FUTURE MANAGEMENT OF THE METROPOLITAN RECREATIONAL ROE'S ABALONE FISHERY

Report of the Metropolitan Roe's Abalone Recreational Fishery Working Group

FISHERIES MANAGEMENT PAPER NO. 243

Future Management of the Metropolitan
Recreational Roe's Abalone Fishery

*Report of the Metropolitan Roe's Abalone
Recreational Fishery Working Group*

June 2010

Government of **Western Australia**
Department of **Fisheries**

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FEEDBACK FORM

FUTURE MANAGEMENT OF THE METROPOLITAN RECREATIONAL ROE'S ABALONE FISHERY (Fisheries Management Paper No. 243)

A copy of this feedback form can be downloaded from the Department of Fisheries website at: www.fish.wa.gov.au

Please complete the form and e-mail to: martin.holtz@fish.wa.gov.au. Alternatively, fill in the form and mail it to: Attention: Martin Holtz, Department of Fisheries, 3rd Floor The Atrium, 168 St Georges Terrace, PERTH WA 6000.

The closing date for submissions is 2 July 2010.

Background
The Metropolitan Roe's Abalone Recreational Fishery Working Group has proposed two options to manage the fishery into the future. The options are set out below.   Your assistance by indicating your preferred option or providing any other comments/views you may have regarding the future management of this fishery would be appreciated.
Option 1.   Maintaining the current fishing season of one-hour fishing periods on consecutive Sundays commencing early November each year, and varying the number of fishing days to ensure that a 40 tonne average catch over a five-year timeline is maintained.
Option 2.   Adjusting the season so that the one-hour fishing periods are scheduled to be held on the first Sunday of the summer and autumn months. Similar to the first option, the number of fishing days would be varied to ensure that a 40 tonne average catch over a five-year timeline is maintained. (*Note: given the higher catch predicted over the summer autumn months this option is likely to result in fewer fishing days to ensure the 40 tonne allocation is adhered to*).
Indicate your preferred option: *(Option 1 or Option 2)*
Other comments/views: *(feedback is welcome on the back of the form if the space is insufficient)*

EXECUTIVE SUMMARY

Following the setting of a 40 tonne Total Allowable Recreational Catch (TARC) for the Perth recreational abalone fishery, a working group was formed to examine future management options.

The Metropolitan Roe's Abalone Recreational Fishery Working Group ("the Working Group") examined historical management, key principles, amenity of fishing, bag limits, license numbers, season length and timing of the season to assist its deliberations. A questionnaire was also sent out to 1,000 abalone recreational licence holders, with 20 per cent of licensees providing a detailed response.

Two options for future management were deemed viable. These were:

1. Maintaining the current fishing season and varying the number of fishing days to ensure that a 40 tonne average catch over a five-year timeline was maintained; and

2. Adjusting the season so that the fishing days would occur on the first Sunday of the summer and autumn months (November to April). Similar to the first option, the number of fishing days would be varied to ensure that a 40 tonne average catch over a five-year timeline was maintained.

Noting that, on average, the weather conditions are better over the summer/autumn months, it is expected that Option 2 will result in fewer fishing days being permitted in the longer term.

1.0   THE FISHERY

The Perth metropolitan roe's abalone fishery is an iconic fishery in Western Australia. Despite substantial fishing pressure from both the commercial and recreational sectors, it is one of the few remaining sustainable abalone fisheries located on the doorstep of a major city.

During the 1980s, recreational fishing for abalone began to increase rapidly, due to a growing population and increasing popularity of abalone as a delicacy. This fishing pressure increase was principally focused on the easily accessible Roe's abalone stocks adjacent to the Perth metropolitan area.

Up until 1988, management arrangements for recreational abalone fishing were limited to a seasonal fishing period that ran from mid-October to mid-December.

Since 1989, increasing recreational fishing activity has lead to a series of management measures being implemented. These have included the introduction of a recreational abalone fishing licence; bag, boat and personal possession limits; and a season limited to one and a half hours on each of six consecutive Sundays. In 2006 this was further reduced to one hour on six consecutive Sundays.

Although the suite of management arrangements currently in place for the Perth metropolitan recreational Roe's abalone fishery make it one of the most regulated and shortest fishery seasons in the world, it has ensured a sustainable fishery.

A table setting out the changes to recreational abalone fishing management is included at Attachment 4.

2.0   ESTABLISHMENT OF WORKING GROUP

Due to its importance to both the recreational and commercial fishing sectors, the Perth metropolitan Roe's abalone fishery was the second fishery examined by the Integrated Fisheries Allocation Advisory Committee (IFAAC). The IFAAC was established to provide advice to the Minister for Fisheries on the allocation of explicit catch shares to each the fishing sector groups (i.e. recreational, commercial and customary).

Although, generally, the IFAAC considers it preferable to recommend proportional allocations under a single sustainable harvest level, it advised against implementing them in this fishery at this stage. This was primarily due to the limited understanding of the relationship between reef-top and off-reef top fisheries.

Whilst the IFAAC did not recommend that proportional allocations should be implemented at this time it believed that there should be certainty in regards to each sector's access to the resource and that the fluctuating recreational catch needed to be addressed. To address these issues the IFAAC recommended the introduction of a Total Allowable Recreational Catch (TARC).

The Minister for Fisheries subsequently approved the IFAAC recommendation that:

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

This TARC level was based on Department of Fisheries' advice that the total sustainable harvest level for the fishery was estimated to be 77 tonnes (reference Fisheries Management Paper No. 204). The 40 tonne TARC took into account the commercial fishery quota of 36 tonnes☐ and was consistent with historical recreational catches.

During the time that the IFAAC was examining this fishery (2005 - 2007) the estimated recreational catch from this fishery (five-year average) was significantly lower than the 40 tonne allocation being contemplated. This lead to stakeholder concerns that the existing management arrangements were overly restrictive and did not allow the recreational fishing sector to catch its share and was impacting upon the amenity of participation in the fishery.

