australia. IFM is an initiative aimed at addressing the issue of how fish resources in Western Australia can be best shared between competing users within the broad context of “Ecologically Sustainable Development”, or ESD.

In summary, IFM involves:

- setting a sustainable harvest level (SHL) of each resource that allows for an ecologically sustainable level of fishing;
- allocating explicit catch shares for use by indigenous, recreational and commercial fishers;
- continual monitoring of each sector’s harvested catch;
- managing each sector within its allocated catch share; and
- developing mechanisms to enable the reallocation of catch shares between sectors.

The Government in its 2005 election commitments listed abalone as one of the first four fish resources to be brought under the IFM framework.

3.1 The integrated fisheries allocation advisory committee

The Government released its IFM Policy in October 2004. The policy refers to the establishment of an Integrated Fisheries Allocation Advisory Committee (IFAAC) to provide the Minister for Fisheries with advice on allocations for fish resources (paragraph 8 to 13). The Minister for Fisheries established the Integrated Fisheries Management Allocation Advisory Committee (IFAAC), under Section 42 of the *Fish Resources Management Act 1994* (FRMA), in 2004 to investigate IFM resource allocation issues and make recommendations to him on optimal resource use.

3.1.1 Membership

The members of the IFAAC at the time this paper was prepared were Mr Jim McKiernan (Chair), Mr Norman Halse and Professor George Kailis.

Mr McKiernan represented Western Australia in the Australian Parliament for nearly 18 years. During this time he served upon and was chair of a number of Senate and other Parliamentary committees. Mr McKiernan has considerable experience in interacting with community groups and stakeholders. He is a sessional member of the State Administrative Tribunal, a Justice of the Peace and a member of the Board of the Disability Services Commission. Mr McKiernan replaced the inaugural Chair Mr Murray Jorgensen on 1 March 2006.

George Kailis is Professor of Management at The University of Notre Dame and is also a Director of the MG Kailis Group. He has had extensive experience on Government, science and industry bodies at a state, national and international level. Prof. Kailis is the Chair of the Australian Seafood Industry’s Native Title Working Group, a member of the Pearling Industry Advisory Committee and is on the Federal Government’s National Oceans Advisory Group. He has previously been a Director of both the Australian Fisheries Management Authority and the Fisheries Research and Development Corporation.

Mr Norman Halse is a keen recreational fisher, conservationist and researcher. Mr Halse worked for Western Australia’s Department of Agriculture for 40 years, his career culminating as that

department's Director General. His conservation interests included serving as past President of the Conservation Council of WA, as Chairman of the National Parks and Conservation Authority and as a member of the Environmental Protection Authority. Mr Halse has a strong interest in recreational fishing, as demonstrated by his service as a past Chair, and current board member, of peak body Recfishwest.

3.1.2 Conflict of Interest

If a member had a conflict of interest in any matter to be considered by the IFAAC, the member disclosed the interest, the disclosure was recorded in the minutes of the committee and the member did not vote on the matter.

No members of the IFAAC hold a recreational or commercial fishing licence that entitles them to fish for abalone, nor do they hold interests in any such licences.

3.1.3 Guiding principles

The Minister provided the IFAAC with the following *Guiding Principles and Terms of Reference*. Government has adopted the principles, outlined below, as the basis for IFM (Appendix A). The IFAAC should ensure that any advice to the Minister for Fisheries is consistent with these principles:

- i. Fish resources are a common property resource managed by the Government for the benefit of present and future generations;
- ii. Sustainability is paramount and ecological requirements must be considered in the determination of appropriate harvest levels;
- iii. Decisions must be made on best available information and where this information is uncertain, unreliable, inadequate or not available, a precautionary approach adopted to manage risk to fish stocks, marine communities and the environment. The absence of, or any uncertainty in, information should not be used as a reason for delaying or failing to make a decision;
- iv. A harvest level, that incorporates total mortality, should be set for each fishery¹ and the allocation designated for use by each group should be made explicit;
- v. Allocations to user groups should account for the total mortality on fish resources resulting from the activities of each group, including bycatch and mortality of released fish;
- vi. The total harvest across all user groups should not exceed the prescribed harvest level. If this occurs, steps consistent with the impacts of each user group should be taken to reduce the take to a level that does not compromise future sustainability;
- vii. Appropriate management structures and processes should be introduced to manage each user group within their prescribed allocation. These should incorporate pre-determined actions that are invoked if that group's catch increases above its allocation;

¹ Fishery is defined under the FRMA as one or more stocks or parts of stocks of fish that can be treated as a unit for the purposes of conservation or management; and a class of fishing activities in respect of those stocks or parts of stocks of fish.

- viii. Allocation decisions should aim to achieve the optimal benefit to the Western Australian community from the use of fish stocks and take account of economic, social, cultural and environmental factors. Realistically, this will take time to achieve and the implementation of these objectives is likely to be incremental over time;
- ix. Allocations to user groups should generally be made on a proportional basis to account for natural variations in fish populations. This general principle should not, however, preclude alternative arrangements in a fishery where priority access for a particular user group(s) may be determined. It should remain open to government policy to determine the priority use of fish resources where there is a clear case to do so; and
- x. Management arrangements must provide users with the opportunity to access their allocation. There should be a limited capacity for transferring allocations unutilised by a sector for that sector's use in future years, provided the outcome does not affect resource sustainability.

3.1.4 The IFAAC's Terms of Reference

Taking into account the principles detailed above, the IFAAC is to investigate fisheries resource allocations issues, and provide advice and recommendations to the Minister on matters related to optimal resource use, and in particular provide advice on:

- i. allocations between groups (sectors) within the harvest limits determined for each fishery;
- ii. strategies to overcome allocation and access issues arising from temporal and spatial competition for fish at a local/regional level;
- iii. allocation issues within a fisheries sector as referred by the Minister for Fisheries;
- iv. more specific principles (than detailed above) to provide further guidance around allocation decisions for individual fisheries; and
- v. other matters concerning the integrated management of fisheries as referred by the Minister for Fisheries.

In the first instance, the Minister for Fisheries has requested the IFAAC to provide advice and recommendations on allocations pertaining to the West Coast Rock Lobster Managed Fishery, Abalone Managed Fishery (with emphasis on the Perth metropolitan fishery), and West Coast Demersal Finfish Fishery (with emphasis on dhufish, baldchin groper and snapper).

The IFM Government Policy released in October 2004 (Appendix A) has been the principal source of guidance for the IFAAC in developing its recommendations on sectoral allocations. The Minister for Fisheries has also provided the IFAAC with additional advice on various IFM issues, and IFAAC has taken this advice into account in its deliberations. These issues are discussed in section 3.2.

3.2 Ministerial advice

In the IFAAC's deliberations it uses the IFM Government Policy (Appendix A) along with additional guidance that has been provided by the Minister for Fisheries on a Customary fishing allocation; the reference period 1997-2001; allocations to non-extractive uses; and the area over which allocations should be made for abalone. This advice and the IFAAC's response are summarised below.

3.2.1 Customary allocation

The then Minister for Fisheries, Kim Chance MLC, provided guidance with respect to the

Customary fishing sector in a letter to the IFAAC (see Appendix F). The key point the Minister made in his letter was that he expected that the IFAAC would recommend some allocation for Customary fishing of inshore fish species.

The Minister also noted that he supported recommendation 13 of the draft Aboriginal Fishing Strategy, which states:

Within any given fisheries allocation framework developed in Western Australia, Customary fishing access rights should be given priority over all other fishing access, including commercial and recreational fishing.

Customary fishing was described by the Minister as the fishing activity of indigenous people who have a right (in accordance with Aboriginal law and customs) to fish in a Customary manner. He commented further that not all indigenous people are permitted to undertake Customary fishing in all areas of the state under Aboriginal law and custom.

Note 1: The Minister for Fisheries' has advised IFAAC that there should be an allocation for Customary fishing, and that Customary fishing access rights should be given priority over all other fishing access.

3.2.2 Formalising catch shares over the period 1997–2001

Paragraph 19 of the Government's IFM policy refers to formalising existing catch shares as a basis for future allocation discussions using the best available catch information over the five-year period 1997-2001. There are a number of issues that are associated with using the 1997-2001 to formalise catch shares including:

- a. the poor quality and availability of catch data for some fish resources over the period 1997-2001 (particularly for the recreational sector);
- b. the period 1997-2001 will be increasingly further away from the date of determination of allocations; and
- c. it is arguable that paragraph 19 could be interpreted to simply mean that it is just a matter of estimating the catch shares over the period 1997-2001 using the available data and making determinations based on that calculation.

The IFAAC considered these issues and resolved to advise the Minister that the following approach should be adopted regarding paragraph 19 of the IFM Government policy:

1. The IFAAC will make an assessment of 1997–2001 catch shares, as a basis for future allocation discussions (Paragraph 19, IFM Government Policy, Appendix A).
2. In making its recommendation for allocation, the IFAAC will apply the broader principles in the IFM Government Policy, in particular Paragraph 5 (Paragraph 5 contains the Guiding Principles which are reproduced at section 3.1.3).

The Minister approved ²

...the IFAAC proceeding to consider allocations on the basis of its resolution.

² Extract from letter from the Minister to the IFAAC of 1 April 2005.

3.2.3 Allocation to the non-fishing sector

The current Minister for Fisheries, Hon Jon Ford JP MLC, has advised the IFAAC that he does not expect to be provided with a recommendation on allocations to non-extractive users of the resource (Appendix G).

Specifically, the Minister has advised the IFAAC that:

1. The IFM initiative was designed to determine allocations between Customary, recreational (including charter) and commercial sectors that are extractive users.
2. He was not seeking a recommendation from the IFAAC.

Note 2: The Minister is not seeking advice from IFAAC regarding an allocation for non-extractive users of the resource as this is taken account of in the setting of the SHL provided to the IFAAC.

3.2.4 Regions over which allocations should be made

The IFAAC carefully considered the information contained in FMP No. 204 and formed the view that there was insufficient reliable data available for it to make a recommendation on final allocations of abalone outside the broader Perth Metropolitan region in this report.

In making this conclusion the IFAAC was mindful of the Guiding Principle iii) in the Government's IFM policy which states that 'The absence of, or any uncertainty in, information should not be used as a reason for delaying or failing to make a decision'. It considered this principle in light of the advice from the Department that competition between sectors is not driving unsustainable outcomes in the non-metropolitan areas of the fishery and concluded that despite the principle, there was no imperative for decision making regarding this region at the present time.

Accordingly, the IFAAC sought the Minister's approval to restrict its advice on allocations to Roe's abalone in the Perth metropolitan region (from Moore River to Cape Bouvard - see Figure 1).

The Minister approved for the IFAAC to limit its advice on proportional allocations to Roe's abalone in the Perth metropolitan region, but also informed the committee that he was prepared to receive advice on arrangements broadly supported by stakeholders for resolving resource sharing issues outside the Perth metropolitan region (Appendix H). The IFAAC advised stakeholders of the Minister's approval.

The IFAAC subsequently sought advice from the Department of Fisheries as to when adequate information would be available to compare recreational and commercial catches outside the Perth metropolitan region. The Department advised that it would not have this additional information for another three years. The IFAAC does not expect to be in a position to provide advice on final allocations outside the Perth metropolitan region until at least 2010.

3.2.5 Allocations by subregions within the Perth metropolitan region

The IFAAC further subdivided the Perth metropolitan region into three subregions to provide a context for discussing the management of the fishery at a finer spatial scale. These subregions are known as north, central and south (see Figure 2).

The proportions of the total catch have varied historically between these subregions. For

example, the recreational sector has taken on average 70.5 per cent of the catch in the central subregion, but only 12.5 per cent in the south, whereas the northern subregion the catch is shared about equally between the two sectors.

Although the subregions do not exist in legislation, they potentially provide a framework for determining allocations on a finer spatial scale. The IFAAC therefore undertook to explore the issue further.

The Department of Fisheries, in its October 2005 submission to the IFAAC, identified allocations by subregions as having a number of disadvantages. The Department believed that allocations by subregion would disadvantage the commercial sector as it would limit management flexibility and increase the complexity involved in setting and managing Total Allowable Commercial Catches (TACCs). For the recreational sector, the Department believed management by subregion would complicate real-time management and monitoring of the recreational catch.

The IFAAC, after initial consideration of the Department of Fisheries' submission, sought additional advice from the Department on allocations by subregions so it could investigate the issue more thoroughly. The Department's response to IFAAC's request is provided at Appendix I. Essentially, the Department's advice is that it would not be sensible to make an allocation for Customary fishing by subregion, and an allocation by subregion would virtually split in half the area where about 90 per cent of the recreational catch is taken.

After examining all the available information, the IFAAC felt that the disadvantages of allocating catch shares by subregions outweighed the advantages. The IFAAC resolved to recommend that allocations should not be made by subregion.

Recommendation 1: Allocations for abalone should only be considered for Roe's abalone within the Perth metropolitan region, that is the region between Moore River mouth and Cape Bouvard (currently Area 7 of the commercial fishery).

Note 3: The IFAAC does not expect that it will be providing advice on final allocations for abalone outside the Perth metropolitan region until at least 2010.

3.3 Additional guiding principles adopted by the IFAAC

IFAAC also considered other allocation principles in addition to those referred to previously (sections 3.1.2 and 3.1.3) which have a bearing on its deliberations. These are outlined below:

- i. The approach should be pragmatic and incremental;
- ii. There was a need to make an explicit allocation (as distinct from making a general statement of principle about how allocations should be made);
- iii. Allocations should not have the effect of merely deferring a decision indefinitely;
- iv. Recommendations that amount to a change to catch shares as assessed in the 1997–2001 period need to be explained on the basis of the 'Guiding Principles', (particularly Guiding Principle viii, see section 3.1.2); and
- v. That until there are re-allocation mechanisms, the IFAAC should be cautious in making recommendations that would have the effect of immediately and significantly impacting on a sector.

3.3.1 Data uncertainty

Although the catch information for the commercial sector is considered to be accurate (because it is managed under a quota management system that is tightly controlled and monitored), significant uncertainty surrounds catch data for the remaining extractive activities.

In relation to the recreational sector, several factors contribute to the uncertainty around its annual catch. Firstly, estimates are taken from surveys and inherent errors are unavoidable in these processes. Secondly, the recent introduction of a new 'phone diary' survey method in 2004 suggests that the previous incorporation of 'phone recall' survey results, was contributing to an over-estimation of the recreational abalone take (see Section 4.2 for further detail). Thus, the various survey methods themselves yield different results and contribute further to uncertainty. Finally, while it is agreed that the dominant percentage of recreational fishers are waders, fishing on the reef top for abalone, there are mixed views on the proportion of recreational fishers which fish in the 'off-reef top' zone. This has significant implications when considering the establishment of an allocation system which is mindful of sustainability issues that will stem from the increase in activity in either one of these zones.

In relation to Customary fishing, significant uncertainty stems from a lack of quantitative data.

There is also the lack of quantitative information on the scale of illegal catch which further adds to the general uncertainty. Illegal catches would mean that the total catches are underestimated. The amount by which they may be underestimated is unknown (see page 58 of FMP No. 204 for a discussion of the illegal take of abalone).

