

INTEGRATED FISHERIES MANAGEMENT

DRAFT ALLOCATION REPORT
ROE'S ABALONE - PERTH METROPOLITAN REGION

Prepared by the
Integrated Fisheries Allocation Advisory Committee



Fisheries Management Paper No. 214

AUGUST 2006

ISSN 0819-4327





INTEGRATED FISHERIES MANAGEMENT

Prepared by the Integrated Fisheries
Allocation Advisory Committee
for the Minister of Fisheries

DRAFT ALLOCATION REPORT – ROE'S ABALONE
- PERTH METROPOLITAN REGION

Fisheries Management Paper No. 214

AUGUST 2006

ISSN 0819-4327

MAKING A SUBMISSION	3
1 IFAAC DRAFT RECOMMENDATIONS	4
1.1 Recommendations	4
1.2 Items to Note	5
2 INTRODUCTION	6
3 BACKGROUND	7
3.1 The IFAAC	7
3.1.1 Conflict of interest.....	7
3.1.2 Guiding principles.....	7
3.1.3 The IFAAC’s terms of reference.....	9
3.2 Ministerial Advice	10
3.2.1 Customary allocation.....	10
3.2.2 Formalising catch shares over the period 1997–2001.....	10
3.2.3 Allocation to the non-fishing sector.....	10
3.2.4 Regions over which allocations should be made.....	11
3.2.5 Allocations by subregions within the Perth metropolitan region.....	11
3.3 Additional Guiding Principles Adopted by the IFAAC	12
3.3.1 Catch data uncertainty.....	12
3.3.2 Optimising the benefit to the community.....	13
3.4 Description of the Fishery	14
3.4.1 Customary Fishing.....	18
3.4.2 Recreational Fishing.....	18
3.4.3 Commercial Fishing and Aquaculture.....	18
4 CATCH INFORMATION	20
4.1 Customary	20
4.2 Recreational	20
4.3 Commercial	21
4.4 Recreational and Commercial Catch Shares	22
5 ALLOCATION ISSUES	23
5.1 Alignment of Boundaries	23
5.2 Hillarys Boat Harbour to Moore River reef top Fishing	25
5.3 Incidental Mortality	25
5.3.1 A harvest level incorporating total mortality.....	26
5.3.2 Allocations that account for total mortality.....	26
5.3.3 Access Arrangements.....	26
5.4 Proportional Allocations for the Perth metropolitan region	27
5.4.1 Management and stock assessment.....	27
5.4.2 Management flexibility.....	28
5.4.3 Impact of catch on the stock.....	29
5.4.4 Optimising socio economic benefits.....	29
5.4.5 Summary of issues.....	29
5.4.6 Discussion.....	29
6 ALLOCATIONS UNDER A SUSTAINABLE HARVEST LEVEL	31
6.1 Customary Fishing	31
6.2 Proportional Allocations for the Recreational and Commercial Sectors	32
6.2.1 Option 1 - Recreational proportion equal to the SHL less the TACC.....	33
6.2.2 Option 2 - Average over the period 2000-2003.....	33
6.2.3 Option 3 - Average over the period 1997-2001.....	33
6.2.4 Option 4 - 55 percent recreational and 45 percent commercial.....	34
6.2.5 Option 5 – 50:50 based on numbers of animals.....	34
6.2.6 Option 6 - Twice the current ‘real’ share or 20 years growth.....	34
6.2.7 Summary of proportional allocation options.....	35
6.3 Aquaculture	36
7 OTHER ISSUES	37
7.1 Reallocation Mechanisms	37
7.2 Management of the Recreational sector’s allocation	37
7.3 Monitoring Allocations	38

7.4	Allocations Outside the Perth Metropolitan Region.....	38
7.5	Management Committees.....	38
7.6	Broader Legislative Arrangements.....	40
REFERENCES		40
APPENDICES		41
Appendix A Integrated Fisheries Management – Government Policy 1 October 2004.....		42
Appendix B Integrated Fisheries Management – Allocation Process.....		45
Appendix C Source of stakeholder submission to IFAAC		47
Appendix D Ministerial letter on customary fishing.....		48
Appendix E Minister letter on allocations to the conservation sector		50
Appendix F Ministerial letter on allocations within the Perth metropolitan region.....		53
Appendix G Departmental letter on management by subregions within the metropolitan region.....		55
Appendix H Departmental letter on the customary take of abalone		57
Appendix I Departmental letter on the sustainable harvest level and incidental mortality		59
GLOSSARY OF ACRONYMS		62

MAKING A SUBMISSION

Members of the public are invited to make written submissions on this draft allocation report. Those making submissions are encouraged to make reference to the particular recommendation or section of the report they wish to comment on. If you disagree with a particular recommendation or section, try to suggest alternative ways to address or resolve the issues identified in the report. Clear reasons should be included in your response, so that your views can be properly considered.

The Integrated Fisheries Allocation Advisory Committee (IFAAC) recognises that many abalone recreational fishers are of Vietnamese or Chinese ethnic background, and do not participate in other recreational fishing advisory activities. The IFAAC will take this into account when disseminating information on its draft allocation report, and has developed a communication plan that has a focus on ensuring that recreational fishers from all backgrounds are included in the consultative process.

As a first step, a flyer translated into Chinese and Vietnamese has been prepared informing licensees of the Integrated Fisheries Management process for abalone. This is being sent out with all recreational abalone licence renewal forms.

The IFAAC will consider the content of all submissions during the preparation of its final report to the Minister for Fisheries and make changes to its

initial position as required. A summary of all the submissions will be provided to the Minister at the time the IFAAC submits its final report to him.

After the submission period has closed, the IFAAC may write to stakeholders who have lodged a written submission, inviting them to speak to the committee in support of their submission. The IFAAC encourages stakeholders and others to communicate among themselves in the preparation of their submissions and would appreciate the lodgement of joint submissions on particular issues.

If the IFAAC receives a submission that it considers requires further consultation, the committee will draw it to the attention of all those who have lodged a submission or expressed an interest in receiving information.

Submissions will be treated as public documents, unless the IFAAC is advised otherwise. Submissions should be made prior to 29 December 2006. The IFAAC would appreciate the lodgement of submissions electronically using the following email address: ifaac@fish.wa.gov.au. Alternatively, they can be sent to:

IFAAC
Locked Bag 39
Cloisters Square Post Office
PERTH WA 6850
Fax: (08) 9482 7224

1 IFAAC DRAFT RECOMMENDATIONS

1.1 Recommendations

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 (Area 7 of the commercial fishery). (p11)

Recommendation 2:

Allocations should not be made on a finer spatial scale (sub regions) within the Perth metropolitan region. (P12)

Recommendation 3:

A recreational zone is created between Moore River and Cape Bouvard so that the commercial and recreational sectors have common boundaries over the Perth metropolitan region. (p23)

Recommendation 4:

The ban on commercial fishers fishing on the reef top between Cape Bouvard and Hillarys Boat Harbour should be extended further north. This recommendation is made in the light of the integrated package proposed in this report. The IFAAC would welcome comments on this issue. (p25)

Recommendation 5:

The Department of Fisheries in consultation with the recreational sector introduce, as a matter of priority, management arrangements that are aimed at reducing discards of abalone on the reef platform in the Perth metropolitan region. (p27)

Recommendation 6:

The introduction of proportional allocations for Roe's abalone in the Perth metropolitan region should be deferred until:

- there is sufficient understanding of the comparability of recreational and commercial catches; and
- fishery managers have gained experience with managing the recreational sector to a total allowable recreational catch under the proposed more flexible management arrangements outlined in Recommendation 13. (p30)

Recommendation 7:

Until proportional allocations are introduced, sectors should be managed to ensure that the catch taken

by one sector is not reducing the opportunity for the other sector to take the average catch it took over the period 1999-2003. (p30)

Recommendation 8:

A total allowable recreational catch should be introduced for the recreational sector for Roe's abalone in the Perth metropolitan region. The total allowable recreational catch in the Perth metropolitan region should be based on data over the period 1999-2003. (p30)

Recommendation 9:

The customary fishing initial priority allocation for Roe's abalone in the Perth metropolitan region should be 200 kg. (p32)

Recommendation 10:

When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis, then the starting point for 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. (p36)

Recommendation 11:

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 commercial sector for access to broodstock. (p36)

Recommendation 12:

When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis, including a sufficient understanding of the comparability of catches of the two sectors, a reallocation mechanism should be introduced. (p37)

Recommendation 13:

The Department of Fisheries should work with the recreational sector to develop a management regime which will reduce incidental mortality, catch variability between years and improve the social and economic benefits from recreational fishing. (p38)

Recommendation 14:

Given the low level of interest shown by stakeholders in negotiating solutions to resource-sharing conflicts outside the Perth metropolitan region, the Department of Fisheries facilitate negotiations between sectors aimed at resolving these conflicts. (p38)

Recommendation 15:

Major abalone resource-sharing conflicts, outside the Perth metropolitan region, that remain unresolved two years after the date of decision on the recommendations in this report should be referred to the IFAAC for resolution. (p38)

Recommendation 16:

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

- the need to include people of Vietnamese and Chinese background who do not have regular contact with the Department of Fisheries;
- the reconstitution of the abalone management advisory committee to deal equitably with recreational and commercial issues and enable negotiations within and between the sectors; and
- the need to give effect to the Government's IFM policies contained in guiding principles vii and x (see section 3.1.2). (p40)

1.2 Items to Note

The notes in this section provide additional information for the reader regarding the IFAAC's deliberations on allocations for abalone:

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.