An important principle recognised by the IFAAC was that management arrangements must provide users with the opportunity to access their allocation and that appropriate management structures and processes should be introduced to manage each user group within their prescribed allocation.

With this in mind, the IFAAC subsequently recommended that:

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

Subsequently the Minister for Fisheries endorsed this recommendation and requested that the Department of Fisheries establish a working group to make recommendations on the future management of the recreational abalone fishery within the context of its catch allocation

A working group was consequently established to provide advice to the CEO of the Department of Fisheries. Importantly, the recommended management approach arising out of this process was to be released for public comment, and that comment must be taken into account before a decision was made in respect to future management.

The working group comprised the following members:

Mr Michael McMullan	Chair
Mr Doug Bathgate	Recreational Fishing Advisory Committee
Mr Peter Blyth	Metropolitan Regional Recreational Fishing Advisory Committee
Mr Kane Moyle	Recfishwest
Mr Ian Taylor	Commercial Fishery Representative
Mr Martin Holtz	Department of Fisheries, Management
Mr Todd A'vard	Department of Fisheries, Regional Services
Dr Anthony Hart	Department of Fisheries, Research

2.1   Working Group's Terms of Reference

- To identify the key management issues facing the metropolitan recreational abalone fishery.

- To prepare a draft management strategy for the metropolitan recreational abalone fishery which will:

  - Provide users with the opportunity to access their allocation;

  - Minimise incidental mortality;

  - Minimise catch variability between years; and

  - Optimise the social amenity of recreational Roe's abalone fishing.

- To identify management and resourcing needs, and possible funding strategies, for implementation of the plan.

- To conduct consultation on the proposed management strategy with key stakeholders and the wider public including people of all cultural backgrounds who access the resource.

- To make final recommendations to the Minister for Fisheries through the Chief Executive Officer of the Department of Fisheries on the management of the metropolitan recreational abalone fishery.

This paper sets out the issues and background information considered by the working group and the options it considered most appropriate for future management of the fishery.

2.2   Overview of Working Group Deliberations

The Working Group met on six occasions between July 2009 and April 2010. As part of its deliberative process it developed a catch prediction model (Attachment 1), and designed and sent a questionnaire out to a sub-set of 1,000 recreational abalone fishers to gain an insight into the general views regarding management of the fishery (Attachment 2).

The 1,000 fishers were randomly selected from the existing database of abalone-specific license holders. There were 10,056 abalone license holders as of January 2010. 201 responses (approximately 20 per cent) were received and a summary of the results is included at Attachment 2.

When the Working Group first met in July 2009, the estimated average recreational catch (over the previous five seasons) was 32.9 tonnes (see Attachment 3). Although the previous season (2008) had produced an estimated total catch of 44 tonnes, this five-year average was still significantly lower than the 40 tonne allocation.

With this in mind, the Working Group examined management options with a general view that there was scope to increase the amenity of the fishery (i.e. participation, enjoyment and safety) and to accommodate a degree of catch increase whilst keeping within the catch allocation.

The process for estimating recreational catch is a statistical procedure based on estimates of daily fishing effort (in hours) and catch per unit effort (weight & numbers per hour). The formula is relatively simple:

Catch (kg) = Catch per hour (kg) x Effort (hours)

However, the estimates of catch rates and effort are based on a large sampling program involving counts of the 20 main fishing grounds, interviews of fishers to obtain catch rates and weight, and aerial surveys to target low effort areas in between the main fishing grounds.

Between 30 and 40 people, most of which are volunteers, are directly involved in catch estimates each year. A complete description of the statistical and mathematical model is found in the following reference.

Hancock B, Caputi N (2006). The Roe's abalone fishery near the Perth metropolitan area, Western Australia. *Journal of Shellfish Research*. 25(1): 167-178.

2.2.1   2009 fishery – record catch

The working group deliberations were somewhat tempered mid-course when the outcomes of the 2009 season became available and showed that an estimated 48.6 tonnes had been taken during the 2009 season (Attachment 3).

This result meant that the five-year catch average increased to 36.3 tonnes. While this was still lower than the 40 tonne allocation, the outcome of the 2009 season clearly demonstrated that the current management arrangements, combined with increasing licence numbers, were capable of a producing total harvests in excess of the allocation.

Thus the Working Group's examination of options and scope to increase amenity within the fishery became more constrained in regards to the risk that any amenity increase may also result in increased catch.

2.3   Key principles

During its examination of the various options available to manage the fishery, the Working Group was cognisant of a number of key principles that needed to be taken into account. The key principles were:

1. That there must be capacity to maintain total catch to the level of allocation (40 tonnes).

2. That management strategies must be flexible and able to be adjusted to ensure there is opportunity to take the 40 tonne allocation. (Note: this acknowledges that variability will exist between seasons and that a five-year moving average should be used to account for this variability – see Attachment 3).

3. That compliance with management arrangements (within appropriate risk levels) must be possible.

4. That total catch must be auditable, to enable an estimate of catch/effort to be made within necessary time lines to facilitate management adjustments as necessary.

5. Management must be affordable.

3.0   MANAGEMENT TOOLS

There are three principal tools used to manage fishing effort in the recreational abalone fishery – bag limits, licensing and a fishing season.

3.1   Bag limits

Bag limits were introduced for recreational abalone fishing in 1992. The bag limit of 20 has been constant in the Perth metropolitan fishery since that time. The Working Group examined the use of bag limit adjustments to manipulate the annual recreational catch.

The key benefit of this approach would be that any increase or decrease could be tailored to meet any under or over-fishing that had occurred in previous seasons. However, it was considered that the existing bag limit was very well accepted and understood and provided a sufficient quantity of abalone to ensure a family meal.

It was felt that minor and frequent changes to the bag limit would potentially cause confusion among participants and would significantly complicate compliance activity. Each bag limit change would require significant and costly public education programs to ensure they were understood.