3.3.2 Optimising the benefit to the community

Guiding policy viii (see section 3.1.2) of the IFM Government Policy states:

Allocation decisions should aim to achieve the optimal benefit to the Western Australian community for the use of fish stocks and take account of economic, social, cultural and environmental factors. Realistically, this will take time to achieve and the implementation of these objectives is likely to be incremental over time.

The Perth metropolitan abalone fishery was one of three fisheries used as case studies in a research project titled "A Socio-economic Valuation of Resource Allocation Options between Commercial and Recreational Use" (McLeod and Nicholls, 2004).

Although the results of the study pointed to possible net benefits arising from a small reallocation of catch to the recreational sector, the authors cautioned against using the results to justify a reallocation because some of the underlying assumptions in their modelling were not met (see FMP No. 204, page 47).

A key message from the McLeod/Nicholls study was that opportunities existed to increase the benefits to the recreational sector within existing constraints. This could be achieved by redistributing the allowable catch amongst individual recreational fishers, so as to more closely match their individual preferences. The authors also suggested that greater flexibility in the way that recreational fishers would catch its share would increase the benefits to this sector.

Inter-sectoral allocation should be considered further after more flexible arrangements for recreational fishers have been established and operated for a time long enough to allow recreational net benefits to be optimised.

During the public comment phase of the Draft Allocation Report, the IFAAC sought specific comments on relevant economic, social, cultural and environmental issues and how these might

be incorporated into allocation decisions to achieve the optimal benefit to the Western Australian community from the use of abalone stocks.

At the stakeholder workshop convened by IFAAC in March, each sector present confirmed what it considered as the key amenity values of the resource for the respective sector. These are documented in **Table 1**. In relation to the Customary sector which did not attend the workshop, the IFAAC based the amenity values of this sector on the contents of the Southwest Aboriginal Land and Sea Council's January 2007 submission to the Draft Allocation Report.

Table 1. Key amenity values of the metropolitan Roe's abalone Resource to users.

SECTOR	VALUES
Commercial	The commercial sector wish to protect and maintain its current 36 tonne annual quota while also protecting the ability for small increases in quota in optimal stock years. The commercial sector also value and wish to maintain the ability to access high levels of large (+70mm) abalone in the metropolitan region
Recreational	The recreational sector seeks a greater diversity in management arrangements to access the resource, including the ability to fish in off-reef top habitats. Recreational fishers also seek management arrangements which will prevent the commercial sector fishing reefs just prior to recreational fishing season openings
Customary	The IFAAC drew from the Southwest Aboriginal Land and Sea Council submission to the Draft Allocation Report that the indigenous sector seeks the continued allowance of Customary use of the metropolitan abalone resource, and recognition of traditional and current access rights.

Given the different nature of each sector's values, it is difficult to make direct comparisons between the commercial, recreational and Customary sectors which would lead to the IFAAC being able to confidently recommend a specific allocation optimising the social, economic and environmental benefits of the community from the use of the resource.

3.4 Description of the fishery

in the waters near Perth, Roe's abalone occupy the intertidal and subtidal limestone reefs of both the mainland and offshore islands. They also occur on some offshore reefs. Densities are highest at the seaward edge of the reef platform and drop to low levels by about 1.5 metres depth on the subtidal cliff at the seaward edge of the reef. Densities decline more gradually shoreward from the outer edge of the reef platform.

Roe's abalone grows to a maximum size of 120 mm and the mean size tends to increase subtidally and shoreward from the seaward edge of the reef platform (Hancock and Caputi, 2006). As such, the deeper areas generally contain a higher proportion of broodstock, whereas the shallower areas contain a larger proportion of smaller abalone which will be future breeders, having not yet matured.

Larval dispersal for Roe's abalone occurs over a relatively small range. Examination of the stock structure has demonstrated that populations can be genetically different when the distance between reefs is less than 13 km (Hancock 2000). In practical terms, this means that larvae from a Roe's abalone colony is unlikely to repopulate another reef (with a suitable habitat) if the unpopulated reef is greater than 13 km away.

The Metropolitan Roe's Abalone fishery is effectively split into two components, the 'reef top' component and the 'off-reef top' component. These two fishery components overlap each other and there is no precise dividing line, nonetheless the distinction between the two components is important to understanding the long standing management arrangements for the fishery. The different components of the fishery have special significance to the recommendations of IFAAC as to future management arrangements.

Commercial fishers are not permitted to stand on the reef top leaving the 'reef top' component largely to recreational fishers who stand or wade in the shallow reef top waters while fishing for abalone. The Department of Fisheries estimates that approximately 90% of recreational sector fishery fish is taken from the 'reef top'. The balance comes from the 'off-reef top' stock.

The 'off-reef top' component is dominated by the commercial sector as only commercial fishers are permitted to use air assisted diving apparatus in fishing deeper waters. In addition the commercial sector intentionally targets the larger sized (and more valuable) abalone that tend to be more prevalent in deeper waters. Recreational fishers can access the 'off reef top' abalone component by free diving and not through air assisted diving.

It should be noted that Recfishwest considers that the Department's estimates of 'off-reef top' recreational take may be too low. It suggests that the proportion of take by recreational fishers in this component could be in fact as high as 20% of the total recreational take and increasing.

With a lack of specific information on Customary take, the IFAAC has made what it believes is a reasonable assumption that any Customary fishing taking place is likely to be on the reef tops. This being the case, it is important to note that although IFAAC considers recreational and Customary fishers to be separate sectors, for the purpose of management arrangements and allocation the Department of Fisheries manages the two sectors collectively. The Department of Fisheries develops management arrangements based on the annual stock surveys of the reef top area in which these two sectors undertake the majority of their activities.

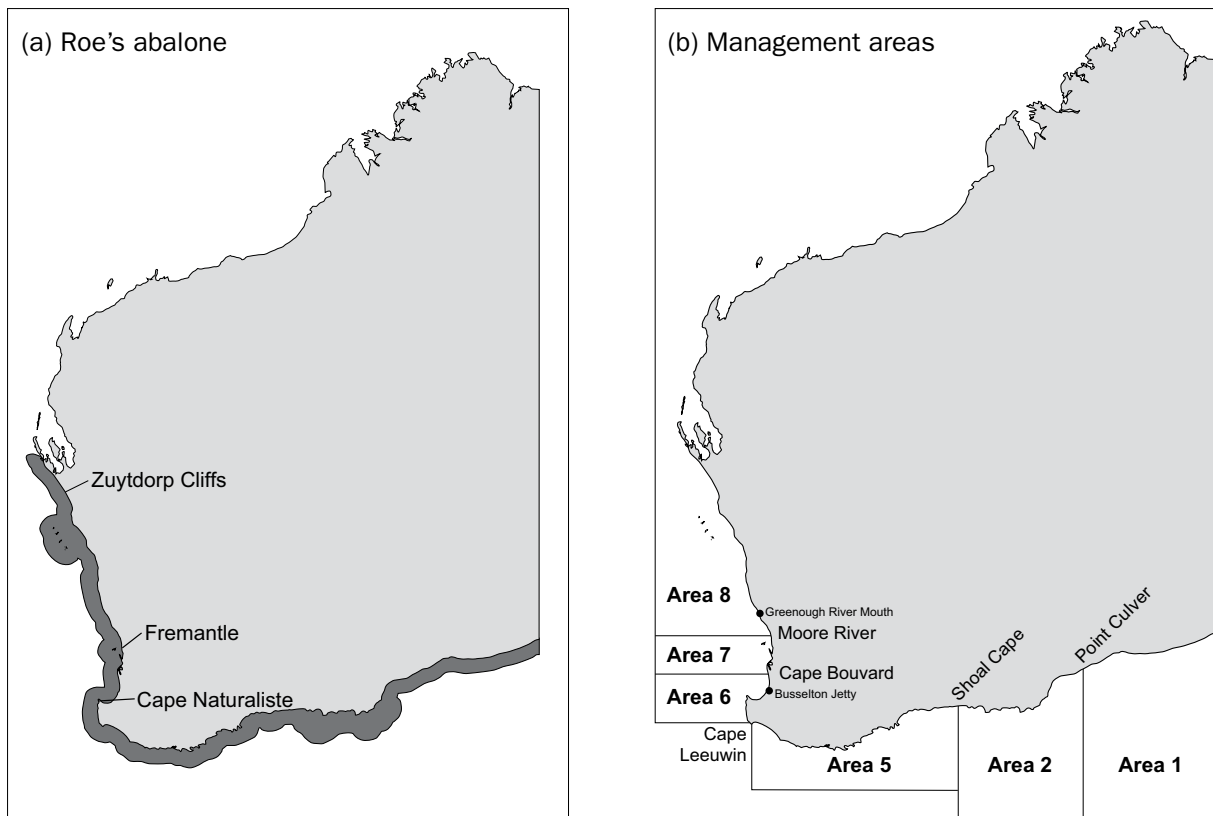


Figure 1. Maps of area of the resource and current commercial and recreational management zones.

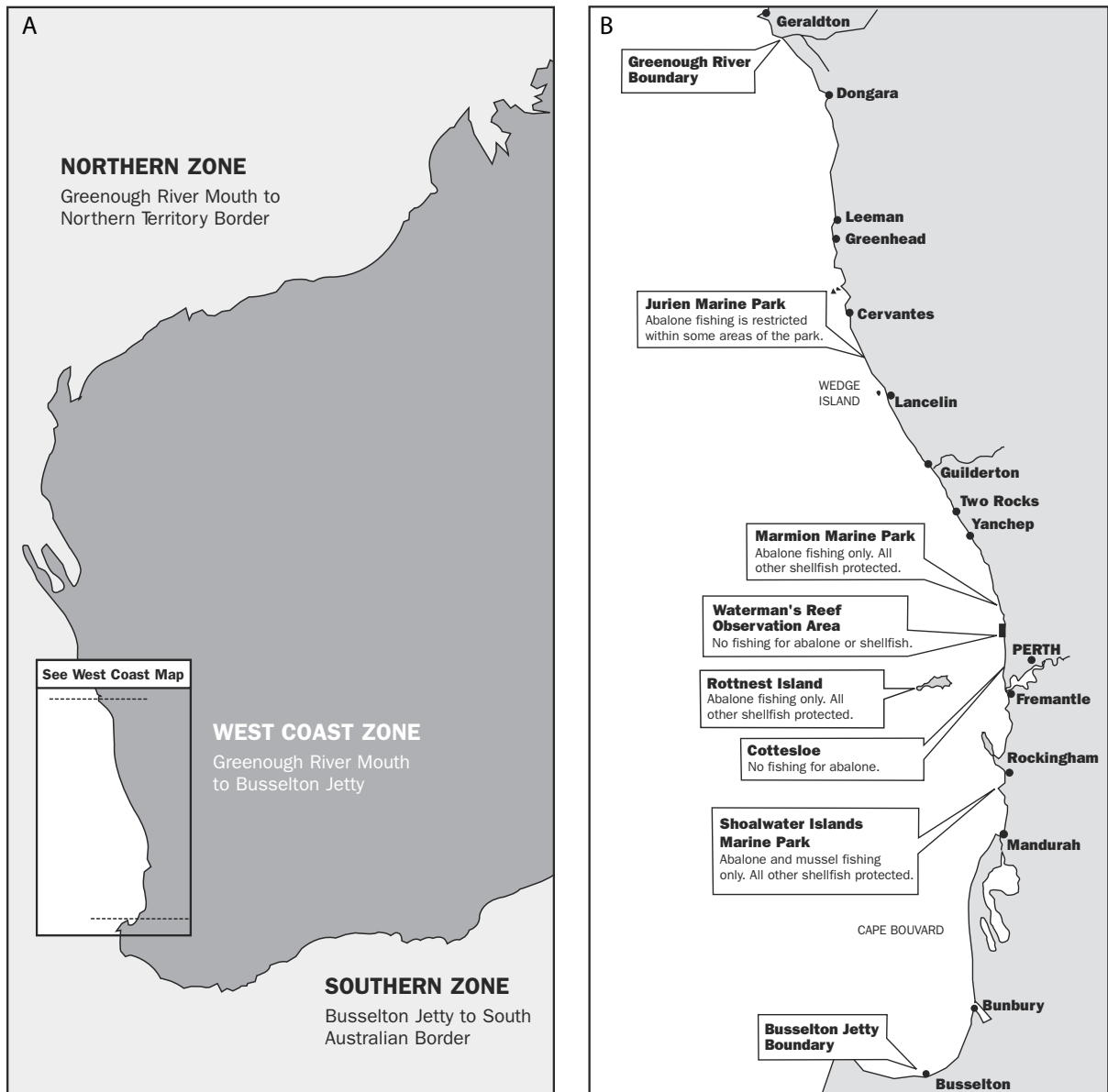


Figure 2. Maps showing northern central and southern subregions.

3.5 Regulation of the sectors

3.5.1 Customary Fishing

The Minister for Fisheries used the term “Customary fishing sector” to:

... describe the activity of indigenous people who have a right (in accordance with Aboriginal law and customs) to fish in a Customary manner.

He added to the above description that:

Customary Fishing applies within a sustainable fisheries management framework to persons of Aboriginal descent; fishing in accordance with the traditional law and custom of the area being fished; and fishing for the purposes of satisfying non-commercial personal, domestic, ceremonial, educational or communal needs.

The National Native Title Tribunal (NNTT) in its submission on western rock lobster allocations (NNTT, 2005) drew attention to the distinction the Department of Fisheries makes between Customary fishing by Aboriginal people and recreational fishing by Aboriginal people. It notes that under the Department’s definition of Customary fishing, Aboriginal people are:

... taking marine resources for practices that reinforce cultural identity and tradition

and in Aboriginal recreational fishing, they are:

... exercising the same right as non-indigenous Australians to take fish, governed by the same laws and regulations.

The NNTT suggested that indigenous acceptance of what can be taken to be a narrow definition of what Customary fishing represents was contingent on other strategies being in place to assist indigenous people to take advantage of opportunities in the marine sector. The NNTT also advised the IFAAC that the appropriateness of the use of such a definition was part of ongoing discussions and negotiations at a national and state level.

The IFAAC accepts the view that a distinction can be drawn between Customary fishing and recreational fishing by indigenous people, and that not all indigenous recreational fishers are fishing for Customary purposes. The IFAAC is cognisant that specific arrangements are being considered for the abalone fishery under the Government’s Aboriginal Fishing Strategy which is still under consultation.

Note 4: IFAAC has included recreational fishing by indigenous people, as distinct from Customary fishing, as part of the broad recreational allocation consistent with the Ministerial advice referred to in Section 3.2.3.

3.5.2 Recreational Fishing

The west coast recreational fishery zone, which includes the Perth metropolitan fishery, extends from Greenough River mouth to Busselton Jetty (Figure 1).

From 1996 to 1999 the Department of Fisheries closed the area around Penguin Island to recreational fishers from 1996 to 1999, while some commercial fishing remained.

The recreational sector is managed by regulation under the *Fish Resources Management Act 1994* and *Fish Resources Regulations 1995*.