Note 2:

The Minister is not seeking advice from IFAAC regarding an allocation for non-extractive users of the resource. In accordance with the Minister's position on this matter, the IFAAC will not be recommending an allocation to non-extractive users.

Note 3:

The IFAAC does not expect that it will be providing advice on allocations for abalone outside the Perth metropolitan region until at least 2009.

Note 4:

Allocations may need further adjustment if more accurate information becomes available on the recreational catch, however the period for adjustment should not extend five years beyond the date of allocations. The IFAAC seeks submissions on how this might be carried out.

Note 5:

The IFAAC would welcome 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.

Note 6:

Recreational fishing by Indigenous people - as distinct from customary fishing by Indigenous people - is considered to be part of the recreational allocation.

Note 7:

The IFAAC welcomes further information on the customary take of abalone by Indigenous people through submissions on this report. Where there is likely to be a significant customary take, the demands of IFM (IFM Government Policy, paragraph 18, Appendix A) will necessarily require more research and monitoring of the customary take by Indigenous people.

Note 8:

The creation of a new mid-west recreational zone north of the new Perth metropolitan region should be discussed directly between the Department of Fisheries and the recreational sector, with 'input' from the commercial sector.

2 INTRODUCTION

Integrated Fisheries Management (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.

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.

The IFAAC has prepared this report, which documents the committee’s initial position on allocations for the abalone resource, along with the reasons for its conclusions as a basis for widespread community consultation. This report follows the IFAAC’s preliminary investigation of the abalone resource-sharing issues and consultation with stakeholders.

The report is being released for a three-month public comment period to facilitate discussion and encourage comment on how the abalone resource should be shared between competing users (Indigenous, recreational and commercial). At the conclusion of the comment period, the IFAAC will consider all submissions and finalise its advice to the Minister for Fisheries on allocations for the abalone resource.

The IFAAC expects to provide this advice in 2006.

Following the receipt of the IFAAC’s advice, the Minister for Fisheries, consistent with the Government’s policy, will determine the allocations to sectors.



3 BACKGROUND

The most recent development in the management of fisheries in Western Australia is the introduction of IFM.

In summary, IFM involves:

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

3.1 The IFAAC

The members of the IFAAC are 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 Mr Murray Jorgensen as the Chair of the IFAAC on 1 March 2006.

Professor George Kailis is Professor of Management at the University of Notre Dame and is 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. Professor Kailis is currently chair of the Australian Seafood Industry Council Native Title Working Group, and a member of the Pearling Industry Advisory Committee. He has previously been 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 organisation's Director General. His conservation interests included serving as a past president of the Conservation Council of WA, as chair 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, which is demonstrated by his service as a past chair, and current board member, of peak body Recfishwest.

3.1.1 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.

3.1.2 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 the 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 of 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 a user 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 (or groups) 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 un-utilised by a sector for that sector's use in future years, provided the outcome does not affect resource sustainability.

3.1.3 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. In particular, the IFAAC will 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 for the West Coast Rock Lobster Fishery, the Abalone Fishery (with emphasis on the Perth metropolitan region) and the West Coast Demersal Scalefish 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, which it has taken into account in its deliberations. These issues are discussed in section 3.2.

Under the IFM Government Policy (Paragraph 11, Appendix A), the Minister determines the process and timeframes for resolving allocations of each fish resources 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. Development of an Integrated Fisheries Management Resource Report by the Department of Fisheries.

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.

- 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; and
 - Step 4. The Minister determining allocations.
- D. Determining mechanisms for future allocations between sectors.

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

The second stage of the process for abalone was completed in November 2005, when the Department of Fisheries released Fisheries Management Paper No 204, Integrated Fisheries Management Report Abalone Resource (FMP 204), (Department of Fisheries, 2005). FMP 204 has been the principal source of information used by the IFAAC in its consideration of the allocations for the abalone resource (see Box 1).

During its investigation of allocation issues (Stage C, Step 1 of the process – see above) the IFAAC sought written submissions from key stakeholders on issues related to allocation and provided an opportunity for them to make a verbal presentation to the committee. Information on where to obtain copies of stakeholder's submissions are provided in Appendix C.

The IFAAC acknowledges that not all stakeholders have had an opportunity to make submissions. In the case of abalone, 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. In addition, no submissions were received in relation to the Indigenous sector.

Given the above considerations, the recommendations in this draft allocation report should be taken only as the initial view of the IFAAC, published to assist in debate and in guiding those interested in making a submission to the IFAAC.

3.2 Ministerial Advice

In addition to using the IFM Government Policy (Appendix A) in its deliberations, the IFAAC has been provided additional guidance by the Minister for Fisheries on

- an Indigenous allocation; the reference period 1997-2001;
- on 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 Minister for Fisheries provided guidance with respect to the customary fishing sector in a letter to the IFAAC (see Appendix D). 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 period to formalise catch shares including

- a. the poor quality and availability of catch data (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 date

Box 1 Fisheries Management Paper 204

An IFM report for the abalone resource, Fisheries Management Paper No 204 (FMP 204) was released by the Department of Fisheries in November 2005. The paper includes a report on the sustainability of the fishery and information that addresses the broader requirements for reporting under an Ecologically Sustainable Development framework.

Other key documents on abalone sustainability include the Department of Fisheries' annual 'State of the Fisheries' report and the Abalone Sustainability Report prepared by the Department of Fisheries for the Commonwealth Department of Environment and Heritage (Department of Fisheries, 2002).

The Executive Director, Department of Fisheries, under the IFM policy has the responsibility for approving a sustainability report for each fishery which includes a clear statement on the sustainable harvest levels (SHL). A SHL of 77 tonnes (range 73 to 83 tonnes) has been given for Roe's abalone in the Perth metropolitan area (see section 8.7 of FMP 204). Sustainable harvest levels have not been provided for any of the commercially important abalone species (greenlip, brownlip and Roe's abalone) outside of the Perth metropolitan area.

The management arrangements introduced to prohibit commercial fishing on the reef platform between Cape Bouvard and Hillarys Boat Harbour mean that the commercial sector's fishing effort is concentrated on the seaward side of the reef platform. Most of the recreational fishing effort is concentrated on the reef platform, although a small percentage of recreational divers take abalone in deeper water. The recreational and commercial sectors are largely spatially separated in most of the Perth metropolitan area, although they share a common stock. The commercial sector also takes a larger sized animals (greater than 70 mm) compared to the recreational sector (greater than 60 mm).

There is no restriction on the total catch taken by the recreational sector, as there is no limit on the number of licenses issued. However, there are other factors that limit the opportunity for recreational fishers to take abalone, such as the very limited fishing period, bag and size limits and weather conditions.

The commercial sector has been managed in the Perth metropolitan region to a quota of 36 tonnes since 1997. Over that period, the recreational sector's catch on the six Sundays that recreational fishers have been allowed to fish has varied between 32 tonnes and 46 tonnes, according to recruitment levels and the prevailing weather conditions.

The indicators used to assess the status of Roe's abalone stocks targeted by the commercial sector in the Perth metropolitan region include: whether the quota has been achieved, the effort required to achieve the quota, and catch rates. Commercial catch rates were relatively stable over the period 1999-2003, but in 2004 the quota was taken at a historically high catch rate.

The status of Roe's abalone stocks targeted by the recreational sector in the Perth metropolitan area involves sampling eight sites. The sampling involves recording the abundance and size of abalone along transects from the shore to the outer edge of the reef platform. A detailed description of the stock assessment is provided in the State of the Fisheries 2003/04 Report.

Source: Department of Fisheries, Government of Western Australia

and making determinations based on that calculation.

Following, the consideration of advice from IFAAC on this issue, the Minister approved the IFAAC:

1. Making an assessment of 1997-2001 catch shares, as a basis for future allocation discussions (Paragraph 19, IFM Government Policy, Appendix A).
2. Applying the broader principles in the IFM Government Policy, in particular Paragraph 5 (Paragraph 5 contains the Guiding Principles which are reproduced at section 3.1.2).

3.2.3 Allocation to the non-fishing sector

The Minister for Fisheries has advised the IFAAC that he does not expect to be provided with a recommendation on allocations to non-extractive users of the resource.

Specifically, the Minister has advised the committee 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 on allocations to non-extractive users of fish resources (Appendix E).

Note 2:

The Minister is not seeking advice from IFAAC regarding an allocation for non-extractive users of the resource. In accordance with the Minister's position on this matter, the IFAAC will not be recommending an allocation to non-extractive users.

3.2.4 Regions over which allocations should be made

The IFAAC, having undertaken a preliminary investigation of the allocation issues for abalone and considered the information contained in FMP 204, formed the view that there was insufficient reliable data available for it to make a recommendation on allocations of abalone outside the Perth metropolitan region. Accordingly, the IFAAC sought the Minister's approval to restrict its advice on allocations to Roe's abalone in the Perth metropolitan region only (from Moore River to Cape Bouvard - see Figure 1).