The Working Group concluded that although bag limit adjustment should remain a management option for the future, it was not practical to adjust bag limits from year-to-year to ensure the catch allocation was maintained. However, 47 per cent of respondents to the questionnaire were in favour of reducing bag limits as a means of maintaining the 40 tonnes TARC (Attachment 2).

3.2   Licensing

Licensing was introduced for recreational abalone fishing in 1992.

Since then, and until 2009, annual abalone fishing licences could be purchased as a stand-alone licence or as part of an 'umbrella licence' covering a number of fishing activities. Umbrella licences are no longer issued.

The cost of a stand-alone licence for the 2010 season is $40. There were 2,700 stand-alone licences issued when the current six-day season was introduced in 1995, along with 4,500 umbrella licences. This increased to 10,100 and 15,700 respectively in the 2009 season. There has never been a limit applied to the number of licences issued.

Restricting the number of licences issued, or increasing licence cost are actions that could be used as *de facto* effort control mechanisms. These options were canvassed in the questionnaire sent to a sub-set of licence holders. Fifty-five percent of respondents did not favour either approach (Attachment 2).

Although the working group noted the possibility of using licensing constraints as effort reduction tools, this was not an approach favoured at this time by its members and not examined in any significant detail.

3.3   Fishing season

The imposition of a fishing season was the first management tool used in the recreational abalone fishery.

On numerous occasions since 1988 the season has been altered to address various sustainability and compliance concerns. This has included early seasonal closures, total closures, and reductions

in season length and fishing times. This has lead to the current season of one-hour fishing times on each of six consecutive Sundays from early November to early December each year.

The Working Group explored the possibility of changing the fishing season to improve the amenity of the fishery. An option favoured by members and discussed in detail was the realignment of the season to the first Sunday of consecutive months over the summer and autumn period.

Feedback from recreational fishers showed that 52 per cent of respondents to the questionnaire preferred not to change to a summer season, while 48 per cent were in favour of doing so (Attachment 2). Although this feedback was generally inconclusive, the Working group considered that the proposal should be included as one of the options for future management discussed further in 'Section 4.4 Future Management Options' of this document.

4.0   ISSUES

4.1   Incidental mortality

Within its terms of reference, the Working Group was required to prepare a draft management strategy for the metropolitan recreational abalone fishery that minimises incidental mortality.

Incidental mortality is a term that refers to the death of abalone due to damage during removal from the reef and where they are not kept as part of a fishers catch. In general, abalone are unable to re-attach when they are removed from their rock/reef habitat and quickly die.

An abalone that has been damaged by having its foot evenly slightly cut during fishing will also die – bleed to death - even if the abalone initially appears to successfully re-attach itself to the reef platform. This is because, like all marine snails, abalone are haemophiliacs and have no true clotting mechanism in their blood, consequently even small wounds can be lethal.

Incidental mortality can be caused by fishers inadvertently damaging abalone when fishing in poor weather conditions, which can make it difficult for fishers to tell whether an abalone they are prising from the reef is actually the legal size or not. A degree of incidental mortality can also be attributed to fishers 'high grading' (the practice while fishing of legal-size animals being discarded from a fisher's catch and replaced by larger animals).

The Working Group concluded that a reduction in incidental mortality attributed to poor fishing practices or high grading would only be achieved through directed education. Fishers needed to be made aware of the susceptibility of abalone to damage or removal from reef platforms and to develop an understanding of how this could be minimised by adopting better or more responsible fishing practices.

However, noting this, the Working Group considered research and compliance advice that indicated that the major cause of incidental mortality was accidental damage caused by fishing in poor weather conditions. This advice suggested that if fishing times could be aligned to better weather conditions (i.e. lower swell, tide and winds) then it was likely that incidental mortality should be reduced.

4.2   Catch variability between years

The Working Group examined management options to address its terms of reference that catch variability between years should be minimised.

The requirement to manage the recreational abalone fishery to within its catch allocation of 40 tonnes makes it important that the management regime is aimed at achieving minimal catch variability between years, or, alternatively, is sufficiently flexible to alter arrangements between years.

However the overriding factors that contribute to annual catch fluctuations are weather-related - particularly tide, swell and wind strength and direction. Although these factors cannot be directly managed, the Working Group has proposed an option that reschedules the fishing season to times when the weather conditions are likely to be better, based on recorded weather observations.

4.3   Re-allocation between sectors

The participation in recreational abalone fishing is continuing to grow, with the number of licences issued increasing by an average of seven per cent per year.

Although the management measures implemented to date are capable of effectively constraining total catch, this will become more difficult as fishing effort continues to increase.

The Working Group recognised that if increasingly restrictive management measures were imposed to accommodate the effort increase, and to maintain catch within the 40 tonne allocation, a point would be reached where the amenity of the fishery would be significantly impacted.

In this regard, the Working Group was of the view that the development of a mechanism to facilitate a reallocation of abalone from the commercial fishing sector to the recreational fishing sector should be pursued by the IFAAC as a matter of priority.

4.4   Future Management Options

Following an examination of the management tools available, the Working Group concluded that the most efficient and effective way to manage fishing effort and total catch was adjustment of the numbers of fishing days. This was also the preferred option of surveyed recreational fishers (53 per cent) in comparison to changing bag limits (47 per cent) (Attachment 3).

This option has been used in past seasons when the Department's Research Division has reported significantly reduced reef-top populations as a result of fishing. The Working Group considered that this could provide sufficient flexibility to ensure that the average total catch was maintained at approximately the 40 tonne allocation without complicated management changes.

Thus the Working Group concluded that maintaining the current season structure (i.e. one-hour fishing periods on consecutive Sundays from early November to early December) was a viable management regime. However, to ensure that the five-year average total catch was maintained at approximately 40 tonnes, the number of consecutive Sundays would need to be adjusted annually.