Recreational fishing for abalone requires either an abalone recreational licence or an umbrella

licence permitting access to all licensed recreational fishing activity.³ The Department of Fisheries first introduced licences in 1992. There is no limit to the number of recreational licences that can be issued.

The Department of Fisheries issues licences for a 12-month period from the date of issue. Licence fees are currently \$36 for a specific abalone licence, and \$72 for an umbrella licence. During 2004 it issued about 8,000 abalone specific licences, and 13,000 umbrella licences.

Anyone, other than the holder of a commercial fishing licence, may apply for a recreational licence. The actual number of licensees that fish for Roe's abalone in the Perth metropolitan region is less than the number of licences issued.

Since 1995, the recreational season has started on the first Sunday in November and consisted of six Sunday mornings between the hours of 7:00am to 8:30am. In 2006, this changed to a one-hour period between 7:00am and 8:00am. A daily bag limit of 20 per licence holder, and minimum size limit of 60 mm apply.

As stated above, the majority of recreational fishers take abalone in the 'reef top' component of the fishery, with a small proportion snorkelling in the 'off-reef top fishery' adjacent to the reef platform. Recreational fishers use a screwdriver or similar instrument to lever abalone from the reef.

The Department of Fisheries does not permit recreational fishers to use compressed air to take abalone from subtidal areas. Further details of the recreational sector are available from FMP No. 204.

3.5.3 Commercial Activities

3.5.3.1 Commercial Fishing

The Roe's abalone commercial fishery, described as "Area 7" in the management plan⁴ for the commercial fishery, extends from the mouth of Moore River to Cape Bouvard (Figure 1).

The commercial sector is prohibited from fishing in the area around Rottnest Island and the Cottesloe area of the mainland coast. The Department of Fisheries closed Cottesloe to recreational fishers in 2003.

The management arrangements do not permit commercial divers to stand or remain on the reef top while fishing for abalone between Hillarys Boat Harbour and Cape Bouvard. Commercial fishing for Roe's abalone is not permitted between North Mole at Fremantle and Trigg Island.

The IFAAC considers that the commercial abalone sector comprises both the commercial wild capture sector and the aquaculture sector.

Commercial fishing for abalone is managed under the *Abalone Fishery Management Plan 1992* (in conjunction with the *Fish Resources Management Act 1994 (FRMA)* and associated regulations). The 13 commercial licensees permitted to take Roe's abalone in the Perth metropolitan region hold a total of 7,200 units (one unit currently equals 5kg whole weight).

The commercial abalone sector has been managed under a Total Allowable Commercial Catch (TACC) in the Perth metropolitan region (Area 7 under the management plan) since 1997. The TACC for the Perth metropolitan region has been 36 tonne each season since then, apart from

³ Aboriginal persons are not required to hold a recreational fishing licence under s. 6 of the FRMA.

⁴ The management plan can be obtained from the Department of Fisheries' website at: <http://www.fish.wa.gov.au/sec/about/legislation/>.

1998 when it was reduced to 24 tonne to provide for a change from a season period of October-to-September to April-to-March.

Although a legal minimum size of 60mm applies to the commercial sector, commercial fishers comply with an industry-initiated management arrangement to only take Roe's abalone of at least 70 mm in length (10 mm above the legal minimum size). This arrangement suits the commercial industry because larger-sized abalone attract a higher price.

Fishing by Commercial divers is not permitted on weekends and on public holidays in the Perth metropolitan region all season. In addition, commercial divers must cease fishing in the region altogether two weeks prior to the opening of the recreational season (i.e. by the first Sunday in November) and not fish at all during the recreational season.

The Department of Fisheries renews the commercial fishery licences annually, following payment of the annual access fee by licensees. The total amount collected from commercial licensees to access Roe's abalone in the Perth metropolitan region for the 2005/06 season was \$92,600.

The Department of Fisheries in its submission estimated the average gross value of production from the Perth metropolitan region over the period 1999 to 2003 as \$1.39 million. FMP No. 204 provides further details of the commercial fishing sector.

3.5.3.2 *Aquaculture*

The aquaculture sector has a requirement to access a limited amount of Roe's abalone from the wild to carry out research and supply brood stock for farm production. This access is currently provided by a Ministerial exemption under section 7 of the FRMA.

The take of Roe abalone by the aquaculture sector is consistently low. Currently, the aquaculture sector takes less than 200 individuals in the Perth metropolitan region.

SECTION 4 CATCH INFORMATION

In accordance with Government Policy paragraph 5 (iii), IFAAC is obliged to use the best available catch information and is directed that uncertainty in relation to that information should not be used as a reason for delaying or failing to make a decision.

The principal source of catch data that the IFAAC has used in considering its advice on allocations that contained in is FMP No. 204.

4.1 Customary

The Department of Fisheries has no specific information on the numbers of indigenous people that participate in Customary fishing for abalone (see section 3.2.1 for a definition of Customary fishing) or the amount that they eat.

There is evidence in a research report, provided to the IFAAC, that indigenous people on the west and southwest coasts have historically eaten molluscs (Wright, 2005). The author of that report referred to a great deal of archeological evidence of coastal exploitation by Aboriginal people. In particular, research conducted between Kalbarri and Cape Arid showed that southwestern Aboriginal people ate marine molluscs including abalone (Dortch, Kendrick and Morse 1984).

More recently, evidence has been given in a Native Title Tribunal hearing that Indigenous people collected abalone from reef tops and rocks on the south coast (see FMP No. 204, page 56).

With respect to the amount of abalone indigenous people ate, the Department in a letter (Appendix J) to the IFAAC makes the following points that:

- There are no known coastal shell midden⁵ sites between Moore River and Cape Naturaliste.
- Further research would be required before any informed decision about the Customary level of take could be made.
- In the Perth metropolitan region, because the stock is located on the local reef platforms attached to the shoreline, historically it would have been easily accessible to indigenous people.

IFAAC made a specific call within the Draft Allocation Report for more information on the nature and extent of Customary fishing for abalone in the Metropolitan area.

The South West Aboriginal Land and Sea Council (SWALSC) made a substantive submission to the Draft Allocation Report which drew on the outcomes of consultation undertaken by SWALSC with indigenous informants. The submission indicated significant interest in Customary use and suggests that this use may not be obvious to non-indigenous observers.

The IFAAC appreciates the additional information by SWALSC and the explanation provided by SWALSC for the lack of profile in relation to specific instances of Customary fishing activity. Given the high visibility, community interest, research and enforcement activities relating to this fishery, however, IFAAC concludes on the information before it that it is likely that current indigenous take is not significant from a resource management perspective.

⁵ Shell middens are defined as “a mound of shells accumulated from human collection, consumption, and disposal” (McGraw Hill Higher Education On line, 2007), in this context, presumed to have originated from indigenous activity.

Note 5: The IFAAC has no quantitative information suggesting that the quantity of Customary take of abalone in the Perth metropolitan area is significant. If there was demonstrated to be a significant Customary take, the demands of IFM (IFM Government Policy, paragraph 18, Appendix A) would necessarily require more research and monitoring of the Customary take by indigenous people.

4.2 Recreational

The recreational catch of abalone is described in FMP No. 204 and the Department's October 2005 submission to the IFAAC (www.fish.wa.gov.au).

Most of the recreational catch is taken in the north and central subregions of the Perth metropolitan region (Figure 2).

The Department provides a comparison of the three survey methods used to collect information on the recreational catch in the Perth metropolitan region in its submission, i.e.:

1. field survey (since 1997);
2. phone recall survey (since 1999); and
3. phone diary survey (2004-05).

The field survey has been conducted the longest (since 1997) and is based on sampling catches of recreational fishers to determine average weights, catch rates and direct counts of recreational fishers.

The Department of Fisheries calculates the recreational daily catch rate from interviews with fishers. An estimate of the total catch in numbers is calculated by using estimates of the total fishing effort. An estimate of mean weights is then used to convert the numbers of abalone taken by recreational fishers to 'recreational catch' (in whole weight) for comparison purposes with the commercial sector.

The phone recall survey has been conducted since 1999 and is based on interviewing 400 people, randomly selected by licence type and location. The interviews are conducted around February each year. Catch estimates are provided at the bioregional scale for all species.

The phone diary survey, which has just recently been introduced, is based on sending a diary to approximately 500 licence holders, selected by licence type (umbrella and abalone only licensees) and location (metropolitan and regional), and contacting each diary holder once a month by phone for the duration of the abalone season.

The catch estimates from each survey method are provided in Table 2 below.

In its October 2005 submission, the Department of Fisheries used the recreational field survey data to compare with the commercial catch, whereas in FMP No. 204 the average of the field and phone survey results were used to represent the recreational catch in comparison with commercial catches.

The Department of Fisheries has justified the change to using the field survey (only) results on the fact that the results from the phone diary survey in 2004 (which only became available some time later) confirm the field survey is more accurate than the phone recall survey. Based on this, the Department determined that the telephone diary survey is more accurate than the phone recall survey due to the recall bias associated with phone recall surveys and that the

phone recall survey should be removed from the calculation of recreational catch inaccurately increasing the estimate of recreational catch.

The important implication therefore of using the field survey results is that the estimate of the recreational catch is lower than the estimate produced from the average of both surveys, i.e. the phone survey results have always been higher than the field survey.

Table 2. Catch estimates for the commercial and recreational sectors, in tonnes whole weight, for Roe's abalone in the Perth metropolitan region from 1997 to 2004.

Season	Commercial Catch (t) ²	Recreational Estimated Catch (t)			
		Field Survey ³	Phone Recall Survey ³	Average Field and Phone recall	Phone Diary Survey
1997	36.4	29.5		29.5	
1998	24.1	33.8		33.8	
1999	36.1	35.3	37.7	36.5	
2000	36.5	30.2	33.7	32.0	
2001	35.4	44.1	47.8	46.0	
2002	36.0	36.0	39.3	37.7	
2003	36.0	42.6	47.2	44.9	
2004	35.9	31.7	44.4	38.1	28.0

¹ For the commercial sector the licensing period starts on the 1 April and finishes on the 31 March. For the recreational sector the fishing season is over six consecutive Sundays starting on the first Sunday in November each year.

² Source: Table 7 FMP No. 204.

³ Source: Table 9 FMP No. 204.

⁴ Source: Information for 2004 has been sourced from the Department of Fisheries October 2005 submission.

In considering the Department's advice on the appropriate data source to base the recreational catch the IFAAC took the view that it should use the average of the two estimates from the field and telephone surveys. The reason for adopting this approach was that the change from the average is based on the survey results from one telephone diary survey only. The Department has advised that it is currently conducting its second telephone diary survey for the 2006/2007 period which will provide additional input into the comparability and accuracy of each of the three survey methods. The Department also advises that the methodology to be used in ongoing monitoring of recreational fishing catch is yet to be determined and any change from the current system will be the subject of stakeholder engagement.

Using the average of the field and phone recall surveys (Table 2 the recreational catch has varied between 29.5 tonnes and 46.0 tonnes since 1997, with an average of 37.2 tonnes per year.

4.3 Commercial

The commercial catch information is provided in Table 2 above. The Total Allowable Commercial Catch (TACC) has been 36 tonnes each season apart from 1998, when it was reduced to 24 tonnes to accommodate a change in season dates.

The sources of data for the commercial abalone fishery are statutory monthly returns and daily catch and disposal records (CDRs). Commercial abalone divers record on their CDRs estimates of catch (in kg), effort (in hours and minutes spent diving) and the location fished with a 10×10 nautical mile grid system.

The Department of Fisheries regards the CDRs as the most accurate record of the catch, and the statutory returns provide a useful historical record of the catch and effort since they have been collected since 1970s.

Most of the commercial catch is taken in the north and southern subregions of the Perth metropolitan region (Figure 2).

4.4 Recreational and commercial catch shares

the catch proportions each year since 1997 are given in **Table 3** below. The proportions have been developed using the commercial and recreational data from **Table 2**.

Table 3. Catch proportions for Roe's abalone in the Perth metropolitan region over the period 1997-2004.

Year	Proportion %	
	Commercial	Recreational ¹
1997	55	45
1998	42	59
1999	50	50
2000	53	47
2001	44	57
2002	49	51
2003	45	55
2004	49	52

¹ Using the average of the field and telephone surveys from Table 1.

Catch shares since 1997 (excluding 1998) have varied between 43 per cent and 55 per cent for the commercial sector and, conversely, between 45 per cent and 57 per cent for the recreational sector.

Essentially, as the commercial catch has been fixed at 36 tonnes per season since 1997 the catch proportions have varied according to the amount taken by the recreational sector.

SECTION 5 ALLOCATION ISSUES

As a precursor to providing its advice on actual allocations, the IFAAC considered that it needed to discuss the following issues:

1. alignment of boundaries;
2. fishing on the reef platform between Hillarys Boat Harbour and Moore River;
3. incidental mortality; and
4. proportional allocations under a single sustainable harvest level (SHL).
5. Each of these issues is discussed below.

5.1 Alignment of boundaries

Currently, Perth metropolitan management boundaries are not aligned between the commercial and recreational sectors on the west coast (see Figure 1).

The recreational metropolitan zone is from Greenough River Mouth to Busselton Jetty and the commercial metropolitan zone is (Area 7) from Moore River to Cape Bouvard.

The Department of Fisheries has proposed that the boundaries be changed so that the management boundaries for the recreational and commercial Perth metropolitan zones are equivalent by amending the recreational boundaries to match that of the current commercial boundaries (Area 7). The Recreational Fishing Advisory Committee has also supported this position.

In the long term, integration of fishery management will result in adjustments to fishery management structures and practices to facilitate the integration of Customary, commercial and recreational fisheries. As creating a recreational zone between Moore River and Cape Bouvard is the type of management change that would facilitate the integration of management of the sectors, the proposal is supported by the IFAAC.

Recommendation 2: The metropolitan zone for the recreational fishery should be amended by extending the boundaries from Moore River to Cape Bouvard so that the commercial and recreational sectors have common metropolitan region boundaries.

The Department of Fisheries has also proposed that a new mid west coast zone is created for the recreational fishery, making a total of four recreational zones. The Department has argued the case for creating a new mid west coast zone because it believes there is a need to manage the more intensive recreational fishing in that area.

The IFAAC has not made any recommendations on the abalone fishery outside the Metropolitan area because the Department of Fisheries submitted that the catch information was not sufficiently reliable to provide a basis for allocation and better data would not be available until 2010. When adequate information is available, abalone fishing outside the Metropolitan area will be examined by the IFAAC and the need for a 'mid west coast' zone can be addressed as part of the wider allocation exercise. In the interim, it is expected that the Department of Fisheries will manage the sustainability of the fishery on an overall basis.

5.2 Hillarys Boat Harbour to Moore River reef top fishing

The current ban on reef top fishing (ie. not permitted to stand or remain on the reef top while fishing) by commercial fishers extends from Cape Bouvard to Hillarys Boat Harbour.

The Recreational Fishing Advisory Committee (RFAC) has proposed that the ban be extended to Moore River. The Department of Fisheries in its response to IFAAC's interim report supported this extension. Recfishwest believes that negotiations should continue with commercial operators concerning important reefs between Trigg Island and Hillarys Marina, and reef top harvesting by commercial operators between Hillarys Boat Harbour and Greenough River mouth. Recfishwest also believe that a recreational fishing only zone should be created between Cottesloe Reef and Mindarie, or at a minimum between Trigg Island and Hillarys Boat Harbour. The Department of Fisheries supported the recommendation to extend the northern boundary of the ban on commercial reef top fishing, and added that it would support an extension to the mouth of Moore River.