The Minister approved the committee limiting its advice on proportional allocations to Roe's abalone in the Perth metropolitan region, but also informed the committee he was prepared to receive advice on arrangements broadly supported by stakeholders for resolving resource-sharing issues outside the Perth metropolitan region (Appendix F). The IFAAC has 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's advice was that this would not be for another three years. The committee does not expect to be in a position to provide advice on allocations outside the Perth metropolitan region until at least 2009.

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 (Area 7 of the commercial fishery).

Note 3:

The IFAAC does not expect that it will be providing advice on allocations for abalone outside the Perth metropolitan region until at least 2009.

3.2.5 Allocations by subregions within the Perth metropolitan region

The Perth metropolitan region has been further subdivided 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 in the northern subregion the catch is shared about equally between the two sectors (Table 3).

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 submission identified allocations by subregions as having a number of disadvantages. The Department believed

that allocations by subregion would disadvantage the commercial sector because they would: limit management flexibility, increase the complexity involved in setting Total Allowable Commercial Catches (TACCs), managing TACCs, and allocating access to commercial fishers. For the recreational sector, the Department believed management by subregion would complicate the real-time management and monitoring of the recreational catch.

Theoretically, management by subregion was not considered practical by the Department unless there was preparedness by sectors to accept, for example, a closure to commercial fishing in the central subregion and a closure to recreational fishing in the southern subregion. In this way, the northern subregion would be the only area managed to proportional allocations.

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 G. The Department's advice is that it can not envision a scenario under which the Perth metropolitan fishery would benefit by having share allocations and subsequent management arrangements made on a subregional basis.

In forming its position on this matter the IFAAC took into account that:

- The management of allocations by subregion had the advantage that it would more closely match the historical variability in catch proportions over the Perth metropolitan region, and had the potential to simplify management if stakeholders were agreeable to management changes in the future such as having recreational and commercial only fishing areas.
- None of the stakeholders in their submissions were promoting allocations by subregion.
- The Department identified a number of disadvantages that would arise from managing allocations by subregions.

After taking into account the above and examining all the available information, the IFAAC was satisfied

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 2: Allocations should not be made on a finer spatial scale (subregions) within the Perth metropolitan region.

3.3 Additional Guiding Principles Adopted by the IFAAC

The IFAAC will, in accordance with its terms of reference, be making recommendations on initial allocations for abalone to each of the sectors. Other allocation principles that the IFAAC has considered, or that have been brought to the IFAAC's attention in addition to those referred to previously (sections 3.1.2 and 3.1.3) that have a bearing on its deliberations, are discussed below.

The IFAAC was guided by the following additional principles in relation to considering allocation options, which it developed when considering allocations for western rock lobster.

- 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 period² need to be explained on the basis of the 'Guiding Principles', (particularly Guiding Principle viii, see section 3.1.2).
- 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 Catch data uncertainty

The catch information from the commercial sector state-wide is considered to be accurate because

² The IFM Government Policy, 19 (Appendix A) states catch shares: "will be formalised using the best available information during the five-year period from 1997-2001". The IFAAC has interpreted the intention expressed in the quote above as that the *status quo* as at 1997-2001 should be the base of future allocation discussions.

it is managed under a quota management system that is tightly controlled and monitored. The catch information for the recreational sector is less accurate because it is estimated indirectly from surveys of recreational fishers, and therefore there are errors associated with these estimates.

The recreational sector's catch estimates are considered to be more accurate in the Perth metropolitan region compared with other regions because three survey methods³ have been used: one which involves direct observation of recreational fishing activity and the other which uses a telephone recall survey. The recreational abalone catch estimates outside the Perth metropolitan region are not considered reliable enough to use for allocation purposes at this time (see section 3.2.4).

Illegal catches would mean that the catches are underestimated. The amount by which they may be underestimated is unknown (see page 58 of FMP 204 for a discussion of the illegal take of abalone).

In the event that the catch information used by the IFAAC in making recommendations on allocations to the sectors is shown to have been in error, then this is a sufficiently relevant consideration to warrant the adjustment of the initial allocation under IFM. There is, however, also a compelling public interest to provide long-term certainty under IFM.

Accordingly, this opportunity for adjustment should not continue indefinitely and a reasonable 'sunset period' of five years should be sufficient for this purpose. The IFAAC would be interested in receiving submissions on how any such adjustment might be undertaken.

Note 4:

Allocations may need further adjustment if more accurate information becomes available on the recreational catch, however the period for adjustment should not extend five years beyond the date of allocations. The IFAAC seeks submissions on how this might be carried out.

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).

The results of the study pointed to a small reallocation of catch to the recreational sector in order to maximise the net economic benefits from the use the resource. However, the authors cautioned against using the results because some of the underlying assumptions regarding the use of the resource by the recreational sector were not met (see FMP 204, page 47).

A key message from the authors 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.

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

Some of the socio-economic data available on the Perth metropolitan fishery provided by the Department of Fisheries is provided below.

Thirteen licensees are entitled to take Roe's abalone commercially in the Perth metropolitan region. As two people operate each licence, about 26 people are involved directly in commercial diving operations.

From 1997 the commercial sector has had its catch fixed at a maximum amount of 36 tonne, while the recreational catch estimate has varied between 32 and 46 tonne (Table 1). The Department of Fisheries, in its submission to the IFAAC, reported the gross value of commercial production from the Perth metropolitan region was about \$1.39 million.

The Perth metropolitan region abalone resource was rated by the Abalone Industry of WA as more

³ A third survey using a phone diary method was introduced in 2004.

important to commercial Roe's abalone divers because of the:

- proximity to infrastructure;
- proximity to residential addresses of divers; and
- higher quality of abalone.

The Department estimates that 21,000 (13,000 umbrella and 8,000 specific) recreational licensees are entitled to take Roe's abalone in the Perth metropolitan region. Of these 21,000 licensees, the Department estimates over 5,000 (Department of Fisheries submission to IFAAC) actually fish in the Perth metropolitan region.

Abalone specific licences, at \$36 per licence, generate over \$290,000 in revenue, whereas umbrella licences at \$72 per licence generate over \$900,000 in revenue. Based on an estimate from the Department of Fisheries of the number of umbrella licensees that fish for abalone, around \$440,000 in revenue is raised state-wide from abalone licence sales (Department of Fisheries submission).

The recreational catch (in tonnes) has not shown any clear growth trend over that period 1997 to 2004 (Figure 6, FMP 204, page 54). However, as the Western Australian population grows (expected to double by 2030) new fishers will want to participate in the fishery, so there is an expectation that this will lead to increased competition for Roe's abalone in the Perth metropolitan region.

No specific mention is made in FMP 204 of cultural factors, other than those relating to customary fishing. There are no known coastal middens in the area between Moore Rive and Cape Naturaliste, although there is evidence from archaeological studies of coastal middens in other locations that Indigenous people ate abalone.

Recently, evidence has been given in a Native Title Tribunal claim hearing that abalone were collected by Indigenous people on the south coast (see FMP 204, page 56).

The IFAAC is of the view that environmental factors are taken into account in setting the TACC and more recently the sustainable harvest level (SHL). A full examination of the ecological impacts of the abalone managed fishery was undertaken as a requirement for export approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (see Page 40 of FMP 204). The fishery was found to

be sustainably managed and received export approval from the Commonwealth.

In summary:

- Abalone have been a component of the diet of Indigenous people, but there is a lack of data on the actual amount taken and participation of Indigenous people in customary fishing and value to these people.
- The recreational fishery for abalone creates a social benefit to a large number of people.
- A socio-economic study of the abalone fishery suggests that opportunities exist to increase the benefits to recreational fishers within existing catch constraints.
- The Roe's abalone commercial fishery in the Perth metropolitan region is a valuable fishery [Gross Value of Production (GVP) of \$1.39 million] and creates economic and social benefits to that section of the community involved in the industry.

Note 5:

The IFAAC would welcome 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.

In the absence of appropriate information, the IFAAC did not find it possible to come to any conclusion on the allocations that optimised the social, economic, cultural and environmental benefits to the community from the use of the resource. Following discussions with the authors of the socio-economic study, the IFAAC formed a view that the economic benefits were close to being maximised under the current management regime.

Nevertheless, the principles of IFM make it clear that specific shares for each sector should be determined. The IFM process requires an allocation to each sector so that the responsibility for sustainable management can be fairly apportioned between sectors.

This IFM allocation is seen as an essential first step that will facilitate progress toward the objectives outlined in the IFM Government Policy. The Government's policy recognises the problem of lack

of information on social, economic, cultural and environmental factors (see Guiding principle viii, section 3.1.2).

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, in press).

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 gap 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 west coast recreational fishery zone, which includes the Perth metropolitan fishery, extends from Greenough River mouth to Busselton Jetty (Figure 1). 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. Cottesloe was closed to recreational fishers in 2003.

The area around Penguin Island (Figure 2) was closed to recreational fishers from 1996 to 1999, but remained open to some commercial fishing.

Commercial divers are not permitted 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.