That is to say if poor weather or other factors resulted in the total catch dropping below a five-year running average of 40 tonnes, then consideration should be given to providing additional fishing days during the next fishing season. Conversely, if total catches resulted in the five-year running average exceeding 40 tonnes, then consideration should be given to reducing the number of fishing days during the next fishing season.

The Working Group examined this basic management tool to assess whether it could be manipulated to provide improved fishing amenity (participation, enjoyment and safety). It was considered that the key issue that affected the amenity of the fishery was weather conditions.

Historical weather data and predictive information for the key variables of swell, tide and, wind patterns showed that there was a general improvement in each during the summer and autumn months compared with the current season opening time (Attachment 1).

This information suggested that if the season opening days were moved to summer or autumn months there would be a general improvement in the ease of accessing abalone stocks and in overall safety for fishers.

With this in mind, the Working Group examined options to adjust the season so that it could take advantage of the better average weather conditions.

The Working Group considered the merits of shifting the fishing season block to January or February. However, this raised concerns that the increased access to abalone stocks due to the favourable weather conditions would result in significantly higher catches.

If this occurred, there would be a need to drastically shorten the season in subsequent years to

ensure catches were maintained within the 40 tonne allocation. This was not deemed acceptable to the Working Group and the option was not pursued.

Another option favoured by Working Group members was spreading the season out over the summer and autumn months. It was proposed that the current six-day season could be held on the first Sunday of each month from November through to April.

From a management perspective, a potential benefit of such a change could be that if opening days were a month apart the estimated catch from each opening may be known in advance of the next scheduled opening date. If this was possible then the opportunity to implement management change within a season (i.e. adding or cancelling a fishing day) may be available to ensure more effective adherence to the 40 tonne allocation. In addition, safety and amenity of the fishery overall may be improved as the season is likely to coincide with better weather conditions.

4.4.1 Decision rules

The Working Group concluded that if an extended season proposal was adopted, it would be essential that 'decision rules' were developed that set-out pre-determined management responses to catch levels achieved during a season (for example, if, due to exceptional weather conditions, after two or three fishing days it was clear that the 40 tonne catch allocation was going to be achieved in four or five fishing days then a management response to cancel one or both the remaining fishing days should be triggered).

The Working Group was of the view that pre-determined decision rules would be an essential safeguard to ensure that significant catch overruns did not occur and that the sustainability of the fishery was not threatened.

Although the Working Group favoured the extended season management option, a catch prediction model indicated that under such a regime and with average weather conditions it was likely that a total catch significantly exceeding the 40 tonne allocation would be achieved (Attachment 1). Noting this, a likely outcome of such a management change would be a reduction in the number of fishing days to ensure that the 40 tonne allocation was not exceeded.

4.4.2 Commercial fishing restrictions

The Working Group noted that should an extended season be introduced the current restrictions on commercial fishing in the waters of the Perth metropolitan area would need to be significantly extended. It was felt that this would be unreasonable impost on commercial fishing operators.

Following consideration of research advice that commercial fishing activity prior to or during the recreational fishing season had no impact on the recreational fishery, the Working Group recommend that the current closure be lifted should an extended season be introduced.

5.0 RECOMMENDATIONS

5.1 Management Options

The Working Group has concluded that the current general management regime for the Perth Metropolitan Roe's Abalone Fishery was capable of providing the recreational sector with the opportunity to catch its 40 tonne allocation and is flexible, through adjustment in the number of days fished so as to ensure that the fishery is kept within its allocation as an average of a five-year time line.

The Working Group has also concluded that the amenity of the fishery, primarily improvement in safety and access, could be achieved via changes to the date of the fishing season.

The Working Group has therefore proposed two options for future management, which are:

Option 1

Maintaining the current fishing season of one-hour fishing periods on consecutive Sundays commencing early November each year, and varying the number of fishing days to ensure that a 40 tonne average catch over a five5 year timeline was maintained

Option 2

Adjusting the season so that the one-hour fishing periods are scheduled to be held on first Sunday of the summer and autumn months. Similar to the first option, the number of fishing days would be varied to ensure that a 40 tonne average catch over a five-year timeline was maintained. It should be noted that given the higher catch predicted over the summer autumn months, this option is likely to result in fewer fishing days to ensure the 40 tonne allocation is adhered to.

If this option is adopted, 'decision rules' must be developed that set-out pre-determined management responses to catch levels achieved during a season.

5.2 Resource Reallocation

The Working Group recommends that, as a matter of priority, the IFAAC develop mechanisms to facilitate the reallocation of abalone from the commercial fishing sector to the recreational fishing sector.

6.0 ATTACHMENTS

6.1 Attachment 1 – Catch prediction model

Catch Predictions: Perth recreational abalone fishery

Dr Anthony Hart and Mr Jamin Brown
Mollusc Research Section, Department of Fisheries

Summary

This report provides an analysis of potential abalone catch arising from the Perth recreational abalone fishery under the scenario of a summer fishing season, namely that fishing occurs on the 1st Sunday of the month from November to April.

The catch prediction model comprised four predictor variables and was developed using daily catch data from 2001 to 2008. The predictor variables were tide, swell, eastings wind component, and number of abalone licenses. Average annual increase of abalone licenses for the period 1996 to 2008 was seven per cent.

Predictions for November 20009 to April 2010 were made using the average and standard deviation of the monthly environmental data, under the assumption of a seven per cent increase in number of abalone licenses (n = 9,800 licenses). Tide levels between 7am and 8am on the 1st day of each month were obtained from the software "Mr Tides 3.0".

Predicted daily catch for November 2009 to April 2010 varied from 7 to 8.5 tonnes. Total estimated catch for 2009/2010 was predicted to be 41 tonnes (± 4 t) for a five-day "average weather" season.

At an annual growth rate of seven per cent per year, license number will reach 12,000 by 2012. If this occurs, the estimated catch from a five-day season will be 50 tonnes, and the season will need to be shortened to four days. This may have a negative impact on the amenity.