In a verbal submission to the IFAAC, the commercial sector objected to restrictions being imposed in relation to fishing activities on reef tops without appropriate offsets. The commercial sector has provided comment to the IFAAC, however that it is not actively fishing on the reef top from Hillarys Boat Harbour to Burns Beach. The area between Hillarys Boat Harbour and Burns Beach is a popular recreational fishing area and extending the reef top ban on commercial fishing has the potential to avoid future interaction and conflict in the area.

Extending the prohibition on commercial fishing on the reef platform to Burns Beach is effectively maintaining what is understood by many to be the *status quo* and will reduce the potential for conflict in the future. Accordingly, the IFAAC generally supports this proposal in the context of the extension of IFM to this fishery and its other recommendations. The IFAAC believes that this recommendation is consistent with its principle of an incremental and pragmatic approach as outlined in **Section 3.3**.

In terms of further extensions to reef top bans or other exclusive areas, IFAAC believes the sectors should be encouraged to take a lead in negotiating outcomes for these issues. For example, extending the prohibition on commercial access to the reef top north of Burns Beach could be negotiated between the two sectors within the IFM framework.

Under IFM, as access to the resource becomes more assured and sector shares are specified, the environment for effective inter-sectoral negotiation is improved. However, the IFAAC cautions that IFM will not of itself guarantee an outcome and it may take time for the necessary cultural shifts in the negotiating practices of the various sectors to occur.

Recommendation 3: The ban on commercial fishers fishing on the reef top between Cape Bouvard and Hillarys Boat Harbour should be extended further north to Burns Beach. IFAAC recommends that the ban should proceed in conjunction with advancing the other issues covered in this report.

5.3 Incidental mortality

there are three relevant IFM Government policy principles, which relate to incidental mortality. These are listed below:

5 iv) A harvest level, that incorporates total mortality, should be set for each fishery and the allocations designated to each group should be made explicit.

5 v) The allocations to user groups should account for total mortality on fish resources resulting from activities of each group, including bycatch and mortality of released fish.

5 x) Management arrangements must provide users with the opportunity to access their allocation ...

The effective implementation of these principles raises substantial issues, requiring a high quality of knowledge of both fish stocks and the impact of fishing activity.

The IFAAC sought advice from the Department of Fisheries on the relationship of the catch of each sector to the SHL and how incidental mortality is incorporated into the SHL. The Department's advice is provided in Appendix K.

5.3.1 A harvest level incorporating total mortality

In terms of the first part of policy principle 5 (iv), setting a harvest level that incorporates total mortality is the role of the Chief Executive Officer (CEO) of the Department of Fisheries. It is clear from FMP No. 204 that the CEO has not currently provided a sustainable harvest level (SHL) that arithmetically incorporates total mortality, as the SHL is given as the total quantity of Roe's abalone that may be taken (landed) by the commercial and recreational sectors.

In other words, the SHL includes only the direct take from the sectors and does not include other indirect or unknown sources of mortality including Customary fishing, discards and illegal take. The Department of Fisheries explains in their submission (Appendix K) how it deals with incidental mortality - a summary of which is provided below.

Although there is no estimate of total mortality, the impact of total mortality on the stock is reflected in performance indicators used to monitor the stock status and assess the SHL.

The monitoring of the stock and SHL is reliant on the trends in fishery-dependent (commercial and recreational catch, effort and catch rates) and fishery-independent (research surveys of key locations of commercial and recreational interest) performance indicators. If there were a substantial increase in abalone abundance due to a decrease in total mortality (caused by, for example, fewer animals discarded) the change in abundance would be identified as a change in the performance indicators.

The Department of Fisheries believes that in this way total mortality is adequately taken into account in setting the SHL, without having to estimate each of the components.

5.3.2 Allocations that account for total mortality

IFAAC believe that insufficient information is available for it to recommend allocations that include incidental mortality. As this was a key issue raised in consultations the following discussion is provided so that the various stakeholder views on this issue are reported.

The submissions made to IFAAC indicate that stakeholders believe incidental mortality is likely to be higher for the recreational sector than the commercial sector for a range of reasons including expertise, environmental conditions, fishing method and short fishing times for the

recreational sector. Stakeholders have argued in their submissions that incidental mortality should be taken into account in accordance with the principles, but they vary as to how this should be done.

The Abalone Industry Association of Western Australia (AIAWA) believes that there should not be an allocation for incidental mortality to the recreational sector in addition to its legally taken share.

Recfishwest's position is that the total catch including incidental mortality must form the basis of the recreational allocation. Recfishwest holds the view that incidental mortality forms part of the 'take' as interpreted under the *Fish Resources Management Act 1994*, and therefore should be used in calculating the recreational allocation.

Recfishwest's October 2005 submission stated that a nominal figure of 33 per cent should be added to the recreational catch figures for allocation purposes to account for incidental mortality, thereby effectively increasing the average recreational catch. In its January 2006 submission, it added that an "additional 5% should be added to the recreational allocation" based on research by Hancock, Basham and Friedman (2004) on incidental mortality rates from recreational fishing.

In contrast, the Department of Fisheries submission stated that allocations should be based only on retained catch. The Department explains that incidental mortality occurs in both fisheries, albeit it is more common in the recreational fishery; is highly variable from year-to-year; and is dependent on weather and swell conditions.

Notwithstanding the general desirability of including incidental mortality in the SHL in accordance with the policy principles, the IFAAC cannot include incidental mortality in an allocation to a sector when there is no validated estimate of it.

The practical implication of this, as pointed out by the Department of Fisheries, is that any decrease in incidental mortality, or for that matter any other change in fishing practices that leads to an increase in the SHL, would benefit⁶ all sectors.

5.3.3 Access arrangements

It has been noted above that the incidental mortality of abalone during fishing carried out by the recreational sector can be affected by restrictions on recreational fishing including the short fishing season, and the ban on air assisted diving. Given that the current season is restricted to specified days despite the prevailing conditions, incidental mortality can also be affected by swell, tide and other weather conditions.

This situation causes a higher number of discards than usual because the poor weather (i.e. a higher swell than usual) makes it more difficult for fishers to gauge the size of abalone while they are attached to the reef. A management system that provided more choice regarding the conditions in which recreational fishers could fish, and the ability to measure abalone prior to collection, would lead to less discards.

Some submitters initially proposed that discards could be reduced if the minimum size limit was removed and fishers could take the first 20 animals they picked up. However, following further advice received from both Recfishwest and the Abalone Industry Association of Western Australia on this proposal, it was agreed that this was likely to lead to higher levels of discarding. Both organisations agreed that education of recreational fishers on ways to reduce incidental mortality was the most important tool to address this issue. The IFAAC believes that

⁶ The extent to which sectors would benefit from a decrease in incidental mortality is unknown.

there are opportunities to reduce incidental mortality by making changes to the management arrangements and increasing educational efforts and the Department of Fisheries should, as a matter of priority, take action in consultation with stakeholders aimed at minimising incidental mortality on the reef platform.

IFAAC further explores and makes recommendations in relation to this issue in **Section 7.2**.

5.4 Proportional allocations for the Perth metropolitan region

There are a number of reasons why determining proportional allocations for Roe's Abalone in the metropolitan region is difficult. The first is that although from a regulatory perspective the resource is contained within one fishery, there are two components of the fishery the 'reef top' fishery component and an 'off-reef top' fishery component. Given the general movement of abalone from the 'reef top' to the deeper waters 'off reef top' as they grow larger and mature, the population structure of each component is different and accordingly the recreational and commercial sectors take most of their catch from different age classes of the Roe's population.

The 'off reef top' component of the fishery consists of larger (and older), abalone taken by commercial divers whereas in the 'reef top' component mainly younger and smaller abalone are taken by recreational fishers. The result of this is that a given amount of abalone in one component is not equivalent to the same amount in the other component. The relationship between these two components is not well understood and there is no known 'conversion factor' relating the contribution to overall sustainability, comparing the impact of take of abalone from one component of the overall fishery to the other.

The differences between the components of the fishery bring into question whether sustainability objectives are best served by moving to a proportional allocation model at this time.

5.4.1 Management flexibility

The ability to alter the management of each sector's fishing activities differently is an important advantage where management contends with a number of issues including a variable population distribution, spatially separate components of the fishery and different fishing practices. Management needs sufficient flexibility to alter the catch in one location of one sector, separately to what it does to the other sector. Two examples are provided below to illustrate this need, where this may be a desirable outcome for Roe's abalone in the Perth metropolitan region.

Example 1: Commercial catch rates indicated that the TACC could be increased while indicators for abalone abundance on the reef platform indicate that recreational fishing effort should not be increased.

Example 2: Productivity of a part of the reef platform is reduced by some unusual environmental impact or overfishing. This situation may not affect the sector that does not fish in that area, but require management action to reduce fishing effort on the sector that fishes the reef platform in that particular location.

In these two examples, a single sustainable harvest level (SHL) with proportional allocations that equally affects both sectors has the potential to be unfair. Also, timing matters would need to be taken into account in terms of appropriate management arrangements for the different age groups, and as a given cohort progresses through the fishery.

5.4.2 Impact of catch on the stock

The IFAAC has some concerns about allocating catch proportions to the sectors under a single SHL when there is uncertainty about the impacts of reallocating catch from one sector to the other, which would effectively move fishing pressure from the ‘reef top’ to ‘off reef top’ component of the fishery and vis versa.

In order to improve its understanding of how the catch of one sector impacts on the catch of the other sector and hence the SHL, the IFAAC sought additional information from the Department of Fisheries. The Department’s response to the request for additional information on this matter is provided in Appendix K.

Essentially, the Department of Fisheries was not able to provide a basis for comparing the catches of the two sectors on the overall stock. The Department advised that it meets sustainability objectives for the fishery through monitoring trends in stock abundance.

5.4.3 Customary fishing

The IFAAC has taken a pragmatic approach to determining the allocation for Customary fishing. In coming to its recommendation, it is required to reconcile the policy advice from the Minister for Fisheries (Appendix F) that a priority allocation for Customary use should be made with the fact that there is a lack of data available on the actual level of take of Customary fishing for abalone.

While there is information in general in relation to the Customary take of abalone, no specific information is available to the IFAAC to suggest that the Customary take of abalone is a significant proportion of the total take of abalone in the Perth metropolitan region.

In the absence of alternative evidence, a methodology was proposed by the Department of Fisheries to make an assessment of Customary take, based on the percentage of the Perth metropolitan population that is indigenous and then attributing to them the level of exploitation that would be attributed to the general population. This would lead to an allocation of approximately 156kg.

However, the Department of Fisheries further advised the IFAAC that the amount estimated using this method may be an underestimate and accordingly recommended instead an allocation of between 500 and 1,000 kg.

The IFAAC subsequently sought further advice from the Department of Fisheries on this matter and this additional advice is provided in Appendix J. The Department in support of its position did not provide specific advice as to the level of Customary take but advised that:

“Under-allocating the Customary take will require future re-allocations at the direct expense of the other sectors... It also needs to be recognised that any over-allocation can be adjusted as further information becomes available.”

The IFAAC has acknowledged and accepted the Department of Fisheries advice on this matter and recommends an initial allocation based on the figure of 500 kg. The IFAAC acknowledges that in arriving at this estimate the approach taken is not fully consistent with the definition of Customary fishing outlined in section 3.2.1.

This initial priority allocation can be validated over time and readjusted if necessary, and gives effect to the government policy on this issue (see section 3.2.1).

The IFAAC was informed that the level of take by Customary fishing was currently unreported. Due to the current management arrangements of which Customary and Recreational are managed

together, any allocation given to Customary fishing would be additional to the calculations for the recreational and commercial take. On this basis, no immediate impact on the take of the commercial and recreational sectors should arise from this allocation.

The relatively small amount believed to be taken, and the fishery-independent measures that the Department of Fisheries use to assist in the setting of the broader SHL for the fishery, mean that under current management arrangements this Customary fishing allocation should not represent a risk to sustainability of the fishery.

In summary, the IFAAC believes that an allocation of 500 kg for Customary fishing is reasonable for this fishery given that the allocation for Customary fishing is in addition to the SHL for the recreational and commercial sectors and would have priority over those sectors.

5.4.4 Summary of Issues and Discussion

Although the IFAAC believes it is preferable to implement proportional allocations under a single SHL, the IFAAC advises against implementing them in the case of Roe's abalone in the Perth metropolitan region at this time because:

- there is already a high degree of spatial separation between the sectors;
- there is insufficient understanding of the comparability of the catches between the two components of the overall fishery the reef top and off reef top fisheries and;
- there is the potential to unfairly disadvantage a sector under a proportional allocation system.

The IFAAC, after considering the issues outlined above, formed the view that a proportional allocation system should not be introduced until there is an increased understanding of the relationship between the reef top and off reef top fisheries; and experience is gained with managing the recreational sector under more flexible management arrangements including the proposal below.

Whilst the IFAAC is not recommending that proportional allocations be implemented at this time, the committee believes there should be greater certainty in regard to each sector's access to the resource, and it should address the issue of the fluctuating recreational catch. To address these issues, the IFAAC is recommending the introduction of a 'total allowable recreational catch' (TARC).

The IFAAC believes the total allowable recreational catch should be based on the SHL provided by the Department of Fisheries in FMP No. 204. As the SHL has been based on 1999-2003 data, the IFAAC expects that the starting point for the total allowable recreational catch should be around 40 tonnes, i.e. the SHL of 77 tonnes less the TACC of 36 tonnes. This is consistent with average of recreational catch for the same period which is 39.5 tonne.

The advantages of this approach are that it retains priority access of the recreational sector to the 'reef top' fishery component; will lead to a reduction in the variability in the recreational catch⁷; and maintains the flexibility to manage the catch of each sector separately.

Under this arrangement, each sector would be managed to a total allowable catch, but the total allowable catches for each sector could be varied, according to relevant biological indicators in each location. Importantly, the total allowable catches would not be linked proportionally.

The importance of this is that if management adjustments have to be made to different parts of the fishery they can be made more fairly. For example, if the 'off-reef top' resource is determined by fishery-independent methods to warrant a higher harvest level by 10% then the

⁷ Provided management rules are changed accordingly. See Recommendation 11.

increase will be applied proportionately to both sectors, i.e. 3.6 tonnes to the commercial sector and 0.4 tonnes (10% of the 4 tonne conservatively estimated to be taken by recreational fishing in the ‘off-reef top’ component of the fishery, refer to Section 3.4) to the recreational diving sector. Furthermore, the introduction of a reallocation mechanism becomes much easier if these different parts of the recreational fishery are recognised because it could operate between the commercial sector and the “dive” part of the recreational sector because both these groups are operating on the same resource.

The extent to which it is practical at this stage to manage the two parts of the recreational sector separately is a matter for the Department of Fisheries but the IFAAC believes it is essential to recognise the need.