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



Figure 1 Map of commercial and recreational management zones

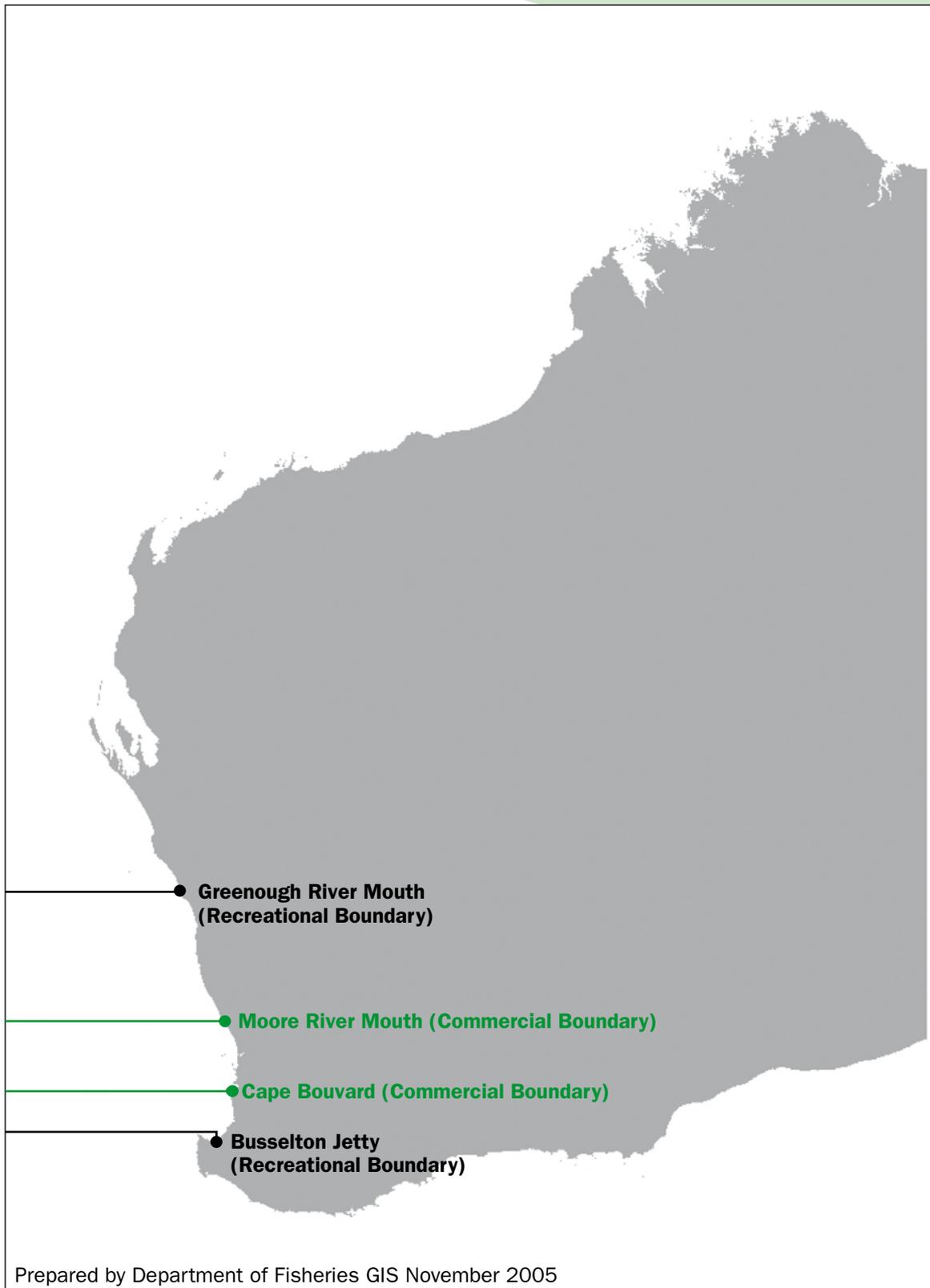
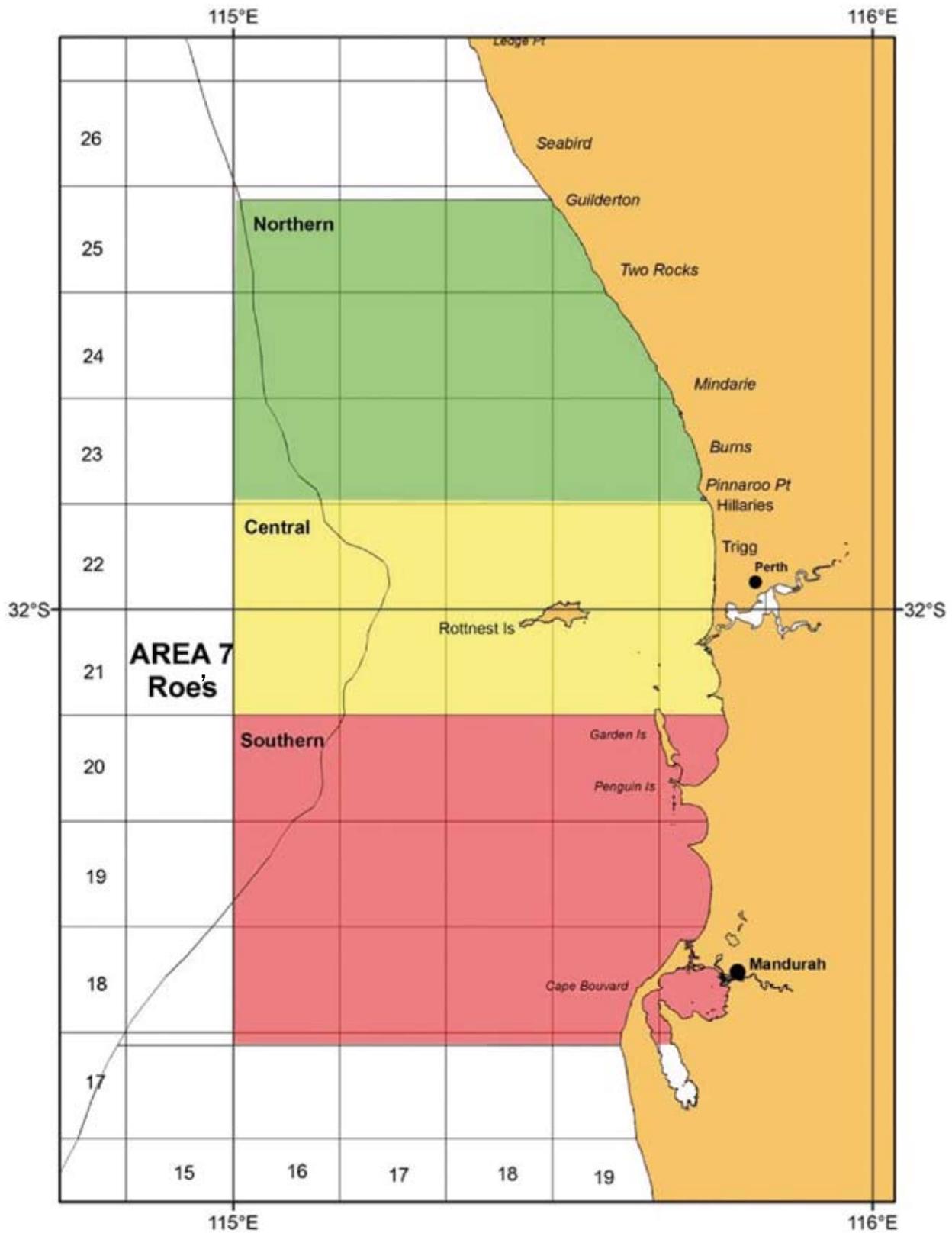


Figure 2 Map showing northern central and southern subregions



3.4.1 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 construct 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 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.

Note 6:

Recreational fishing by Indigenous people - as distinct from customary fishing by Indigenous people - is considered to be part of the recreational allocation.

3.4.2 Recreational Fishing

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

Recreational fishing for abalone requires either a abalone recreational licence or an umbrella recreational licence permitting access to all licensed recreational fishing activity.⁵ Licences were first introduced in 1992. There is no limit to the number of recreational licences that can be issued.

Licences are issued 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 recreational licence. During 2004 about 8,000 abalone specific licences, and 13,000 umbrella recreational licences were issued.

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. A daily bag limit of 20 per licence holder, and minimum size limit of 60 mm apply.

The majority of recreational fishers take abalone by wading on the reef platform, with a small proportion snorkelling adjacent to the reef platform. Recreational fishers use a screwdriver or similar instrument to lever abalone from the reef.

Recreational fishers are not permitted to use compressed air to take abalone from subtidal areas. Further details of the recreational sector are available from FMP 204.

⁵ Aboriginal persons are not required to hold a recreational fishing licence under s. 6 of the FRMA

3.4.3 Commercial Fishing and Aquaculture

The IFAAC considers the commercial abalone sector to comprise 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 and associated regulations). There are 13 commercial licensees permitted to take Roe's abalone in the Perth metropolitan region. These licensees hold a total of 7,200 units (one unit currently equals 5 kg 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 tonnes each season since then, apart from 1998 when it was reduced to 24 tonnes to provide for a change from a season period of October-to-September to April-to-March.