GLM Model:

Catch = Ab License + Eastings + Tide + Swell

Variable	β*eta*	*P - values*
Swell	-0.42	<0.001
Licenses	0.40	<0.001
Tide	-0.34	<0.0003
Eastings	-0.25	0.007

Choice of predictor variables

Initially, eight variables and their combinations were tested for significance using a stepwise process. These were abalone licenses, umbrella licenses, northings, eastings, tide, swell, cloud cover, and air temperature.

Variables were eliminated in turn until the best model was found.

Predictor variables

|	**Swell**	**Lic.**	**Easts**	**Tide**
Nov:	0.50±0.20	9,800	-5.8±3.3	0.47
Dec:	0.45±0.17		-6.9±5.9	0.29
Jan:	0.43±0.18		-9.3±2.3	0.24
Feb:	0.38±0.14		-11.4±3.8	0.35
Mar:	0.44±0.14		-11.3±1.3	0.47
Apr:	0.44±0.17		-9.9±2.9	0.66

Model calibration:

The model is calibrated by comparing the observed values with the predicted values.
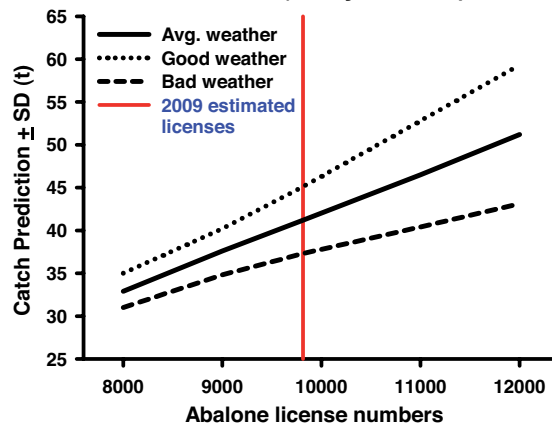
The statistical measure of this is the multiple regression coefficient (R^2). R^2 varies from 0 (no fit) to 1 (perfect fit)

The R^2 for this model is 0.73, which is a good fit (see figure).
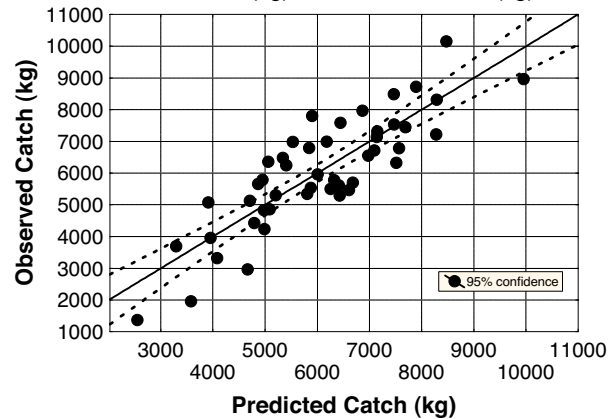

Monthly Roe's abalone catch predictions (2009/2010)
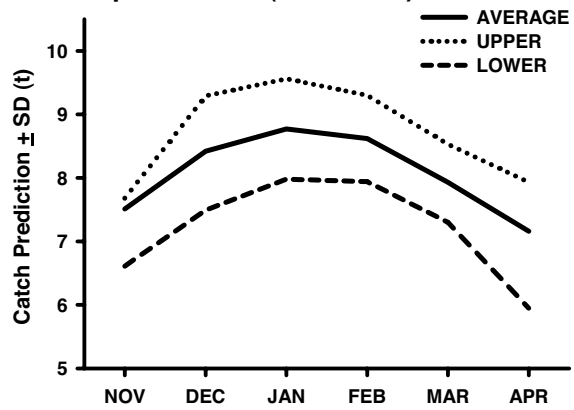
Total Roe's abalone catch vs license #'s (5 day season)

Predicted catch (kg) vs Observed catch (kg)

6.2   Attachment 2 – Questionnaire design and results

2nd January 2010

ABALONE FISHER
WELLINGTON ST
PERTH WA 6000

Dear ABALONE FISHER

PERTH RECREATIONAL ABALONE FISHERY
FISHERY UPDATE AND RESEARCH QUESTIONNAIRE

Thank you for your support of the abalone fishery and I trust you had a successful fishing season in 2009. Your purchase of a recreational abalone fishery license supports the Department in its sustainable management activities.

You may be aware of a new catch sharing arrangement for the Perth abalone fishery. The total allowable catch for all sectors is 76.5 tonnes. Of this **40 tonnes** has been allocated to the recreational sector, 36 t to the commercial sector and 0.5 t for customary fishing. Each sector must be managed to ensure that it does not exceed its allocation.

The recreational sector has been given the opportunity to decide how to manage its 40 t allocation. This is a difficult task given that, with favourable weather conditions, this sector can exceed its 40 t allocation, as happened in 2009 when the catch was 48 t. At the same time, license numbers are increasing at a rate of 5 to 7% annually.

Consequently, there is likelihood that tighter management controls may be required in the future in order to limit catch to the 40 t allocation. This can be achieved in different ways, e.g. changing the fishing season dates or length, changing the daily bag limit, or restricting the license numbers. Each method has its pluses and minuses.

Please assist the Department to make the best decision for you by completing the attached questionnaire and returning it in the reply paid envelope by 28th February 2010.

Kind Regards

Dr Anthony Hart
PRINCIPAL RESEARCH SCIENTIST – MOLLUSCS

Perth recreational abalone fishery questionnaire

Government of Western Australia
Department of Fisheries

Background

The Department is examining options to increase the "amenity" of the metropolitan recreational abalone fishery. That is, making the fishing experience as safe, rewarding, and enjoyable as possible. For example, if the season was held over summer and autumn, conditions would be better on average, however this may arise in a greater number of people fishing, or lower average size, and the season length (no. of days) or bag-limit might have to be reduced.

These are the types of options we'd like you to consider when answering the questionnaire

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Your individual fishing behaviour

What <u>matters most</u> to you in the abalone fishery? Order your answers in preference from 1 to 3.