The IFAAC believes this approach is in accordance with its principle that there should be a practical and incremental approach taken to the implementation of IFM, and the Government policy 5 ix (see above).

In order to provide guidance and certainty to the sectors about allocations under a proportional model, the IFAAC has provided a discussion in Section 6 of its view on the basis for proportional allocations when they are considered in the future.

Recommendation 4: That management on the basis of keeping sectors to proportional allocations for Roe’s abalone in the Perth metropolitan area should be deferred until:

- (a) There is adequate information on the off-reef top recreational fishery so that its catch can be managed; and**
- (b) There is adequate understanding of the relationships between the reef top and off-reef top fisheries that it is possible to manage all of the components of the fishery equitably through proportional allocations; and**
- (c) Fishery managers have gained enough experience with managing the recreational sector to a total allowable recreational catch under new more flexible management arrangements as proposed in Recommendation 12.**

Recommendation 5: Subject to sustainability constraints and until proportional allocations are introduced, sectors should be managed to ensure that the recreational catch is consistent with its average over the period 1999-2003 (40 tonnes) and the commercial sector has the opportunity to maintain its 36 tonne quota.

Recommendation 6: That should proportional allocations be made to the recreational and commercial sectors that firstly a priority allocation of 500 kg for Roe’s abalone be made to the Customary sector in the Perth metropolitan region.

5.5 Comparing ‘reef top’ and ‘off reef top’ components of the fishery

As noted above, there is a mixture of fishing in the two components of the fishery and no easy way of combining both. A shift in the commercial sector activity is not predicted as market forces are likely to continue to encourage fishing for larger abalone. However, there is potential for a change in the balance of recreational activity between the ‘reef top’ and ‘off reef top’

components. Given that sustainability issues for this fishery are based on the current balance of pressure exerted over the stock components, this could affect the sustainability of the resource. The IFAAC believes that given this matter is likely to present sustainability issues in the coming years, the Department should commence programs to ensure that the trend in recreational fishing is monitored and tracked. The IFAAC notes that response to changes in the amount of 'off reef top' recreational fishing is the responsibility of the Department of Fisheries and the Minister.

Recommendation 7: A regular estimate should be made of the amount of recreational fishing in the 'off reef top' component of the fishery. If this changes significantly, a review of the current arrangements will be necessary to separately manage each of the two components of the recreational fishery.

The appropriate responses to changes in stock abundance was canvassed at the March 2007 Stakeholder Workshop. From discussions undertaken, it would appear to IFAAC that given the uncertainties involved and the general equal share that each sector has across the entirety of the fishery (based on the data available), changes in stock abundance should be shared equally. Implementation of changes should take into account the specific and different characteristics of each sector and each component of the fishery. Given the life history of the abalone, the timing of adjustments may need to occur within different timescales for each sector and of each component of the fishery.

SECTION 6 FUTURE INTRODUCTION OF PROPORTIONAL ALLOCATIONS UNDER A SUSTAINABLE HARVEST LEVEL

The IFM policy guidelines provide a long-term framework for enhancing the sustainability of fish stocks and resolving resource-sharing conflicts. The IFAAC's terms of reference include both providing advice on proportional allocations as well as advising on strategies to reduce conflict arising from competition for fish at a local and regional level. The approach that the IFAAC has taken with respect to this fishery is to place greater emphasis on providing advice on strategies aimed at resolving conflict rather than establishing proportional allocations within an overall unified sustainable harvest level (SHL). As discussed in the previous section, the IFAAC is not recommending an immediate introduction of proportional management of Roe's abalone within a sustainable harvest level (SHL).

In the absence of proportional allocations, there remains an incentive for each sector to seek to increase its catch to the detriment of other sectors and potentially create greater risks to the sustainability of the fishery. As a result, and in order to provide guidance to stakeholders and advice to the Minister for Fisheries, the IFAAC believes it is appropriate to express a view as to the proportional allocations that it would have recommended had its concerns (referred to above and in previous sections) been able to be resolved.

The IFAAC still believes proportional allocation is preferable in the long term and that its recommendation regarding proportional allocations for the commercial and recreational sectors (see section 6.2.7 below) should be seen as a starting point for any future proportional allocation. In addition, the IFAAC believes that if it is proposed that the proportions to be allocated are significantly different than those indicated, then a full review of the implementation of IFM for this resource should be initiated.

6.2 Proportional allocations for the recreational and commercial sectors

There are a number of options that can be used to determine the allocations for the commercial and recreational sectors for Roe's abalone for the Perth metropolitan region. These options were either drawn from stakeholder submissions or developed by the IFAAC and IFAAC considered whether they could be applied.

Table 4. Future proportional allocation options.

No	Source	Option
1	IFAAC	Recreational proportion equal to the SHL less the TACC (status quo).
2	IFAAC	At the average proportion over the period 2000-2003.
3	IFAAC	At the average proportion over the period 1997-2001 (reference period).
4	RFAC	55 percent recreational: 45 percent commercial.
5	AIAWA	50:50 Based on numbers of animals.
6	Recfishwest	At a proportion which will allow for long-term growth in population and estimated growth in recreational activity or twice the current 'real' share, whichever is the greatest.

6.2.1 Option 1 - Recreational proportion equal to the SHL less the TACC

A way of evaluating the proportions would be to use the total allowable commercial catch (TACC) for the commercial sector as its share of the resource, and calculate the recreational

sector's share by subtraction from the sustainable harvest level (SHL)⁸. This approach could be regarded as reflecting the management practices over the last eight years, i.e. a TACC of 36 tonnes with a variable recreational catch.

The TACC since 1997 has been 36 tonnes (apart from 1998), while the average of the recreational sector's catch has varied according to a number of factors such as management changes, weather conditions and abalone recruitment on the reef top. Under this option, if there had been a SHL of 77 tonnes and a TACC of 36 tonnes the recreational sector's allocation would have been on-average 41 tonnes (SHL – TACC = TARC) since 1997.

The proportions, given a SHL of 77 tonne, would be 53.2 per cent to the recreational sector and 46.8 per cent to the commercial sector.

6.2.2 Option 2 - Average over the period 2000-2003

After examining the data to determine the most valid figures to use in comparing the catches of each of the sectors since 1997, the IFAAC concluded that the period from 2000 to 2003 was most valid.

The reasons for choosing this period are that the estimates of the recreational sector's catch for 1997, 1998, 1999 and 2004 are not considered to be sufficiently reliable to use for determining proportional allocations. For 1997, 1998 and 2004 the only estimate available for the recreational catch is from the recreational field surveys and these estimates could underestimate the catch of recreational divers.

In 1998 the commercial fishery only fished for half the season and this would not provide a valid comparison. In 1999 the recreational catch figures have been retrospectively adjusted downwards on the basis of subsequent number/weight relationship and this creates some uncertainty about the recreational catch estimate.

The average catches over the period 2000-2003 were 40 tonnes for the recreational sector and 36 tonnes for the commercial sector. On a proportional basis this is 52.5 per cent for the recreational sector and 47.5 per cent for the commercial sector.

6.2.3 Option 3 - Average over the period 1997-2001

The IFM Government Policy states that catch shares should be formalised over the period 1997-2001, and an allocation based on this criteria could be considered to be consistent with the policy (paragraph 19, Appendix A).

The allocations for the period 1997-2001 were estimated using the data provided in Table 1 except for 1998⁹. The committee noted that Recfishwest argued that 1998 should be included in estimating the proportional allocations, but the IFAAC considered that it was reasonable to exclude that year because, if it were not for the season date change, the TACC would have been 36 tonnes.

Using the data from Table 1 over the period 1997-2001 (excluding 1998), the proportions were estimated as 50 per cent for the recreational sector and 50 per cent for the commercial sector.

⁸ The SHL as given in FMP 204 is equivalent to the total allowable catch for the recreational and commercial sectors.

⁹ The catches for 1998 were not used because the TACC for that year was lowered to accommodate a change in season dates.

6.2.4 Option 4 - 55 percent recreational and 45 percent commercial

The Recreational Fishing Advisory Committee (RFAC) believes that the allocation to the recreational sector should be 55 per cent over the entire Perth metropolitan region. The RFAC emphasised the social value of collecting abalone and that special weighting should be given to the social value of collecting abalone in the allocation process.

Social value was explained in terms of the enjoyment offered to people in gathering abalone and the opportunity that this type of recreational fishing provides for members of the public to eat a seafood species that is considered by some to be a delicacy.

The RFAC has proposed that if the allocation is made at the sub-regional level the allocation should reflect the historical catch ranges given in FMP No. 204.

6.2.5 Option 5 - 50:50 based on numbers of animals

The AIAWA has proposed that the split of allocations between commercial and recreational fishing should be 50:50, based on numbers. The AIAWA has put forward the firm view that:

“... an allocation based on total take in terms of weight alone would be wrong, and fails to recognise the impact on sustainability of the operations of the commercial and recreational sectors.”

The AIAWA has highlighted that there is a differential impact on sustainability by the two sectors because of the difference in the mean size and numbers of abalone taken by the two sectors (see Table 5 below). The AIAWA believes the IFAAC should take this differential impact into account in setting allocations particularly, as IFM guiding principle (ii) states that:

“Sustainability is paramount and ecological requirements must be considered in the determination of appropriate harvest levels.”

Table 5. Minimum size, mean weight and numbers taken by the recreational and commercial sectors

Sector	Min. Size (mm)	Mean weight (g)	Estimated Numbers taken
Commercial	70	129 (138 – 120)	280,000
Recreational	60	92	330,300 – 481,300

The AIAWA argued that taking fewer larger animals has less impact on the sustainability of the resource than the recreational sector taking more animals at a smaller size. The AIAWA believes the commercial sectors harvesting strategy is critical to maintaining sustainability and the fishery at current harvest levels.

As the AIAWA has not given specific details of how the numbers would be calculated, the IFAAC has developed a method that could be used to estimate the number of animals for a 77 tonne sustainable harvest level (SHL). This method is described in Box 1.

Applying these methods, it is evident that an allocation of around 350,000 animals to each sector would theoretically result in a SHL of about 77 tonne. The proportions based on the estimated average weight of animals taken by each sector have been estimated as 42 percent for the recreational sector and 58 percent for the commercial sector.

Box 1

Method of estimating an equal number of abalone

Using average weights of 0.092 kg for the recreational sector and 0.129 kg for the commercial sector from Table 5 above, the proportion of the SHL for the recreational sector in weight can be calculated as:

$$0.092 \text{ kg} / (0.092 \text{ kg} + 0.129 \text{ kg}) = 42 \text{ per cent}$$

This percentage can then be converted to numbers, depending on the SHL. For an SHL of 77 tonnes, this would be equivalent to about:

$$32,000 \text{ kg} / 0.092 \text{ kg} = 348,000 \text{ abalone each}$$

6.2.6 Option 6 - Twice the current 'real' share or 20 years growth

Recfishwest in its October 2005 written submission proposed that the recreational sector should be allocated twice its current 'real' share or its projected catch after 20 years, whichever is the greatest.

The IFAAC found that the proposal by Recfishwest of using projected catches after 20 years is problematic, given the strict controls which this fishery operates under.

To gain an understanding of what the projected catch of the recreational sector would be in 20 years on the basis of current figures, the IFAAC referred to Figure 6 in FMP No. 204. It is evident from that figure that there was no obvious growth in the recreational catch estimate from 1997.

Once again, this is unsurprising as growth by both commercial and recreational fisheries in the Perth metropolitan region has been restrained by strict management arrangements for some time. Given these factors, the IFAAC has not used projected growth as a basis for considering allocations nor has it included it as one of the options listed in Table 1 below.

In seeking further information on the alternative view of 'twice real catch share' by Recfishwest, Recfishwest informed the IFAAC that it views that the 'real' catch share is the catch share that includes both the quantity of abalone kept and those discarded by recreational fishers (Recfishwest pers. com.).

In practical terms, this means that Recfishwest believes that an additional amount, equal to the discards of recreational abalone fishers, should be added to the recreational catch estimates given in FMP No. 204.

An allocation to the recreational sector of twice its current 'real' catch would mean 100 per cent of the resource would be allocated to the recreational sector (note this apparently assumes that the commercial discard rate is close to zero). However, Recfishwest appreciates that a 100 per cent allocation to the recreational sector is not likely to be acceptable, and therefore has a preference to use arrangements that involve the use of spatial separation to resolve resource sharing conflicts in the Perth metropolitan region (Recfishwest pers. com.).

6.2.7 Comparative analysis of options

The proportion that would be allocated to each sector under each of the options discussed above is outlined in Table 6.

Table 6. Allocation options expressed as proportions by weight.

Option	Source	Proportion (%)	
		Recreational	Commercial
1	IFAAC	53	47
2	IFAAC	53	47
3	IFAAC	50	50
4	RFAC	55	45
5	AIAWA	42	58
6	Recfishwest	-*	-*

Option 1 (the SHL less the TACC) is the preferred proportional allocation of the IFAAC as it best represents the current management practice, which has been in place since 1997. This would also be the same allocation if the data set over the period 1997 to 2003 were used, as in Option 2.

Option 3, on the basis of using data over the 1997–2001 period, is problematical because of concerns the IFAAC has about the data for the 1997, 1998 and 1999 (see section 6.2.3). There would, in effect, be only two years (2000 and 2001) over that period in which catches could be compared.

Although not that different from allocations under Options 1 and 2, Option 4 is arbitrary and difficult to justify in comparison to allocations that are based on historical data or management practices.

Option 5 is an alternative approach to allocations that the industry believes accounts for the different impacts each of the sectors has on the stock sustainability. The option is a substantial departure from the *status quo* because it is based on the recreational sector taking less animals and the commercial sector taking more on average than has been the case in recent years. Managing allocation on numbers would mean that there would be the necessity to introduce new management arrangements to regulate the recreational catch.

Options 1 and 2 are preferred over Option 5 because they are more closely matched with the IFAAC's guiding principles, particularly principles (i) and (v) (see section 3.3).

Option 6 is based on Recfishwest's principle in relation to accommodating natural growth of the recreational sector, or an allocation of twice its current 'real' catch share or its projected catch after 20 years. In practical terms, implementation of this option would mean that in the long term there would be a substantial reallocation to the recreational sector.

As an allocation of this nature represents a substantial departure from IFAAC's guiding principles (Section 3.3) Option 6 was less preferred than other options that more closely matched the committee's principles.

6.2.8 Determining Proportional Allocations

Of the six options presented, Option 1 (and by default Option 2) would normally be the preferred Option to recommend to the Minister, which would result in a 53/47 per cent split between the commercial and recreational sectors, respectively.

* Recfishwest's preference is to use spatial separation to resolve resource sharing conflicts.

In considering these figures however IFAAC notes the background of data uncertainty, and especially, difficulties of accurately comparing different sectors and components of the fishery.

Recommendation 8: When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis the starting point for any future proportional allocations in the Perth metropolitan region should be an allocation of 53 percent for the recreational sector and 47 percent for the commercial sector.

6.3 Aquaculture

The Aquaculture Council of Western Australia (ACWA) has stated that, based on the projected size of the abalone industry in 2015, the sector would require access to 200 kg of brood stock per species.