Commercial fishers comply with an industry-initiated management arrangement to 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 (per kg).

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

Commercial fishery licences are renewed annually, after licensees have paid the annual access fee. 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 Perth metropolitan region is an important area to the commercial Roe's licensees, as about a third of the annual commercial catch for the state is taken there. The industry report, in their submission, that the value of the Perth metropolitan catch equates to about 40 per cent of the total state-wide value of the Roe's abalone catch, because of the value of the large size abalone that are taken in the Perth metropolitan area.

The Department of Fisheries in its submission has estimated the average gross value of production from the Perth metropolitan region over the period 1999 to 2003 as \$1.39 million. Further details of the commercial fishing sector are provided in FMP 204.

The aquaculture sector has a requirement to access a small number 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 number of Roe's abalone permitted to be taken by the three bodies that currently hold Ministerial exemptions is relatively low (550 animals). Further, it appears from Table 11 in FMP 204 that only one of these exemption holders is located within the Perth metropolitan region.

4 CATCH INFORMATION

The principal source of data that the IFAAC has used in considering its advice on allocations is FMP 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 collected.

There is evidence in a research report, provided to the IFAAC, that Indigenous people on the west and southwest coasts have historically taken 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 abalone were collected from reef tops and rocks on the south coast (see FMP 204, page 56)

With respect to the amount of abalone Indigenous people ate, the Department in a letter (appendix H) to the IFAAC makes the following points:

- There are no known coastal shell middens 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 particularly accessible to Indigenous people.

The IFAAC accepts that to date there is no information on the customary catch of abalone by Indigenous people in the Perth metropolitan region, but it is interested in knowing if there are any other sources of this information that may have been overlooked in preparing this report. The IFAAC

therefore encourages persons who have information on the customary take to provide it to the committee during the submission phase.

Note 7:

The IFAAC welcomes further information on the customary take of abalone by Indigenous people through submissions on this report. Where there is likely to be a significant customary take, the demands of IFM (IFM Government Policy, paragraph 18, Appendix A) will 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 submission to the IFAAC (www.fish.wa.gov.au).

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.

Recreational daily catch rates are calculated from interviews with fishers. Estimates of the total fishing effort are then used to provide an estimate of the total catch in numbers. Estimates of mean weights are 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 500 licence holders, selected by licence type and location, 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 1 below.

The Department of Fisheries in its submission has used the field survey data to compare the catches between the sectors, whereas in FMP 204 these were based on the comparison of the average of the field and phone survey results (when they were both available).

The Department of Fisheries has justified the change to using the field survey results on the fact that the results from the phone diary survey in 2004 confirm the field survey is more accurate than the phone recall survey. The telephone diary survey is considered to be more accurate than the phone recall survey due to the recall bias associated with phone recall surveys. The phone diary survey results only became available after FMP 204 was published.

The important implication 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 estimates have always been higher than the field survey estimates.

The IFAAC is concerned that the Department of Fisheries has (in its submission) used a different method to estimate the recreational sector's catch

in the Perth metropolitan region in the short period since the publication of FMP 204.

The IFAAC took the view that it should use the average of the two estimates from the field and telephone surveys as the best estimate of the recreational abalone catch in the Perth metropolitan region for the purposes of estimating catch proportions. The reasons for adopting this approach were firstly that the averages of the two surveys have been used in FMP 204 (the principal source of information) and the State of the Fisheries up to the time of the Department's submission; and secondly that the change from the average is based on the survey results from one telephone diary survey only.

Using the average of the field and phone recall surveys (Table 1) it is evident that the recreational catch has varied between 29.5 tonnes and 46.0 tonnes since 1997, with an average of 37.2 tonnes per year.

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

4.3 Commercial

The commercial catch information is provided in Table 1. The 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

Table 1 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 ³	35.9	31.7	44.4	38.1	28.0

¹For 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.

²Source: Table 7 FMP 204

³Source: Table 9 FMP 204

⁴Source: Information for 2004 has been sourced from the Departmental submission

and disposal records (CDRs). Commercial abalone divers record on their CDRs estimates of catch (in kg), effort (in hour and minutes spent diving) and the location fished within a 10 x 10 nautical mile grid system.

The CDRs are regarded as the most accurate record of the catch, but statutory returns provide a useful historical record of the catch and effort as they have been collected since the 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 2 below. They have been estimated using the commercial and recreational data from Table 1.

Table 2 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

¹Using 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. Ranges of catch proportions in subregions since 1999 using the information provided in FMP 204 are shown in Table 3 to give an indication of how the catch is shared between the two sectors in each of the subregions.

Table 3 Catch proportions by subregion and regions combined in the Perth metropolitan region over the period 1999-2004

Subregion	Sector % Average & range	
	Commercial	Recreational ¹
North	45 (51- 36)	55 (64 – 49)
Central	30 (40 – 33)	70 (77 – 60)
South	89 (96 – 79)	11 (21 – 4)
Combined	48 (55 - 42)	52 (58 - 45)

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

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.

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).

Each of these issues is discussed below.

5.1 Alignment of Boundaries

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

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

The Department of Fisheries has proposed that the boundaries are changed so that the recreational boundaries for the Perth metropolitan region are equivalent to the boundaries for the existing commercial fishery in the Perth metropolitan region (Area 7). This position has also been supported by the Recreational Fishing Advisory Committee.

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 3: A recreational zone is created between Moore River and Cape Bouvard so that the commercial and recreational sectors have common boundaries over the Perth metropolitan region.

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

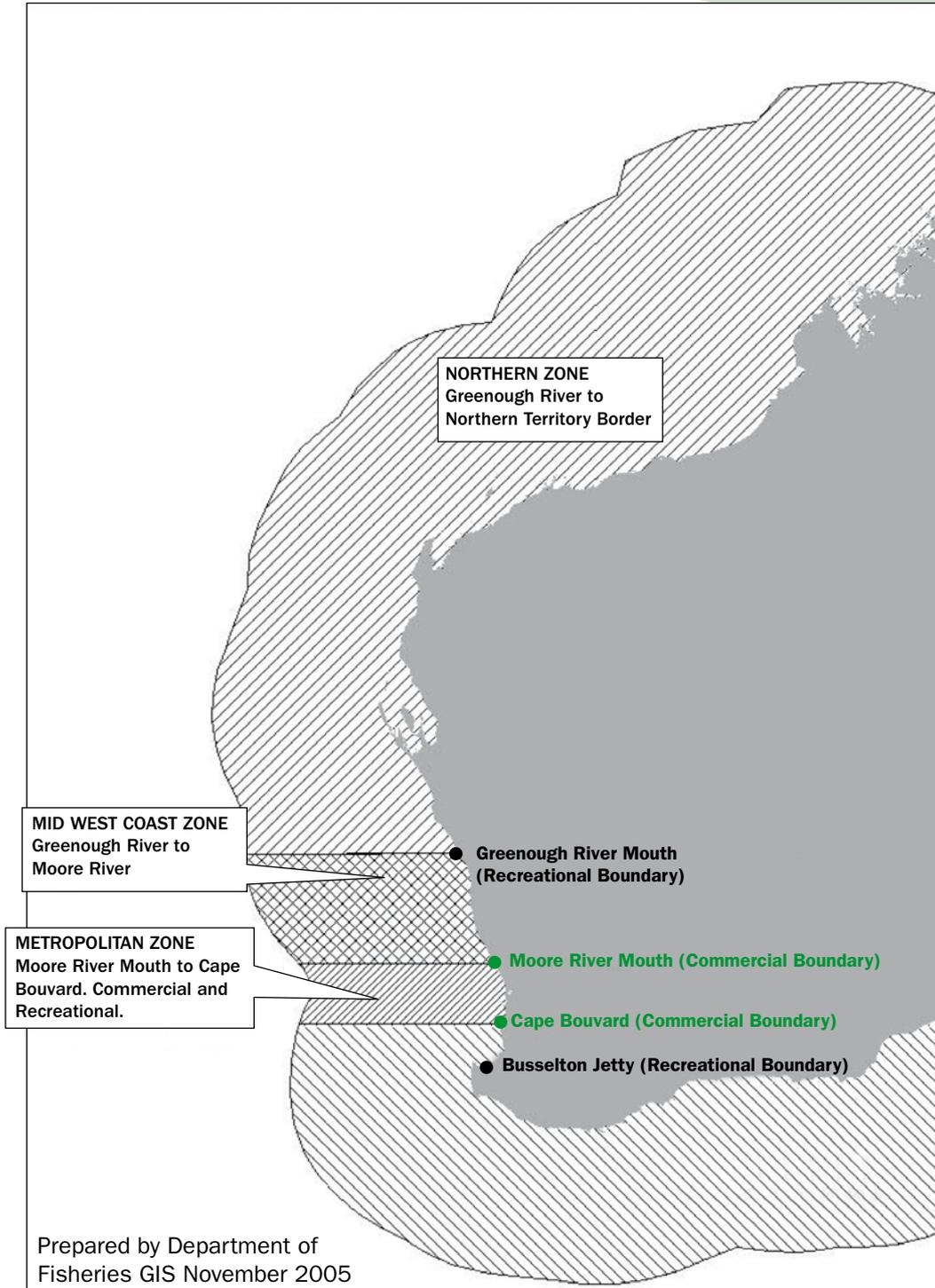
recreational zones (see Figure 3). The Department has argued the case for creating a new mid-west coast zone because it believes there is a need to manage the more intensive recreational fishing in that area.