☐ Catching your daily bag limit   ☐ Achieving the biggest size possible   ☐ Having fun with your family and friends

How many days did you fish last season? ☐

Change of season issues

A change of season from the current 6 day Nov-Dec season to an extended summer-autumn season (i.e. the first Sunday of each month from Nov - Apr), is being contemplated.

Do you think you might fish more days in summer? (**Y**es or **N**o) ☐

Managing a summer season

A summer season is predicted to achieve a higher daily catch because of the better weather conditions. Therefore, to keep total catch within the **40 tonne quota**, the number of days fishing might have to be reduced, or alternatively, the daily bag limit (20) would have to be reduced. Please indicate (tick) your preference below.

☐ Reduce number of fishing days   ☐ Reduce daily bag-limit

Please indicate (tick) your season preference below

☐ Maintain current season dates   ☐ Change to a summer season

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License numbers

Would you be in favour of restricting license numbers in the Perth abalone fishery as a method for maintaining a 40 t quota catch?
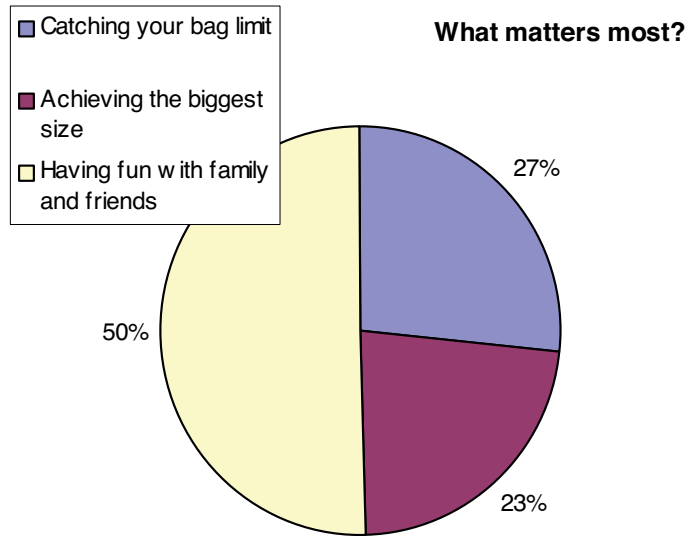
☐ Yes   ☐ No

Cost of restricted licenses

If yes, would you be willing to pay a higher price for a restricted license, or would a lottery system be your preference. Please indicate (tick) your preference.
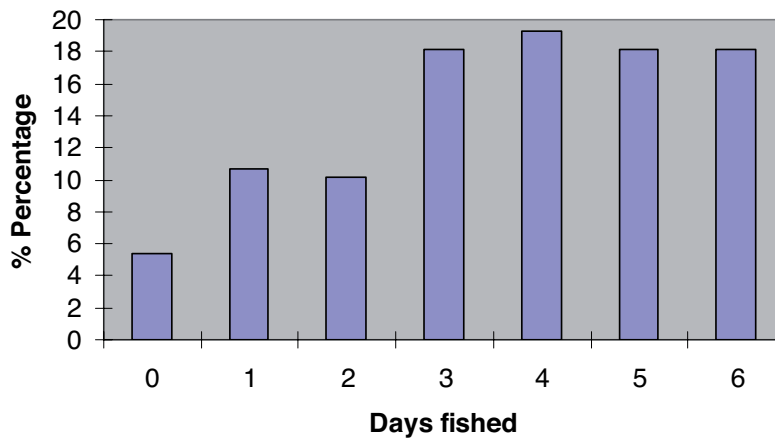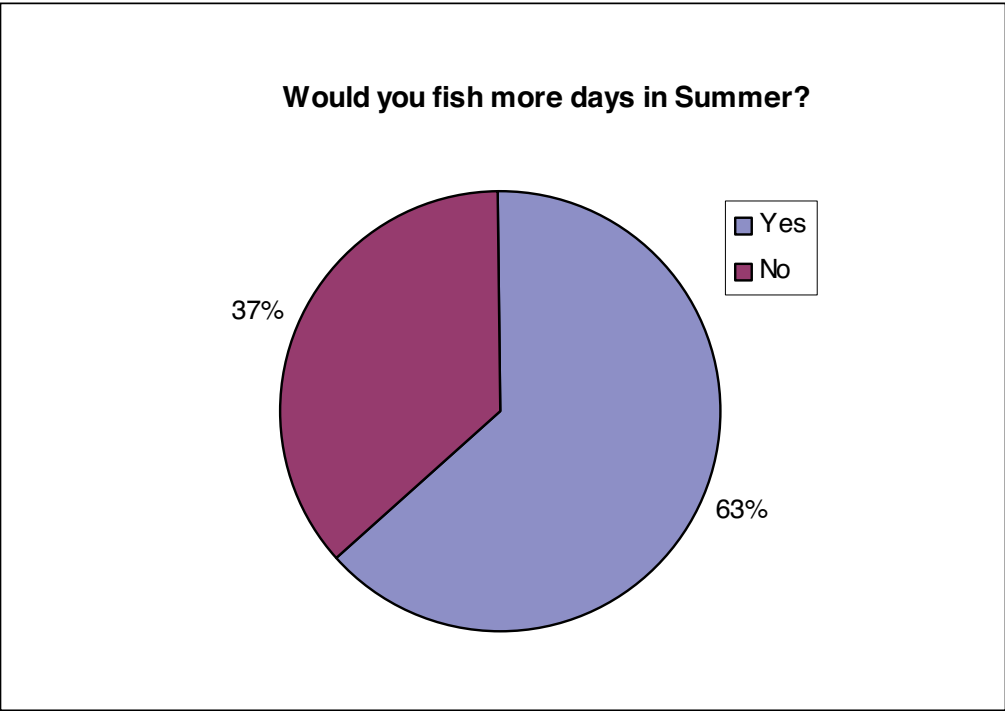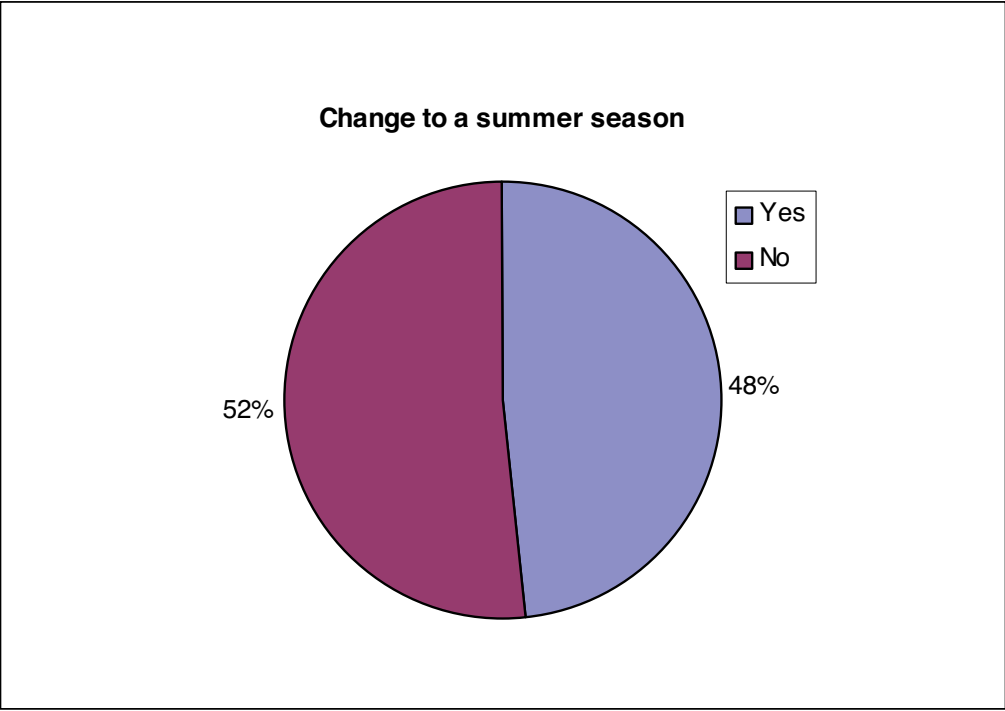
☐ Higher price