According to the ACWA, this access would be required for start-up enterprises, but more importantly for the inclusion of new genetic material for new traits as part of selective breeding programs. Two hundred kilograms of Roe's abalone brood stock is equivalent to about 1,550 animals, based on an average weight of 129 g (Table 5).

The best available information indicates that less than 200 Roe's abalone are taken in the Perth metropolitan region for aquaculture purposes under a Ministerial exemption. There may therefore be a case to allocate 200 Roe's abalone in the Perth metropolitan region to the aquaculture industry, which is a small amount (about 26 kgs) and would not have an impact on the sustainability of the resource.

However, this type of allocation raises a number of policy issues such as; "who holds the allocation?", "is it transferable?", "how is it distributed between competing aquaculturalists?" and "in a cost recovered environment, who would pay for the management and monitoring of this take for commercial purposes?" No advice was received as to why this relatively small catch could not be accessed via the commercial sector.

The IFAAC'S view, given the small amount required for broodstock purposes, is that provided the aquaculture industry can access its requirements via the existing exemption process or from the commercial sector, a specific allocation is not necessary. The IFAAC believes this position reflects its pragmatic and practical approach to considering allocations.

Recommendation 9: Access to Roe's abalone in the Perth metropolitan region for aquaculture purposes should only be by Ministerial exemption. Should there be a regular and ongoing need to access the resource, then the aquaculture sector should make appropriate arrangements with the participants in the existing commercial fishing sector for access to broodstock.

7.1 Reallocation mechanisms

government's 2004 IFM policy (paragraph 16) states that 'Priority will be given to investigating the potential development of market based systems to achieve reallocations, along with due consideration of social equity considerations, as soon as practical. Clearly, consideration of any market-based system will be based on its 'merits'.

In relation to the abalone resource, the IFAAC does not consider the development of a reallocation mechanism a priority at this time based on three relevant factors. Firstly, given the current stability of recreational and commercial shares, there is no imperative for a mechanism to effect shifts in the shares. Secondly, given the sectors fish in different fishery components, any change in shares would result in a change in fishing pressure on each of the components, the consequences of which would be complex. The complexity arising from this situation is compounded by the third factor, which is the inability to meet the information requirements to support such transfers. An example of a trade between sectors and the complexity that would result is provided in Box 2.

Box 2 – Example of a trade between sectors

The commercial sector may want to increase its catch by 7 tonnes. Under a reallocation mechanism the only way to access the additional 7 tonnes is by purchasing it from the recreational sector.

Given that most of the recreational fishing occurs in the 'reef top' area, the recreational sector has (mostly) only this resource of 60+ mm animals to trade. This raises the question of whether this is a desirable outcome for the commercial sector which is seeking to collect larger 70+ mm animals not present in commercial quantities in the 'reef top' area.

The commercial sector could take an equivalent 'weight' of 70+ mm animals from the 'off reef top' component, but would likely find that there is insufficient stocks to maintain this increased exploitation so over time the abundance of abalone in the 'off reef top' zone would decline. In the short term the 'reef top' component stock indicator may show stock increasing as less pressure is exerted in that area by recreational fishers. However, over time, as the 'off reef top' component is the habitat of the broodstock, it is likely that the level of recruitment into the fishery as a whole would decline, also effecting the 'reef top' zone.

The discussion in Box 2 is by no means exhaustive, but it is used primarily to demonstrate that, at this stage, there are many imponderables regarding the comparability of the recreational and commercial sectors' catches of Roe's abalone in the Perth metropolitan region and that it would be inappropriate at this stage to introduce a reallocation system.

The IFAAC expects that these complexity and information requirements will be resolved over time allowing for the establishment of a proportional allocation framework for the abalone resource, and at this point the need and appropriateness of a reallocation mechanism will become apparent.

Recommendation 10: When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis, a reallocation mechanism should be introduced.

7.2 Management of the recreational sector's allocation

The IFAAC notes that management arrangements must provide users with the opportunity to access their allocation (see Guiding principle x (Section 3.1.3), and Section 5.3.3) and appropriate management structures and processes should be introduced to manage each user group within their prescribed allocation (see Guiding principle vii, see Section 3.1.3).

Although allocations are not being recommended at this stage, it is clear that the current management arrangements applied to the recreational sector do not allow for a consistent harvest. Research by McLeod and Nicholls, referred to earlier, indicates that there may be significant advantages accruing to the recreational users of changes to the management of the recreational abalone fishery.

The AIAWA has proposed that the allocation of tags (say, different colours for each week of the season) and a limit on the number of tags an individual may purchase be used as a method of managing the recreational sector. The use of tags would be a very direct method of managing the total catch of the recreational sector and may have merit, but has some significant issues associated with implementation, including:

- tag design (i.e. how to design a tag that can be placed on/in an abalone?);
- the cost of implementing the system and the cost of tags;
- administration of the system;
- trading of tags; and
- associated changes to management that would be required to complement a tag system.

The IFAAC recommends that the Department of Fisheries work with the recreational sector to develop a management regime which will minimise incidental mortality; optimise the social and economic benefits from recreational Roe's abalone fishing; and allow the sector to achieve the total allowable recreational catch.

Recommendation 11: The Department of Fisheries work with the recreational sector to develop a management regime which will reduce incidental mortality and catch variability between years, provide the opportunity for the sector to take its allocation and improve the social and economic benefits from recreational fishing.

7.3 Monitoring allocations

the IFAAC's view is that it was never intended that resource reallocation needs to respond on a real-time basis, but should deal with trends in the utilization of fish towards making long-term adjustments between sectors to reflect long-term changes.

The challenge will be to find a set of principles/performance indicators that account for year-to-year variation in catches, so as to attempt to set longer-term adjustment of business rules for each of the sectors.

7.4 Allocations outside the Perth metropolitan region

The Minister has indicated to the committee that he would accept advice on proposals to resolve resource sharing conflicts outside the Perth metropolitan region that are broadly supported by stakeholders (see Appendix F).

The RFAC, Recfishwest and Department of Fisheries are all proposing spatial closures around major south coast boat ramps and temporal closures to commercial fishing on weekends and public holidays to reduce conflict outside the Perth metropolitan region.

These types of changes to management arrangements have the potential to reduce conflict, but to date the commercial sector has not shown an interest in pursuing these approaches.

In order to progress the issue, the IFAAC will seek detailed information on the proposed location to be closed and any possible impacts, including an assessment by the Department of Fisheries of any proposals. The IFAAC will be encouraging stakeholders, including the Department of Fisheries, to negotiate arrangements during the submission period that will reduce conflict. IFAAC would hope that stakeholders would present the committee with detailed proposals prior to the close of submissions.

If there is insufficient time for negotiations during the submission period, the IFAAC would recommend that the Department of Fisheries convene and facilitate focus group meetings in regional areas to negotiate agreement over changes to reduce resource sharing conflicts.

Recommendation 12: The Department of Fisheries should initiate and facilitate negotiations between the commercial and recreational sectors aimed at resolving their conflicts outside the metropolitan region.

Recommendation 13: Major abalone resource sharing conflicts, outside the Perth metropolitan region, that remain unresolved three years after the date of decision on the recommendations in this report should be referred to the IFAAC to make recommendations for resolution.

7.5 Management committees

The two relevant policies regarding management of allocations are:

Guiding Principle vii (see section 3.1.2) states that:

Appropriate management structures should be introduced to manage each user group within their prescribed allocation. These should include predetermined actions that are invoked in that group's catch increases above its allocation.

And guiding principle x (see section 3.1.2) states that:

Management arrangements must provide users with the opportunity to access their allocation...

The Department of Fisheries' management functions are often carried out in consultation with stakeholders' representatives and through Ministerial advisory committees. For abalone, the Abalone Management Advisory Committee (AbMAC) has been established under the *Fish Resources Management Act 1994* to provide advice to the Minister for Fisheries on abalone management issues.

The Recreational Fishing Advisory Committee (RFAC) is another statutory committee established under section 33 of the *Fish Resources Management Act 1994* that provides advice to the Minister for Fisheries on all recreational fisheries, including abalone.

The majority of the AbMAC membership is commercial fishers, and it primarily provides advice

on management of the commercial sector. In contrast, the majority of the RFAC members are recreational fishers and it provides advice only on recreational fishing. The Minister therefore receives advice on management of the abalone resource from two different committees - one with a commercial focus and the other with a recreational focus.

Representative bodies such as Recfishwest and the Abalone Industry Association of WA (AIAWA) also provide 'input' into abalone management issues and approach the Minister directly.

One of the outcomes that are expected to flow from the determination of allocations under the IFM process is that each sector takes a greater responsibility for maximising the benefit from their allocation. The recreational sector, in particular, may also be expected to benefit from more direct involvement in the management of their allocation. Appropriate structures also need to be in place in relation to the participation of Customary fisheries.

The existing management structures outlined above may not be the most appropriate for these purposes and there is a need to determine what changes, if any, are required to current institutional arrangements.

All major stakeholders have referred to the need to have appropriate management structures in place to take advantage of the opportunities that IFM will provide sectors. For example, the National Native Title Tribunal has identified:

...the absence of a means for consistent informed input from indigenous people is a major impediment to the development of an effective IFM system.

The Western Australian Fishing Industry Council (WAFIC) has stated that the Government needs to:

Devolve the responsibility (...) for use of these shares to credible institutions that genuinely involve and represent individuals and groups that access the shared fish stocks

WAFIC indicated that there would be value in examining the formation of a recreational abalone advisory committee. The WAFIC advised that this approach may require additional resources being allocated to Recfishwest, or the formation of an advisory committee under s 41 of the *Fish Resources Management Act 1994* (WAFIC submission).

The RFAC believed that licensed recreational abalone fishers may not be adequately represented in current advisory or lobby groups, such as the RFAC and Recfishwest.

During stakeholder consultation, concerns were raised that recreational abalone fishers of Vietnamese or Chinese descent may not be well served by the current communication and consultation arrangements. Key stakeholders recognised the need for effective communication with all abalone fishers and for there to be real opportunities for participation in fishery management. The IFAAC believes that special considerations should be given as to how fishers of Vietnamese and Chinese descent may best be included in consultation processes and as to how they may be represented in management deliberations.

In conclusion, the IFAAC supports a broad review of management structures and institutions to determine whether there is need for change to enable the sectors and licence holders to have more involvement in the development of future management arrangements.

Recommendation 14: The Department of Fisheries progressively develop, in consultation with stakeholders, the necessary regulatory and consultative structures that account for:

- (a) the need to include people of all backgrounds who access the resource;**
- (b) the reconstitution of the abalone management advisory committee to deal equitably with Customary, recreational and commercial issues, and enable negotiations within and between the sectors; and**
- (c) the need to give effect to the Government's IFM policies contained in Guiding principles vii and x (see section 3.1.2).**

7.6 Broader legislative arrangements

the Western Australian Fishing Industry Council (WAFIC) has made the point in its submission to the IFAAC that incorporation of decisions around allocations and policies adopted by Government through legislation is extremely important, as it demonstrates to the community that the Government is serious about this initiative.

Further, the WAFIC argues that the implementation of allocation decisions in legislation will also provide added security and confidence to sectors about their access to their share of the resource. As a result, the WAFIC proposes the introduction of a Ministerial Policy Guideline on these matters.

This view is consistent with the IFM Government Policy (paragraph 9, Appendix A), which states that:

Allocation processes will be developed in the context of policy guidelines set by the Minister. In the longer term, it may be desirable to amend the Fish Resources Management Act 1994 to incorporate allocation processes.

The IFAAC considers that this is a matter already covered by the Government Policy on IFM, which was released in 2004 and the timing of the development of a Ministerial Policy Guideline is a matter for the Minister for Fisheries.

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APPENDICES

- Appendix A Integrated Fisheries Management – Government Policy, 1 October 2004
- Appendix B Integrated Fisheries Management – Allocation Process
- Appendix C Source of stakeholder submissions to IFAAC
- Appendix D Approach taken to consultation
- Appendix E List of people or organisations that made a submission
- Appendix F Ministerial letter on Customary fishing
- Appendix G Ministerial letter on allocations to the conservation sector
- Appendix H Ministerial letter on allocations within the Perth metropolitan region
- Appendix I Departmental letter on allocations by subregions
- Appendix J Departmental letter on amount of abalone indigenous people ate
- Appendix K Departmental letter on the take and incidental mortality of each sector

Appendix A Integrated Fisheries Management – Government Policy, 1 October 2004

General

1. The Government is committed to the implementation of an integrated management system for the sustainable management of Western Australia's fisheries.
2. The integrated management system will be open and transparent, accessible and inclusive and flexible.

Information requirements

3. The development and funding of an appropriate research and monitoring program encompassing all user groups is essential to provide the necessary information for sustainability and allocation issues to be addressed under an integrated framework. This program will be progressively phased-in over a number of years as more fisheries are brought under the integrated management framework.
4. The Department of Fisheries will, in consultation with user groups, investigate options for standardising catch information between sectors, noting that the scale for data collection and reporting must be appropriate for each particular fishery.

Guiding principles for management

5. The following principles will be adopted (by incorporating them into either legislation, Ministerial Policy Guidelines or policy as appropriate) as the basis for integrated fisheries management.
 - i) Fish resources are a common property resource managed by the Government for the benefit of present and future generations.
 - ii) Sustainability is paramount and ecological requirements must be considered in the determination of appropriate harvest levels.
 - iii) Decisions must be made on best available information and where this information is uncertain, unreliable, inadequate or not available, a precautionary approach adopted to manage risk to fish stocks, marine communities and the environment. The absence of, or any uncertainty in, information should not be used as a reason for delaying or failing to make a decision.
 - iv) A harvest level, that incorporates total mortality, should be set for each fishery¹⁰ and the allocation designated for use by each group should be made explicit.
 - v) Allocations to user groups should account for the total mortality on fish resources resulting from the activities of each group, including bycatch and mortality of released fish.
 - vi) The total harvest across all user groups should not exceed the prescribed harvest level. If this occurs, steps consistent with the impacts of each user group should be taken to reduce the take to a level that does not compromise future sustainability.

¹⁰ Fishery is defined under the FRMA as one or more stocks or parts of stocks of fish that can be treated as a unit for the purposes of conservation or management; and a class of fishing activities in respect of those stocks or parts of stocks of fish.

- vii) Appropriate management structures and processes should be introduced to manage each user group within their prescribed allocation. These should incorporate pre-determined actions that are invoked if that group's catch increases above its allocation.
- viii) Allocation decisions should aim to achieve the optimal benefit to the Western Australian community from the use of fish stocks and take account of economic, social, cultural and environmental factors. Realistically, this will take time to achieve and the implementation of these objectives is likely to be incremental over time.
- ix) Allocations to user groups should generally be made on a proportional basis to account for natural variations in fish populations. This general principle should not however preclude alternative arrangements in a fishery where priority access for a particular user group(s) may be determined. It should remain open to government policy to determine the priority use of fish resources where there is a clear case to do so.
- x) Management arrangements must provide users with the opportunity to access their allocation. There should be a limited capacity for transferring allocations unutilised by a sector for that sector's use in future years, provided the outcome does not affect resource sustainability.