As the creation of this zone is aimed at improving management arrangements and is not a matter directly related to the determination of allocations in the Perth metropolitan region, the IFAAC believes that it is not appropriate to make a recommendation on the matter. Instead, the creation of a new mid-west zone should be discussed directly between the Department of Fisheries and the recreational sector, with 'input' from the commercial sector.

Note 8:

The creation of a new mid-west recreational zone north of the new Perth metropolitan region should be discussed directly between the Department of Fisheries and the recreational sector, with 'input' from the commercial sector.

Figure 3: Map showing recreational zones proposed by the Department of Fisheries



5.2 Hillarys Boat Harbour to Moore River reef top Fishing

The current ban on reef top fishing for commercial fishers extends from Cape Bouvard to Hillarys Boat Harbour.

The RFAC has proposed that the ban be extended to Moore River. 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.

The commercial sector, in a verbal submission to the IFAAC, rejected further restrictions on its fishing activity on reef tops, but has provided comment to the committee that it has not been actively fishing on the reef top from Hillarys Boat Harbour to Burns Beach.

From the submissions made to the IFAAC, it would appear that the commercial sector (or at least some participants) believed that they are already prohibited from fishing on the reef top from Hillarys Boat Harbour to Burns Beach (see Figure 2).

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 reduce future interaction and conflict in the area.

As extending the prohibition on commercial diving on the reef platform to Burns Beach is effectively maintaining the status quo and will reduce the potential for conflict in the future, the IFAAC believes the proposal has merit, in the context of the implementation of IFM for this fishery.

As the population of Perth spreads further north along the coast, there may be a need to consider further changes to arrangements to reduce potential conflict between commercial and recreational fishers under the ongoing IFM framework, although as noted above in first instance the sectors should take a lead in negotiating on 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 an IFM framework. IFM provides a secure basis for inter-sectoral negotiations.

A significant defect of the current 'non-integrated' fisheries management system is that should the commercial or recreational sector show flexibility in negotiations that might lead to an increase in catch and effort by the other sector, the result could lead to losses and a reduced allocation by the sector making a concession. Unfortunately and unintentionally, the incentives are effectively in favour of disputation and conflict.

Under IFM, access to the resource becomes more assured and sector shares are specified, opening up more possibilities for negotiation and agreement. However, 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 4: The ban on commercial fishers fishing on the reef top between Cape Bouvard and Hillarys Boat Harbour should be extended further north. This recommendation is made in the light of the integrated package proposed in this report. The IFAAC would welcome comments on this issue.

5.3 Incidental Mortality

There are three relevant 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 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 I.

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 Executive Director of the Department of Fisheries. It is clear from FMP 204 that the Executive Director 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 does not include all sources of mortality such as natural mortality, discards and illegal take. The Department of Fisheries explains in Appendix I 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 taken into account in setting the SHL, without having to estimate each of the components.

5.3.2 Allocations that account for total mortality

Although information is not available for the IFAAC to recommend allocations that include incidental mortality, 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 and short fishing times for the recreational sector. Stakeholders have in their submissions argued 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 fished share.

Recfishwest's position is that the total catch including incidental mortality "must" form the basis of the recreational allocation. In other words, it should be in addition to its legally fished share. 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 believes 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 historical recreational catch.

In contrast, the Department of Fisheries has adopted the view that allocations should be only based 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 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 because 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 of the SHL, would benefit⁶ all sectors.

5.3.3 Access arrangements

Management arrangements are having an influence over the number of abalone discards by the recreational fishing sector. The IFAAC believes there is the potential to reduce discards by the recreational sector under a less restrictive management regime.

It has been noted above that the incidental mortality of abalone during fishing carried out by the recreational sector can be affected by the short fishing season and weather conditions, particularly

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

swell. This is because the nine-hour recreational season can mean that fishers go fishing for abalone under poor weather conditions.

This situation causes a higher number of discards than usual because the poor weather (i.e. a higher swell than usual) means it is very 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.

The AIWA has proposed that discards could be reduced if the minimum size limit was removed and fishers could take the first 20 animals they picked up, regardless of the size of the animals.

The IFAAC believes that there are opportunities to reduce incidental mortality by making changes to the management arrangements 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.

Recommendation 5: The Department of Fisheries in consultation with the recreational sector should introduce, as a matter of priority, management arrangements that are aimed at reducing discards of abalone on the reef platform in the Perth metropolitan region.

5.4 Proportional Allocations for the Perth Metropolitan Region

According to the Department of Fisheries, much of the conflict between user groups for Roe's abalone in the Perth metropolitan region:

“...stems not from direct competition for access to the resource but rather concern on the part of the industry about the large annual fluctuations in the recreational catch and incidental mortality.”

After stakeholder presentations, it appeared to the IFAAC that the principal concerns for the commercial sector were:

- the risks to maintaining a stable catch in the light of fluctuations in recreational catch and mortality;
- the size/age structure of that section of the

fishery accessed by the commercial sector is such that it enables optimal commercial harvesting strategies; and

- concern about protecting recruitment to the subtidal fishery.

The IFAAC is of the view that much of this concern can be reduced.

The approach to addressing the fluctuating recreational catch is discussed in this section, while incidental mortality was discussed in the previous section.

The approach the IFAAC proposes to address the large annual fluctuations in the recreational catch is discussed in the context of Guiding principle 5 (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.”

5.4.1 Management and stock assessment

The differences between the commercial and recreational fisheries for Roe's abalone in the Perth metropolitan region bring into question the appropriateness of managing the catch of each sector under a proportional allocation model.

The recreational and commercial sectors take most of their catch from different age classes of the Roe's population. The commercial sector takes larger, and therefore older, abalone from air-assisted diving in the sub-tidal habitat, whereas the recreational sector currently mainly takes younger and smaller abalone from the reef platform. A small proportion of recreational fishers 'free dive'⁷ and take generally larger abalone than what is taken from the reef top.

The management of the two sectors is very different. There is to a large extent spatial separation between the sectors, with the recreational sector having exclusive access to the reef top supplies of abalone from Cape Bouvard to Hillarys Boat Harbour. The stock in the sub-tidal habitat is shared, but in practice only a small proportion of the recreational sector fish there.

⁷ The use of compressed air by recreational divers to take Roe's abalone in the Perth metropolitan region is prohibited.



The commercial sector is managed to a fixed catch under a TACC. In contrast, the recreational sector's catch is very variable, as it is managed mainly by controls on bag limits and fishing effort.

Recreational fishing is restricted to six Sundays each year, between the hours of 7:00am and 8:30am only. As the weather conditions can have a direct impact on the fishing activity of recreational fishers, the catch varies significantly from year-to-year, according to the prevailing weather conditions.

The performance indicators used for stock assessment also vary for each of the sectors. Catch rates have been the main indicator used to assess the status of stocks for the commercial sector, although there is fishery-independent sampling of the population size structure and abundance in the sub-tidal habitat.

The Department of Fisheries uses changes in commercial catch rates as a basis for making adjustments to the TACC for the commercial abalone fishery. In particular, if the commercial catch rates reach a certain threshold (44 kg/hr), consideration is given to increasing the TACC.

For the recreational fishery, the abundance of animals on the reef platform is monitored after the end of each season to determine the effects of fishing on the stock and estimate recruitment, based on fishery-independent sampling of the population size structure on the reef platform.

Catch, effort and catch rates of the recreational sector are estimated from field and phone surveys. This information is used to assess the need to make changes to the management arrangements for the recreational sector.

There has been little variation to the principal management arrangements for each of the sectors since 1997, i.e. the commercial TACC has remained at 36 tonnes while recreational fishing effort has been limited to six Sundays.

Essentially, the two sectors have been managed separately as demonstrated above, although there is recognition they share the same stock.

5.4.2 Management flexibility

Given the discussion above, the IFAAC is concerned that there may be a loss of management flexibility under proportional allocations. The ability to alter the management of each sector's fishing activities

differently is an important advantage where there is a variable population distribution, spatially separate fisheries and different fishing practices.

Management needs sufficient flexibility to alter the catch for one sector, separately 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 commercial 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 may 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.

5.4.3 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.

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 I.

Essentially, the Department of Fisheries was not able to provide a basis for comparing the catches of the two sectors on the overall stock, although it provided an explanation of how it assessed the SHL in terms of monitoring trends in stock abundance, so as to meet sustainability objectives for this fishery.

5.4.4 Optimising socio economic benefits

As outlined in section 3.3.2, from an economic perspective, now may not be the appropriate time to consider inter-sectoral allocations for Roe's abalone in the Perth metropolitan region.

McLeod and Nicholls (2004) in their study on optimising the benefits from the use of the resource concluded that the appropriate time to give further consideration to inter-sector allocation would be after more flexible arrangements for the recreational fishers have been established, and operated for a time long enough to allow net benefits to be optimised.

The AIWA shares a similar view to the authors, that is:

"...IFM should, prior to tackling inter-sector allocation, consider the allocation mechanisms within the recreational sector itself."