☐ Lottery system

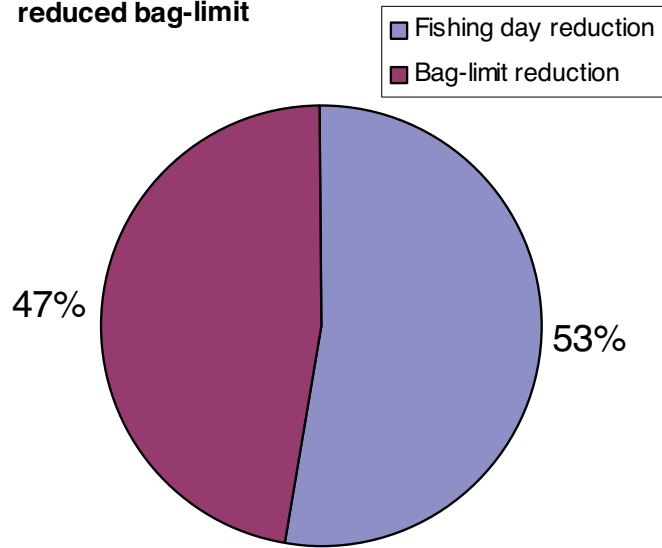## *What matter's most to you in the abalone fishery?*

What matters most?

Legend:
- Catching your bag limit
- Achieving the biggest size
- Having fun with family and friends

27%

23%

50%

Number of days fished by abalone fishers

% Percentage (y-axis: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20)

Days fished (x-axis: 0, 1, 2, 3, 4, 5, 6)

Change to a summer season

Would you fish more days in Summer?