More specific principles to provide further guidance around allocation decisions may also be established for individual fisheries.

Sustainable harvest levels

6. A sustainability report will be prepared for each fishery in accordance with the 'Policy for the implementation of ecologically sustainable development for fisheries and aquaculture in Western Australia'.
7. The Executive Director, Department of Fisheries, will approve a sustainability report for each fishery, which includes a clear statement on the harvest level.

Allocation processes

8. An Integrated Fisheries Allocation Advisory Committee will be established under s42 of the *Fish Resources Management Act 1994* (FRMA) to investigate resource allocation issues and make recommendations on optimal resource use to the Minister for Fisheries including:
 - i) allocations between groups within the harvest limits determined for each fishery;
 - ii) strategies to overcome allocation and access issues arising from temporal and spatial competition at a local/regional level;
 - iii) allocation issues within a sector as referred by the Minister for Fisheries;
 - iv) more specific principles to provide further guidance around allocation decisions for individual fisheries; and
 - v) other matters concerning the integrated management of fisheries as referred by the Minister for Fisheries.
9. Allocation processes will be developed in the context of policy guidelines set by the Minister. In the longer-term, it may be desirable to amend the FRMA to incorporate allocation processes.
10. The Integrated Fisheries Allocation Advisory Committee will generally comprise a chairperson and two members.
11. The Minister will be responsible for determining the process and timeframes for resolving allocation issues in each fishery based on advice from the Integrated Fisheries Allocation Advisory Committee.

12. The Minister will provide a statement of decision on announcement of his determination in an allocation matter.
13. The Minister may make public the Committee's report at the same time his statement of decision is released.

Compensation

14. Where a reallocation of resources from one user group to another results in demonstrable financial loss to a licensed fisherman, in principle there should be consideration of compensation. Compensation may take various forms and desirably does not necessarily involve the payment of money. The Department of Fisheries will review the scope of the *Fisheries Adjustment Scheme Act 1987* to ensure it contains sufficient flexibility to encompass these principles under an integrated management system.
15. Cases for compensation should be assessed on their merits.
16. Priority will be given to investigating the potential development of market based systems to achieve reallocations, along with due consideration of social equity considerations, as soon as practical. Clearly, consideration of any market based system will be based on its merit.
17. No compensation should be payable where adjustments are made for sustainability reasons.

Effective sectoral management

18. The Government is committed to introducing more effective management across all fisheries. The implementation of more effective sectoral arrangements in which the catch of a sector can be contained is an essential first step in the introduction of a new integrated management system within which allocation issues may be addressed. In the interim, each sector will continue to be managed responsibly within current catch ranges and should the catch of a sector alter disproportionately to that of other sectors, the Minister will take appropriate management action to address this.
19. It is important to formalise existing shares as a basis for future allocations discussions. These will be formalised on the basis of proportional catch shares using the best available information during the five year period from 1997 to 2001.
20. Recreational fishing plans for the West Coast and Gascoyne regions will be implemented with effect from 1 October 2003 to provide a more effective framework for managing recreational fisheries. A review of the North and South Coast regions is also underway.
21. A review of the commercial wetline fishery has commenced. Management outcomes must involve the removal of excess fishing capacity from the fishery and the establishment of a dedicated commercial fishery with clear entry criteria and an appropriate limit on catch in each bioregion.

Funding

22. The initiative can be commenced within the 2004/05 budget however resourcing requirements will increase as more fisheries are brought under a integrated framework. Future funding will be considered through the Government budget process.
23. The Government will consider seeking greater contributions from all users over time corresponding to growing certainty/security over access as allocation models are implemented in each fishery.

Appendix B Integrated Fisheries Management Allocation Process

Introduction

Government Policy 2004 on Integrated Fishery Management (IFM) states that the Minister will determine the process and timeframes for resolving allocation in each fishery based on the advice of the Integrated Fisheries Allocation Advisory Committee (IFAAC).

A. Determining the Need for a Formal Allocation process in a Fishery

The Minister for Fisheries has requested that IFAAC begin with the Western Rock Lobster Fishery, Abalone Fishery and the West Coast Demersal Finfish Fishery.

In the future the IFAAC will consult broadly as to fisheries that should be included in the IFM process and advise the Minister for Fisheries accordingly.

B. Development of an Integrated Fishery Management Fishery Report - Department of Fisheries

The setting of sustainable harvest levels is fundamental to ensure sustainable management. An Integrated Fisheries Management Fishery Report will be prepared by the Department of Fisheries for each fishery that is to be subject to the IFM process (IFM Government Policy, 2004, paragraphs 6 & 7).

The reports will contain details such as:

- The current management practices within the fishery;
- Historical catch levels or estimates of catch taken by each sector;
- The biology of the fish species involved;
- The sustainable harvest level of the resource; and
- Other relevant data such as regional employment, economic and social/lifestyle issues.

In short the report should be a robust summary of the facts about the fishery.

The Department, in developing these reports, will consult with the key stakeholder groups. The IFM report will be approved by the Executive Director, Department of Fisheries and will include a clear statement of the sustainable harvest level.

C. The Integrated Fisheries Allocation Process.

Step 1 – Investigation of the allocation issue

IFAAC will receive the IFM Report and then conduct preliminary investigations into the allocation issue by:

- Seeking submissions and consulting with the peak stakeholder groups such the Western Australian Fishing Industry Council, Recfishwest, Conservation Council of Western Australia and bodies representing Indigenous interests.
- Drawing on the knowledge, data, technical material and experience available with regard to the particular fishery both from the Department of Fisheries and as appropriate from other sources.
- Identifying areas of agreement and disagreement between the different parties.

As part of its considerations, IFAAC may request the Department of Fisheries to further advise on the ecological, economic and social impacts of any proposed change in resource allocation.

Following these actions, IFAAC will formalise its initial position.

Step 2 - IFAAC settles draft allocation report and releases for public comment.

Once IFAAC has come to an initial position with regard to allocation, this will be documented, along with the reasons for its conclusions, and will recommend to the Minister that it be released as a 'draft allocation paper' for public comment, inviting submissions.

This stage in the process will allow those involved in fishing, managing and researching the fishery, as well as those in the wider community who may have a specific interest in this fishery to provide additional input. Depending on the circumstances of the particular fishery, IFAAC may hold or ask Departmental Officers to undertake meetings in relevant metropolitan and regional locations to enable industry, recreational fishers and community members to input their views into the IFAAC process.

The comment period will be normally for a period of two months.

Step 3 - IFAAC recommends an allocation to the Minister for Fisheries

Once the comment period has closed, and IFAAC has considered the submissions received IFAAC will finalise its position and submit a final allocation report to the Minister.

Step 4 - Determination by the Minister (IFM Government Policy, 2004, paragraph 12)

The Minister for Agriculture, Forestry and Fisheries is responsible for considering the recommendations of IFAAC and determining the allocations. The allocations are likely to be fixed for a period of about five years.

The Minister has agreed to provide a statement of decision on announcement of his determination in an allocation matter. The Minister may make public IFAAC's report at the same time as his statement of decision is released. **(IFM Government Policy, 2004, paragraphs 11, 12 & 13)**

D. Mechanisms for future allocations between sectors (IFM Government Policy 16)

The Toohey report states that the 'Community expectations and demands over the use of fish resources will change over time so an integrated framework must allow for adjustments in allocations to occur, both within and between sectors'. IFM Government Policy paragraph 16 states that priority will be given to investigating the development of a market based system to achieve reallocations, along with social equity considerations, as soon as practical.

IFAAC proposes to investigate possible mechanisms, consult with stakeholders on proposals through a public process and provide advice to the Minister on preferred options. In formulating its recommendations IFAAC will have regard to Government Policy Paragraphs 14 to 17.

Appendix C Source of stakeholder submissions to IFAAC

Department of Fisheries

<http://www.fish.wa.gov.au/docs/op/op032/index.php>

Recfishwest

<http://www.recfishwest.org.au/SubIFMAbaloneFMP204.htm>

Recreational Fishing Advisory Committee

Contact: Doug Bathgate

Phone: 9482 7332

WA Fishing Industry Council

http://www.wafic.com.au/key_issues/submissions_and_reports.phtml

Aquaculture Council of Western Australia

Contact: Mr Dan Machin

Phone: 9492 8814

Abalone Industry Association of WA

Contact: Ian Taylor

Phone: 0419 903 421

National Native Title Tribunal

Contact: Guy Wright

Phone: 9268 9700

Appendix D Approach taken to consultation

Initiative	Date
Advertisement in the Western Australian Newspaper	29 August
Draft Allocation Report released: Department of Fisheries website; Department of Premier and Cabinet – Citizenscape website; Copies posted to all commercial licensees and pre-registered 'interested' persons	1 September
Advertisement in the Ethnic Communities Council e-newsletter	August/September issue
Article in the Western Australian "New catch limit looms to save abalone stocks"	2 September
Editorial in the Western Australian Newspaper "Time to get tough to protect abalone stocks"	4 September
Advertisement in the West Australian Newspaper Government Announcements section	6 and 8 September
Article in the Sunday Time Newspaper "Abalone Harvest Shares"	10 September
Article in all Community Times Newspapers	9-13 October
Article in the Australian Chinese Times	11 September
Flyer (translated in Vietnamese and Mandarin) with recreational licence renewal	All renewals from mid September
Briefing to Volunteer Fisheries Liaison Officers	17, 18 and 19 October
Public meetings in Rockingham, Scarborough and Hillarys (advertised in the Western Australian, Community Times, Australian Chinese Times, Ethnic Communities Council Newsletter and flyers distributed with recreational licence renewals).	24, 25 and 26 October
Illustrated flyer on recreational abalone rules	All renewals from 2 November
Vietnamese Radio – written statement to be read out	w/b 6 November
Ad in Chinese and English editions of Asia Times (new rec rules and IFM proposals)	10 November
Illustrated recreational rules pamphlet and IFM pamphlet (translated in Vietnamese and Mandarin) inserted in the Chung Wah Association Newsletter	13 November

Appendix E List of people or organisations that made a submission

SUBMISSIONS TO THE ROE'S ABALONE DRAFT ALLOCATION REPORT 01 SEPT 2006 – 31 JANUARY 2007	
1.	Ray Watson
2.	Peter Powell
3.	Tristan Jeeves
4.	Rob Tomba
5.	Bill Rafferty
6.	Department of Conservation and Environment
7.	Abalone Industry Association of WA
8.	Department of Fisheries WA
9.	South West Aboriginal Land and Sea Council
10.	Recfishwest
11.	WA Fishing Industry Council (WAFIC)

Appendix F Ministerial letter on Customary fishing



**MINISTER FOR AGRICULTURE, FORESTRY AND FISHERIES;
THE MIDWEST, WHEATBELT AND GREAT SOUTHERN
LEADER OF THE GOVERNMENT IN THE LEGISLATIVE COUNCIL**



Mr Murray Jorgensen
Chairman
Integrated Fisheries Allocation
Advisory Committee
C/- Department of Fisheries
The Atrium
168-170 St George's Terrace
Perth WA 6000

Dear Murray

As IFAAC moves forward in its deliberations on specific fisheries, I believe it is important for me to provide you with some guidance on my thinking with respect to the customary fishing sector.

Let me start by clarifying my use of the term "customary fishing sector". I use this term to describe the fishing activity of indigenous people who have a right (in accordance with aboriginal law and customs) to fish in a customary manner. Customary fishing applies within a sustainable fisheries management framework to persons of Aboriginal descent; fishing in accordance with the traditional law and custom of the area being fished; and fishing for the purpose of satisfying non-commercial personal, domestic, ceremonial, educational or communal needs.

It is important to differentiate between the activity and the people, as not all indigenous people are permitted to undertake customary fishing under aboriginal law and custom.

The involvement of the customary fishing sector in the sustainable management of fisheries has been the subject of a number of different research and consultative processes over recent years and the government has invested significantly in participating in these processes to ensure the smooth development of recognised indigenous participation in relevant fisheries.

Of relevance are:

1. The National Indigenous Technical Working Group (NITWG), which include statements that indigenous fishing be recognised and protected within management arrangements. The National Indigenous Technical Working Group flowed out of the Indigenous Fishing Conference held in Perth in 2003 and Commonwealth, State and Territory governments; indigenous groups; and commercial and recreational fishing interests have now approved its findings.

Of particular significance is principle 4 from NITWG, which states:

"Recognition of customary fishing will translate, wherever possible, into a share in the overall allocation of sustainable managed fisheries."

11th Floor, Dumas House, 2 Havelock Street, West Perth, Western Australia 6005
Phone: (08) 9213 6700 Facsimile: (08) 9213 6701

2. The Aboriginal Fishing Strategy, which I have supported and which is currently before Cabinet, contains the following recommendation.

“Recommendation 13: Within any given fisheries allocation framework developed in Western Australia, customary fishing access rights should be given priority over all other fishing access, including commercial and recreational fishing.”

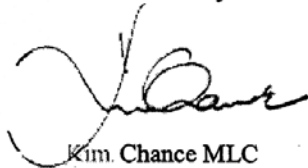
3. The National Recreational and Indigenous Fishing Survey (NRIFS), to which we contributed, provided data on indigenous fishing activity in the Kimberley region of Western Australia. Although not relevant to the fisheries you are currently considering, it was the first large-scale survey of customary fishing and it gave recognition to that fishing as a legitimate activity.

It is IFAAC’s responsibility to provide advice on allocations to the various sectors. I request that IFAAC be mindful of the Government’s position of giving priority to a customary fishing allocation. In the case of inshore fish resources, such as rock lobster and abalone, I am sure you would recognise that coastal indigenous communities would have been accessing these resources long before white settlement and that it is likely that this access continues, albeit at a low level.

I am aware that there is no data on the customary take of fish off Western Australia apart from that obtained through the NRIFS and that this makes allocation to customary fishing a difficult matter to consider. Nevertheless, given the importance of fishing in the life of coastal indigenous people, I would expect to see some allocation recommended by IFAAC for customary fishing of inshore species.

I wish you well in your deliberations.

Yours sincerely



Kim Chance MLC
MINISTER FOR AGRICULTURE, FORESTRY AND FISHERIES

08 DEC 2004

Appendix G Ministerial letter on allocations to the conservation sector



HON JON FORD JP MLC
Minister For Fisheries; the Kimberley,
Pilbara And Gascoyne



17 MAY 2005

Ref: 21-296

Mr Murray Jorgensen OAM
Chair
Integrated Fisheries Allocation Advisory Committee
3rd Floor, The Atrium
168 St Georges Terrace
PERTH WA 6000

DEPT OF FISHERIES	
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19 MAY 2005	
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ACTION OFFICER	

Dear Murray

Thank you for your letter of 22 April concerning the role of the conservation sector in the Integrated Fisheries Management (IFM) process.

IFAAC sought my guidance on what role I see for the conservation sector in the IFM process, and in particular, whether I expect the committee to provide a recommendation on allocations to non-extractive uses of the resource.

In replying to your request it is worth considering the objects of the *Fish Resources Management Act 1994* (FRMA) which are to conserve, develop and share fish resources of the State for the benefit of future generations.