Delaying the consideration of inter-sectoral allocations should not disadvantage the recreational sector because there are opportunities to increase the benefits to recreational fishers within the existing catch constraints.

5.4.5 Summary of issues

Although the IFAAC believes it is preferable to implement proportional allocations under a single SHL, the IFAAC has some concerns about 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 recreational and commercial sectors;
- there is the potential to unfairly disadvantage a sector under a proportional allocation system; and
- from an economic perspective the appropriate time to consider how best to optimise the socio-economic benefits from the use of the resource is after more flexible management arrangements for recreational fishers have been established and operated for a long enough time to allow net benefits to be optimised.

5.4.6 Discussion

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 comparability of recreational and commercial catches 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'.

The IFAAC believes the total allowable recreational catch should be based on the SHL provided by the Department of Fisheries in FMP 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 41 tonnes - i.e. the current SHL of 77 tonnes less the commercial TACC of 36 tonnes.

The advantages of this approach are that it retains priority access of the recreational sector to the reef platform; will lead to a reduction in the variability in the recreational catch⁸; 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 separately, according to relevant biological indicators in each location. Importantly, the total allowable catches would not be linked proportionally.

The IFAAC believes this approach is in accordance with its principle that there should be a practical and incremental approach taken to 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 some time in the future.

Recommendation 6: The introduction of proportional allocations for Roe's abalone in the Perth metropolitan region should be deferred until:

- **there is sufficient understanding of the comparability of recreational and commercial catches, and;**
- **fishery managers have gained experience with managing the recreational sector to a total allowable recreational catch under the proposed more flexible management arrangements outlined in Recommendation 13.**

Recommendation 7: Until proportional allocations are introduced, sectors should be managed to ensure that the catch taken by one sector is not reducing the opportunity for the other sector to take the average catch it took over the period 1999-2003.

Recommendation 8: A total allowable recreational catch should be introduced for the recreational sector for Roe's abalone in the Perth metropolitan region. The total allowable recreational catch in the Perth metropolitan region should be based on data over the period 1999-2003.

⁸ Provided management rules are changed accordingly

6 SECTOR ALLOCATIONS UNDER A SUSTAINABLE HARVEST LEVEL

As discussed in the previous section, the IFAAC is not recommending an immediate introduction of management of Roe's abalone under a sustainable harvest level (SHL), although it believes it is preferable in the long term as fishing pressure increases. However, for the benefit of stakeholders and in order to provide guidance to Government in the future, the IFAAC has included a discussion of sector allocations under a SHL.

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 includes 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 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).

Over time, the IFAAC expects that a better understanding of the impact of each sector on the resource, and the interaction of the sectors involved, will allow for proportional allocations for this resource to be introduced. This will enable the introduction of reallocation mechanisms within an overall unified SHL, so that the benefits that can arise from transfers of shares between sectors can be realised.

However, 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, 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) been able to be resolved.

The IFAAC believes 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.

The submission period for this document offers the opportunity for stakeholders to provide further advice to the IFAAC on the matters discussed above.

6.1 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 D) 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 156 kg (see Box 2).

The Department of Fisheries further advised the IFAAC that the amount estimated using this method may be an underestimate and 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 H. 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 taken the view that it needs to make its recommendations on the basis of specific information, or at least using a consistent methodology. Accordingly, in the absence of specific evidence as to the level of customary take, the IFAAC believes the allocation should be based on the methodology proposed by the Department of Fisheries.

However the IFAAC believes the figure of 156 kg (as calculated in Box 2) should be rounded up to 200 kg on the basis that an allocation of 156 kg might give a misleading impression of the accuracy of the methods used.

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 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

In relation to the impact on the other sectors of this allocation, the information the IFAAC has received is that the level of customary fishing take is currently unreported and is in effect additional to the existing SHL calculations for 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 200 kg for customary fishing is reasonable initial allocation for this fishery given that:

- The IFAAC is not recommending proportional allocations for the other sectors (see section 6.2.7).
- The allocation for customary fishing is in addition to the SHL for the recreational and commercial sectors and has priority over those sectors.

Recommendation 9: The customary fishing initial priority allocation for Roe's abalone in the Perth metropolitan region should be 200 kg.

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. The options discussed in this section (see Table 4) were either contained

Box 2

According to 2001 census data (Department of Fisheries submission) the weighted percentage of the population of the Perth metropolitan region that are Indigenous is 1.5 per cent. Assuming that the Indigenous population participate in recreational fishing at the same rate as the non-indigenous population, the take of Roe's abalone by Indigenous people would be equivalent to about 1.5 per cent of the recreational take.

Part of this 1.5 per cent would be attributed to recreational fishing by Indigenous people, while part would be attributed to customary fishing by Indigenous people.

The part of the 1.5 per cent attributed to customary fishing by Indigenous people is estimated by the Department of Fisheries to be approximately 25 per cent. In other words, it is assumed that 25 per cent of abalone fishing by Indigenous people is for customary purposes, while the other 75 per cent is for recreational purposes. The customary allocation would therefore be 0.38 per cent (25 per cent of 1.5 per cent) of the recreational proportion of the catch.

Assuming the recreational sector's total allowable catch is 41 tonnes the customary allocation would be equivalent to 156 kg.

Using this method, an allocation of about 156 kg would be the initial priority customary allocation for the indigenous sector, noting that this would be subject to review as more information becomes available on customary fishing by indigenous people.

in a submission from a stakeholder or the IFAAC considered they could be applied.

Table 4 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)⁹. 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 per cent to the recreational sector and 47 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 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 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 53 per cent for the recreational sector and 47 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 Government policy (paragraph 19, Appendix A).

The allocations for the period 1997-2001 were estimated using the data provided in Table 1 except for 1998¹⁰. 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.

⁹ The SHL as given in FMP 204 is equivalent to the total allowable catch for the recreational and commercial sectors.

¹⁰ 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 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.”

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 sector’s 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 therefore developed a method that could be used to estimate the number of animals for a 77 tonne sustainable harvest level (SHL) - see Box 3.

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 per cent for the recreational sector and 58 per cent for the commercial sector.

Box 3

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:

$$0.092 \text{ kg} / (0.092 \text{ kg} + 0.129 \text{ kg}) = 41.63 \text{ per cent}$$

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

$$(0.42 / 77,000) \text{ kg} / 0.092 \text{ kg} \\ = 348 \text{ t abalone each}$$

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

In its written submission, Recfishwest has 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 to be problematic, given the strict controls that this fishery operates under.

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

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 204. It is evident from that figure that there was no obvious growth in the recreational catch estimate from 1997, bearing in mind that the recreational catch for 2005 is likely to be lower than it was in 2004 (DoF pers. comm.).

This is unsurprising as growth by the 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 6 below.

In seeking further information on the ‘twice real catch share’ proposal by Recfishwest, the IFAAC has been informed that Recfishwest takes the view 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 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 for arrangements that involve the use of spatial separation to resolve resource-sharing conflicts in the Perth metropolitan region (Recfishwest pers. com.).

6.2.7 Discussion of proportional allocation 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	AIWIA	42	58
6	Recfishwest*	100	0

*Recfishwest preference is to use spatial separation to resolve resource-sharing conflicts

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 2000 to 2003 is used, as in Option 2.

Option 3, which would mean the allocations would be based on 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, only be 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 on average 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.

As discussed previously, i.e. the IFAAC is recommending a continuation of separate management for the two distinct abalone fisheries in the Perth metropolitan region (i.e. recreational and commercial). However, it is important to note that the IFAAC believes there should not be a substantial change to the current catch proportions until there is more information on how changes in catch proportions impact on the SHL.

Recommendation 10: When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis, then the starting point for 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 fewer 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 11: 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 commercial sector for access to broodstock.

7 OTHER ISSUES

7.1 Reallocation Mechanisms

As discussed in the previous section, the IFAAC is not proposing the introduction of allocations for Roe's abalone in the Perth metropolitan region for the recreational and commercial sectors at this stage. As allocations are obviously a necessary precursor to reallocations, a reallocation mechanism is not recommended for Roe's abalone until allocations are introduced.

An example of a trade between the two sectors is provided in Box 4 to illustrate the complexity of the issues and the uncertainty involved in the trading allocations between the two sectors.

The discussion in Box 4 is by no means exhaustive, but is used primarily to demonstrate that, at this stage, there are so many imponderables regarding the comparability of the recreational and commercial sectors' catches of Roe's abalone in the Perth metropolitan region that it would be inappropriate to introduce a reallocation system.

Recommendation 12: When at a future time it becomes appropriate to manage the recreational and commercial sectors on a fully integrated basis, including a sufficient understanding of the comparability of catches of the two sectors, a reallocation mechanism should be introduced.

Box 4

The recreational sector may want to increase its catch from the reef platform by two tonnes, thereby increasing its proportion of the total catch, and purchase two tonnes of quota from the commercial sector, noting that what is being traded is two tonnes of 70+ mm animals taken subtidally in order for the recreational sector to take two tonnes of 60+ mm animals from the reef platform.

There are a number of possible scenarios that could result from such a trade, but the following scenario is described to illustrate some of the issues involved.