Managing a summer season

Reduced number of fishing days or reduced bag-limit

Legend:
- Fishing day reduction
- Bag-limit reduction

47%

53%

Restriction of license numbers

Legend:
- Yes
- No

45%

55%

Higher Price or Lottery System
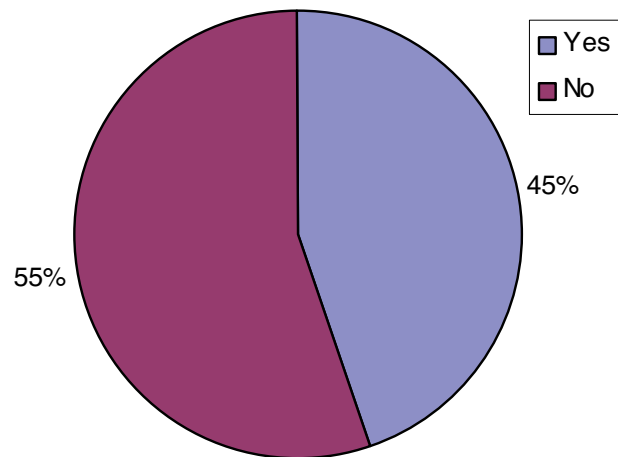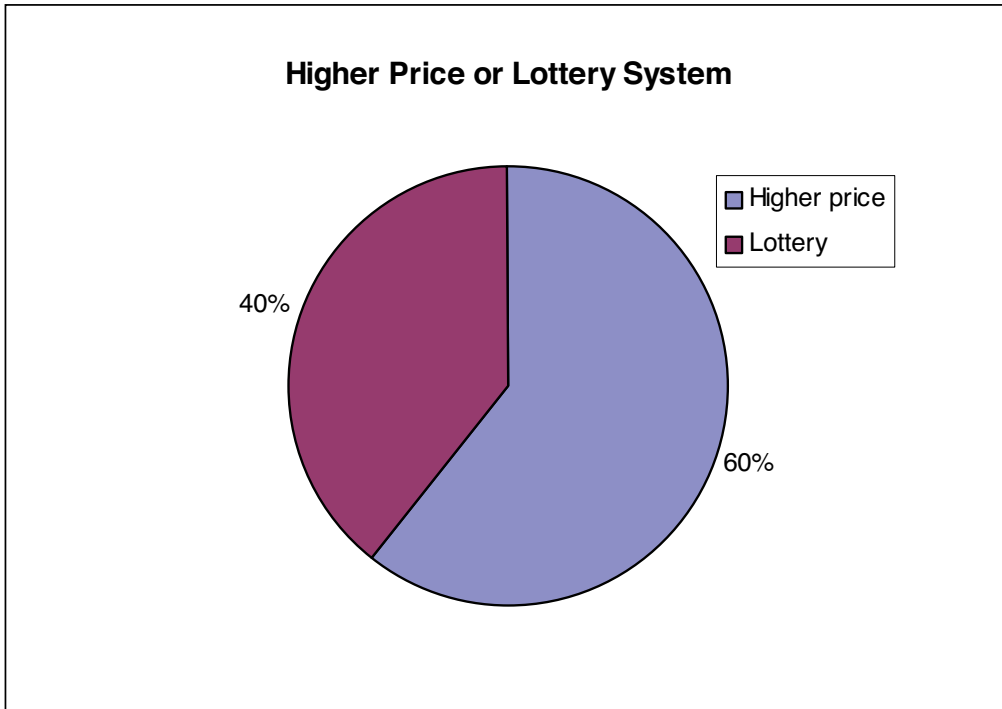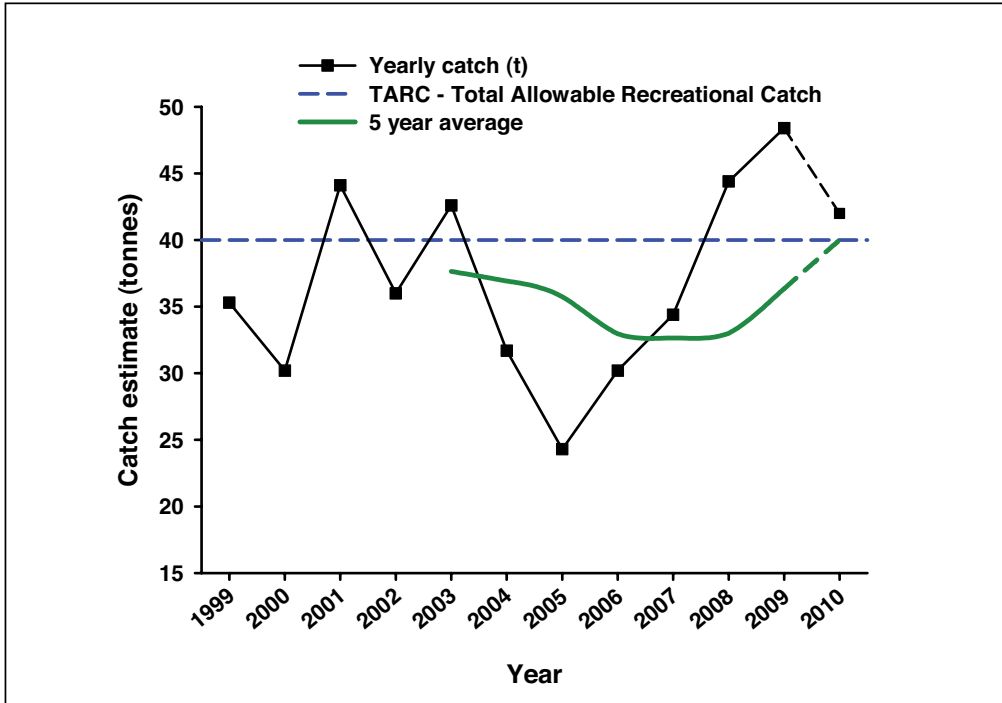

6.3   Attachment 3 – Perth recreational abalone catch (1999-2009)

Target catch 2010 and 5 Year Avg

6.4   Attachment 4 – History of Management

PERTH METROPOLITAN ROES ABALONE FISHERY
HISTORY OF MANAGEMENT

Year	Season	Permitted Fishing Days / Times	Estimated Catch (tonnes)	Approx Licence Number	
1988	mid October - mid December	Weekends and public holidays 6.00 am to 10.00 am			60mm size limit introduced
1989	As above	As above			
1990	Season closed after 1 month due to stock concerns				
1991	Season cancelled due to stock concerns				
1992	17 Oct – 20 Dec	Weekends and public holidays 7.00 am and 9.00 am	33	Licence introduced 4500 + 2800 umbrella	Bag limit of 20 introduced
1993	16 Oct - 5 Dec		51	5000 + 3,800 umbrella	
1994	as above – but season closed 2 weeks early	Weekends and public holidays 7.00 am and 9.00 am	48	6000 + 4500 umbrella	Season closed early as good weather resulted in high catches
1995	Early Nov to Early Dec	6 Sundays only 7 am to 8.30 am	17.5	2700 + 4500 umbrella	
1996	As above		16	3500 + 4400 umbrella	
1997			34	5200 + 5800 umbrella	
1998			29	6000 + 6100 umbrella	
1999			35.3	7100 + 9000 umbrella	
2000			30.2	7100 + 10100 umbrella	
2001			44.1	8500 + 11500 umbrella	
2002			36	8300 + 11800 umbrella	
2003			42.6	8100 + 12600 umbrella	
2004			31.7	7800 + 13300 umbrella	
2005			24.3	7200 + 13100 umbrella	
2006		Reduced to 1 hour 7-8 am (6 Sundays)	30.2	6800 + 14100 umbrella	
2007			34.4	7900 + 14600 umbrella	
2008			44	9200 + 15300 umbrella	
2009			48.6	10100 + 15700 umbrella	