Other particular objects of the FRMA, which are relevant to the conservation of fish are set out below:-

- to conserve fish and protect their environment;
- to ensure that the exploitation of fish resources is carried out in a sustainable manner;
- to achieve optimum economic, social and other benefits from the use of fish resources; and
- to enable the allocation of fish resources between users of those resources.

The Government's approach to the management of marine resources is somewhat complex. The conservation of fish resources and the protection of their environment, the sustainable exploitation of fish resources and allocation of fish resources between users of the fish resources is the responsibility of the Minister for Fisheries and is administered by the Department of Fisheries. Some conservation of fish resources and their environments is also achieved through the establishment of marine reserve and marine parks under the *Conservation and Land Management Act 1984*, (CLMA), which is administered by the Department of Conservation and Land Management. Fishing is banned in marine protected areas such as sanctuary zones; special purpose zones under the CLMA legislation and under some Fish and Fish Habitat Protection Areas established under the FRMA. Under the FRMA large areas are protected from fishing through spatial and temporal closures. For instance in the rock lobster fishery the fishing season is limited and some areas are protected from fishing.

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Telephone (08) 9425 4200 Facsimile (08) 9425 4244

The concerns and views of the conservation sector were identified in the Report to the Minister for Agriculture, Forestry and Fisheries by the Integrated Fisheries Management Review Committee ('The Toohey Report'):

'...major concerns of conservation groups was that fisheries managers tended to view sustainability as the relationship between fish stocks and fishing activity. Little or no consideration appeared to be given to wider ecological requirements of other fish or animal species (eg birds, animals) or importance of healthy fish stocks in the wider ecosystem.'

'The conservation sector argued that wider ecological requirements must be incorporated into the calculation of sustainable catch [Sustainable Harvest Level] (which is then used as a basis for allocations to consumptive user groups) or a specific allocation set aside ... to meet these requirements'

'Spatial allocations may also be required in the form of no take areas to meet other requirements, such as preservation of representative habitats, establishment of scientific reference areas, viewing purposes for which fishing may negatively impact (for example dive ecotourism) or for fishery management reasons (closures to protect breeding fish or nursery areas).'

The Department shares the conservation sector's concerns with respect to a healthy marine ecosystem, however, the Department believes that the environmental approval under the Commonwealths *Environmental Protection And Biodiversity Conservation Act 1999* for the major fisheries demonstrated that the broader ecological needs are being addressed under the existing management arrangements. In the case of the rock lobster fishery this view is supported by the fact that the fishery was the first to receive Marine Stewardship Council accreditation.

Particular fisheries also have extensive "no-take" areas to cater for recruitment processes, habitat protection or to effect spatial separation between user groups. These have often arisen through the public consultation process leading to the creation or amendment to a Fisheries Management Plan and/or associated rules. This avenue will continue to be open for comment by the conservation sector.

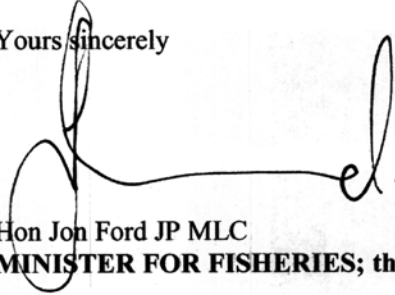
The Department of Fisheries' position is that the creation of no take areas to meet other requirements, such as the preservation of representative habitats, establishment of scientific reference areas and for viewing proposes for which fishing may negatively impact, will be accommodated through the reservation processes such as Marine Park Planning or Fish and Fish Habitat Protection areas. Such closures to fishing for demersal and sedentary species result in a reduction in the Sustainable Harvest Level (SHL) for a particular species.

The Executive Director, Department of Fisheries, will take the effective 'spatial allocations' to these non-extractive uses into account when he approves the SHL for a particular fishery resource. The Executive Director currently does not intend to seek public input into the setting of the SHL, as this is appropriately set based on expert advice from the Director of the Fisheries Research Division. The SHL does implicitly take into account the wider ecological requirements. If the setting of the SHL is an issue for the

conservation sector then it is open to them to contact the Executive Director to discuss its concerns. They of course should be fully engaging with the marine parks planning process to ensure that its position is considered in the Government's consideration of new marine parks.

In summary, the Integrated Fisheries Management initiative is designed to determine allocations between commercial, recreational (including charter) and indigenous sectors that are extractive users. I am not seeking recommendation from IFAAC on allocations to non-extractive uses of the resource.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jon Ford', written over a faint, illegible background stamp.

Hon Jon Ford JP MLC
MINISTER FOR FISHERIES; the KIMBERLEY, PILBARA AND GASCOYNE

Appendix H Departmental letter on allocations within the Perth metropolitan region



HON JON FORD JP MLC
Minister For Fisheries; the Kimberley,
Pilbara And Gascoyne



19 SEP 2005

Ref: 21-1234

Mr Murray Jorgensen
Chairman
Integrated Fisheries Allocation Advisory Committee
Department of Fisheries
168 St Georges Terrace
PERTH WA 6000

Dear Murray

INTEGRATED FISHERIES MANAGEMENT – ABALONE ALLOCATION

Thank you for your letter of 30 August seeking my approval for the Integrated Fisheries Allocation Advisory Committee to restrict its advice on allocations for abalone to Roe's abalone in the Perth Metropolitan area.

In considering your recommendation, I took into account that stakeholders have not made written submissions on this matter, and that the general principle of proportional allocation should not preclude the implementation of alternative arrangements for a fishery where priority access to a particular user group(s) may be determined [Government policy 5 (ix)].

At this stage I do not want to unnecessarily restrict the potential for stakeholders to negotiate and propose spatial and temporal solutions to resource sharing conflicts outside the metropolitan area, but I also understand the need to provide clarity to stakeholders on the focus for their submissions.

This being the case, I am prepared to give my approval to the Committee to limit its advice on proportional allocations for abalone to the metropolitan area. However, I am prepared to receive advice on alternative arrangements which arise out of the consultative process and are broadly supported by stakeholders for resolving resource sharing issues outside the metropolitan area.

Yours sincerely



Hon Jon Ford JP MLC
MINISTER FOR FISHERIES; the KIMBERLEY,
PILBARA AND GASCOYNE

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Appendix I Departmental letter on allocations by subregions



Department of Fisheries
Government of Western Australia



Fish for the future

774/98

Mr Murray Jorgensen
Chair
Integrated Fisheries Allocation Advisory Committee
C/- Department of Fisheries
3rd Floor, Atrium
168 St Georges Terrace
PERTH WA 6000

Dear Murray

Thank you for your letter of 29 November regarding the possibilities of allocation and management of the abalone fishery by sub-region in the metropolitan area. The Department of Fisheries cannot envisage a scenario under which the metropolitan fishery would benefit by having share allocations and subsequent management arrangements made on a sub-regional basis.

It would limit management flexibility and could disrupt rotational fishing behaviour in the commercial sector, which is important for sustainability and industry's sense of stewardship of the resource. It would also increase the complexity of commercial fishery management and monitoring because Total Allowable Commercial Catches would have to be determined for each sub-region instead of for Area 7 as a whole, as is currently the case.

As stated in the Department's submission to IFAAC, on customary fishing, because of limited data on this sector, and the relatively small quantity of abalone that is likely to be involved, the Department considers that allocation to customary fishers should apply to the Metropolitan area as a whole, rather than to specific sub-regions.

To allocate and manage the metropolitan fishery by sub-region would have the biggest impact on the viable management of the recreational component of the fishery.

As can be seen from the historical catch figures, the majority of recreational catch comes out of the northern and central sub-regions. However, operationally this area, which produces over 90% of the recreational catch in the metropolitan fishery, is between Trigg Island and Burns Beach, a distance of only sixteen kilometres.

Although this component of the fishery spans two sub-regions, it covers a very small area. Management by sub-regions would add an unnecessary layer of complexity to the

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administration of allocations, management, compliance and monitoring, by splitting a sixteen kilometre operational area with no apparent benefit to any sector. It is therefore something the Department would not support, especially given there is no evidence or argument that managing this fishery by sub-region would improve its sustainability.

Yours sincerely

A handwritten signature in black ink, appearing to read 'PP Rogers', written in a cursive style.

PP Rogers
EXECUTIVE DIRECTOR

24 January 2006

Appendix J Departmental letter on amount of abalone indigenous people ate



Department of Fisheries
Government of Western Australia



Fish for the future

Ref: 774/98

Mr Murray Jorgensen
Chair
Integrated Fisheries Allocation Advisory Committee
C/- Department of Fisheries
3rd Floor, Atrium
168 St Georges Terrace
PERTH WA 6000

Dear Murray

Thank you for your letter of 29 November regarding the estimated customary take of abalone. You have asked why the Department of Fisheries expressed the view that 130 kilograms may be a significant underestimation of the actual customary take.

The Department has acknowledged that it has no information on the level of customary take of abalone in any part of the fishery, including the metropolitan area.

The National Native Title Tribunal Research Report, "An overview of the evidence for Indigenous fisheries on the west and south coasts of Western Australia" makes the point that there are no coastal shell midden sites between Moore River and Cape Naturaliste from which to gauge the level of indigenous use of abalone and although a number of reasons are proffered for the lack of middens, the fact remains that further research would be required before any informed decisions about the customary level of take could be made.

However, in the metropolitan area, because the fishery is largely located on local reef platforms attached to the shoreline, it would have been particularly accessible to indigenous people.

Given that in all likelihood indigenous people collected Roe's abalone in the metropolitan area and the fishery is sustainable under current catch levels the initial allocation to customary fishing should not be seen as a re-allocation from the commercial or recreational sectors.

Under allocating the customary take will require future re-allocations at the direct expense of the other sectors. In the absence of any information on the level of customary take and in recognition of the ease of access to abalone stocks in the metropolitan area that the Department considers it prudent to over, rather than under allocate for customary fishing, in

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the first instance. It also needs to be recognised that any over allocation can be adjusted as further information becomes available.

Yours sincerely

A handwritten signature in black ink, appearing to read 'P.P. Rogers', with a stylized flourish at the end.

PP Rogers
EXECUTIVE DIRECTOR

24 January 2006

Appendix K Departmental letter on the take and incidental mortality of each sector



Department of Fisheries
Government of Western Australia



Fish for the future

Ref: 582/04

Mr Murray Jorgensen
Chair
Integrated Fisheries Allocation Advisory Committee
Department of Fisheries WA
3rd Floor, 168-170 St Georges Terrace
PERTH WA 6000

Dear Murray

Recreational and commercial abalone catch comparability

Thank you for your letter of 30 November 2005 requesting additional information about the comparability of recreational and commercial abalone catches and total mortality. Responses to the two issues you raised are provided below.

Issue 1: The comparability of recreational and commercial take in relation to a Sustainable Harvest Level (SHL).

The SHL is evaluated by monitoring trends in abundance of stock over the areas fished using fishery-dependent (catch rates) and fishery-independent (research surveys) data. The SHL takes into account a range of factors that affect abalone abundance. These include:

- recruitment variation;
- increases in fishing effort; and
- changes in fishing practices (e.g. incidental mortality).

If variations in these factors result in a downturn in stock abundance, then appropriate management changes (e.g. quota and bag limit changes) will be made to address the downturn, and the SHL altered accordingly.

In terms of allocating the SHL between the recreational and commercial sectors, my view is that historical catch data should be used for determining allocations. Accounting for **size of abalone caught by each sector, depth and location of fishing, or incidental mortality** would require a sophisticated modelling approach and unnecessarily complicate the resource-sharing process. Accounting for these factors explicitly increases the complexity of allocations because:

- There are differences in target size both between sectors and **within** sectors, for example 50% of commercial divers target a high size category (75mm +), whereas the others target a range of sizes. These differences vary annually depending on recruitment, target areas and market requirements.
- Recreational catches are so weather-dependent that any other controls on catch allocation can only be of minor influence.

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With respect to the issue of IFAAC evaluating how the SHL would change if the commercial sector's current TACC was varied, if there was a relatively small change to the current TACC, as a result of the allocation process, the current SHL should be robust enough to still apply. However, if a significant variation to the current proportions was approved by the Minister then the Department would need to re-assess its current SHL estimate, because it is based on 1999-2003 data. ✕

Having said that, the Department will, as a matter of course, recommend adjustments to the SHL according to changes in performance indicators (see below for more detail).

The current policy regarding TACC adjustments is to alter the TACC in 10% increments, according to changes in performance indicators. I expect that the process for adjusting the SHL will be similar. In other words, under the new IFM regime, the SHL would be altered following consideration of performance indicators. If allocations are specified as proportions of the SHL, then management would need to ensure the catch proportions are maintained.

Issue 2: Estimates of total mortality for these two sectors.

In Fisheries Management Paper No. 204 the SHL is given as the total quantity of Roe's abalone that may be taken (landed) by both sectors in the Perth metropolitan region. The current management regime for recreational and commercial sectors **does** take into account the impact of total mortality even though mortality for some components such as incidental mortality may not be specifically measured.

The impact of the SHL is assessed by monitoring of the stocks. This monitoring is reliant on trends in fishery-dependent (commercial and recreational catch, effort and catch rates) and fishery-independent (research surveys of key locations of commercial and recreational interest). These performance indicators reflect the effect of total mortality of the stock over time. If any one component of that total mortality changes substantially, e.g. incidental mortality from recreational fishing reduces to nothing or increases substantially, it will be reflected in the performance indicators by increases or decreases in abundance of abalone.

In this way **total mortality is taken into account in setting the SHL**, even though incidental and natural mortality are not accurately determined.

In summary, the Department has taken a pragmatic approach to specifying the SHL which is to base it on recent (1999-2003) known sources of fishing mortality i.e. the catch of each sector rather than attempt to explicitly include in the SHL sources of mortality that are either uncertain or unknown, such as incidental mortality.

I appreciate that this approach has implications for the IFAAC providing advice on allocations for a sector that accounts for the total mortality resulting from the activities of that sector [policy principle 5 (v)]. However, I believe it would be inappropriate for the Department to attempt to include incidental mortality estimates that it does not have available at this time or in any event it may not be practical to estimate.

The practical implication of this is that any decrease in incidental mortality, which results in the increase of the SHL, would benefit all sectors. I acknowledge that this outcome may not

be consistent with the intent of the present policy principle 5 (v). However, I believe that the inability to provide reliable estimates of all sources mortality should not hold up the IFM process, as in my view it is important for the allocation process for abalone to proceed in a timely fashion.

If you would like further clarification of the above issues please do not hesitate to contact Dr Nick Caputi on 9203 0111 or request a verbal briefing at one of your meetings.

Yours sincerely



P P Rogers
EXECUTIVE DIRECTOR

12 January 2005

GLOSSARY OF ACRONYMS

AIAWA	Abalone Industry Association of Western Australia
FMP 204	Fisheries Management Paper No. 204
FRMA	<i>Fish Resources Management Act 1994</i>
IFAAC	Integrated Fisheries Allocation Advisory Committee
IFM	Integrated Fisheries Management
NNTT	National Native Title Tribunal
SHL	Sustainable harvest level
TAC	Total allowable catch
TACC	Total allowable commercial catch
TARC	Total allowable recreational catch