The recreational sector could take an additional two tonnes in the short term from the reef platform, but find that there is insufficient recruitment to maintain increased exploitation on the reef platform, so over time the abundance of abalone on the reef platform falls.

At the same time, stock indicators show that the subtidal stock increases because there is less exploitation. As the recreational sector does not generally exploit the subtidal area, it is unlikely to be able to take the additional allocation from the increased subtidal abundance of abalone. Under this scenario, the catch from the reef platform may have ultimately to be reduced, representing an overall proportional reduction in catch of both sectors.

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 (Guiding principle x, see section 3.1.2) and appropriate management structures and processes should be introduced to manage each user group within their prescribed allocation (Guiding principle vii, see section 3.1.2).

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. The research cited previously indicates that there may be significant advantages accruing to the recreational users of any changes that occur in the management of the recreational abalone fishery.

The dominant factor determining the harvest of the recreational sector is the weather conditions.

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 is used as a method of managing the recreational sector. The use of tags is a very direct method of managing the total catch of the recreational sector and has 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 13: The Department of Fisheries work with the recreational sector to develop a management regime which will reduce incidental mortality and catch variability between years, 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 utilisation 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 location proposed to be closed and any possible impacts, including an assessment by the Department of Fisheries of any proposals. The IFAAC is therefore encouraging stakeholders, including the Department of Fisheries, to negotiate arrangements over the submission period that will reduce conflict and 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 recommends 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 14: Given the low level of interest shown by stakeholders in negotiating solutions to resource-sharing conflicts outside the Perth metropolitan region, the Department of Fisheries should facilitate negotiations between sectors aimed at resolving these conflicts.

Recommendation 15: Major abalone resource-sharing conflicts, outside the Perth metropolitan region, that remain unresolved two years after the date of decision on the recommendations in this report should be referred to the IFAAC 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 if 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 4 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 also provide ‘input’ into abalone management issues and approach the Minister directly.

One of the outcomes 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 its 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...”

In particular, the WAFIC believes there would be value in examining the formation of a recreational abalone advisory committee. The WAFIC has identified the composition and functions of the committee, and commented 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 has identified that licensed recreational abalone fishers may not be adequately represented in current advisory or lobby groups such as the RFAC and Recfishwest. The RFAC believes that representation on MACs should reflect the proportion of the catch each sector is allocated.

The IFAAC has been advised that many recreational abalone fishers are of Vietnamese or Chinese descent. In addition, many of these participants are not otherwise active recreational fishers.

Given these factors there are particular difficulties in communicating with these community groupings. The IFAAC believes the special consideration should be given to how people of Vietnamese and Chinese descent are included in the consultation process and represented in management deliberations.

Given these stakeholder views and the ethnic background of many of the recreational abalone fishers, the IFAAC supports a 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 under IFM.

The IFAAC encourages the Department of Fisheries, in consultation with stakeholders, to commence

developing the appropriate management structures and management arrangements that will deal effectively with these important matters as soon as possible.

Recommendation 16: The Department of Fisheries progressively develop, in consultation with stakeholders, the necessary regulatory and consultative structures that account for:

- **the need to include people of Vietnamese and Chinese background who do not have regular contact with the Department of Fisheries;**
- **the reconstitution of the abalone management advisory committee to deal equitably with recreational and commercial issues, and enable negotiations within and between the sectors; and**
- **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 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 that is 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.

REFERENCES

- Department of Fisheries, Western Australia, website: www.fish.wa.gov.au
- Department of Fisheries, 2002. Application to Environment Australia on the Abalone Managed Fishery, November, 2002.
- Department of Fisheries, 2005, Integrated Fisheries Management Report Abalone Resource, Fisheries Management Paper, No 204, Perth, Western Australia.
- Dortch, C.E., G Kendrick and K. Morse 1984, Aboriginal mollusc exploitation in southwestern Australia', *Archaeology in Oceania* 19, pp 81-104.
- Hancock, B.T and Caputi, N. in press, The Roe's abalone fishery near Perth metropolitan area, Western Australia. *J. Shellfish Research*
- Hancock, B. 2000. Genetic subdivision of Roe's abalone, *Haliotis roei* Grey (Mollusca: Gastropoda), in southwestern Australia. *Mar. Freshwater Res.* 51 679-687.
- McLeod, R. and J., Nicholls 2004. A socio-economic valuation of Resource Allocation options between recreational and commercial fishing uses. FRDC Project 2001/065
- National Native Title Tribunal, 2005, National Indigenous Fishing Technical Working Group, website: www.nntt.gov.au, Accessed June, 2005.
- Wright, G., 2005, An overview of the evidence for Indigenous fisheries on the west and south coasts of Western Australia, National Native Title Tribunal, Research Report.



APPENDICES

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 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.
- 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.

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.

- 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 an 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 ALLOCATION ADVISORY COMMITTEE

Integrated Fisheries Management Allocation Process (from working draft paper)

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 FOR STAKEHOLDER SUBMISSIONS TO THE 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: 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

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.”

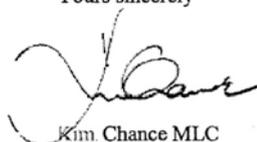
3. The National Recreational and Indigenous Fishing Survey (NRIFS), to which we contributed, provided data on indigenous fishing activity in the Kimberley region of Western Australia. Although not relevant to the fisheries you are currently considering, it was the first large-scale survey of customary 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 2014

APPENDIX E

MINISTER LETTER ON ALLOCATIONS TO THE CONSERVATION SECTOR



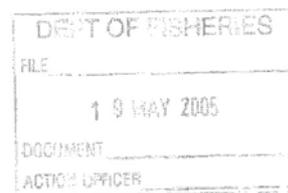
HON JON FORD JP MLC
Minister For Fisheries; the Kimberley,
Pilbara And Gascoyne



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



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.

14th Floor, May Holman Centre, 32 St Georges Terrace, Perth WA 6000
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.

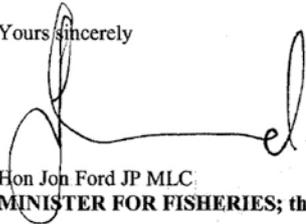
The Department of Fisheries' position is that the creation of no take areas to meet other requirements, such as the preservation of representative habitats, establishment of scientific reference areas and for viewing proposes for which fishing may negatively impact, will be accommodated through the reservation 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



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

MINISTERIAL LETTER ON ALLOCATIONS WITHIN THE PERTH METROPOLITAN REGION



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.

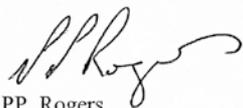
As can be seen from the historical catch figures, the majority of recreational catch comes out of the northern and central sub-regions. However, operationally this area, which produces over 90% of the recreational catch in the metropolitan fishery, is between Trigg Island and Burns Beach, a distance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

3rd Floor, The Atrium 168 St Georges Terrace Perth Western Australia 6000
Telephone +61 8 9482 7333 Facsimile +61 8 9482 7389
Email: headoffice@fish.wa.gov.au
Website <http://www.fish.wa.gov.au>
ABN 55 689 794 771

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



PP Rogers
EXECUTIVE DIRECTOR

24 January 2006

DEPARTMENTAL LETTER ON MANAGEMENT BY SUBREGIONS WITHIN THE METROPOLITAN REGION



Department of Fisheries
Government of Western Australia



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

3rd Floor, The Atrium 168 St Georges Terrace Perth Western Australia 6000
Telephone +61 8 9482 7333 Facsimile +61 8 9482 7389
Email: headoffice@fish.wa.gov.au
Website <http://www.fish.wa.gov.au>
ABN 55 689 794 771

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



PP Rogers
EXECUTIVE DIRECTOR

24 January 2006

DEPARTMENTAL LETTER ON THE CUSTOMARY TAKE OF ABALONE



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

3rd Floor, The Atrium 168 St Georges Terrace Perth Western Australia 6000
Telephone +61 8 9482 7333 Facsimile +61 8 9482 7389
Email: headoffice@fish.wa.gov.au
Website <http://www.fish.wa.gov.au>
ABN 55 689 794 771

XFIL01

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

Yours sincerely



PP Rogers
EXECUTIVE DIRECTOR

24 January 2006

DEPARTMENTAL LETTER ON THE SUSTAINABLE
HARVEST LEVEL AND INCIDENTAL MORTALITY

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.

3rd Floor, The Atrium 168 St Georges Terrace Perth Western Australia 6000
Telephone +61 8 9482 7333 Facsimile +61 8 9482 7389
Email: headoffice@fish.wa.gov.au
Website <http://www.fish.wa.gov.au>
ABN 55 689 794 771

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

AbMAC	Abalone Management Advisory Committee
AIAWA	Abalone Industry Association of Western Australia
FMP 204	Fisheries Management Paper No. 204
FRMA	Fish Resources Management Act 1994
IFAAC	Integrated Fisheries Allocation Advisory Committee
IFM	Integrated Fisheries Management
NNTT	National Native Title Tribunal
RFAC	Recreational Fishing Advisory Committee
SHL	Sustainable harvest level
TAC	Total allowable catch
TACC	Total allowable commercial catch
TARC	Total allowable recreational catch
WAFIC	Western Australian Fishing Industry Council

