

WEST COAST DEMERSAL SCALEFISH ALLOCATION REPORT

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

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

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1.0 COMMITTEE'S RECOMMENDATIONS

Recommendation 1

The initial allocation for the west coast demersal scalefish resource be made for the entire area covered by the West Coast Demersal Scalefish Interim Managed Fishery, 26°30' South to 115°30' East (north of Kalbarri to east of Augusta).

Recommendation 2

The total recorded commercial catch of all west coast demersal species and the estimated total recreational catch of all west coast demersal species should be used for allocating the west coast demersal scalefish resource.

Recommendation 3

2005/06 should be used as the reference year for the allocation of the west coast demersal scalefish resource.

Recommendation 4

No specific allocation to the Customary sector is required and Customary fishing can continue in accordance with existing Customary fishing arrangements.

Recommendation 5

The formal allocations in the fishery should be made to the recreational and commercial sectors.

Recommendation 6

The Department of Fisheries should manage the fishery so that the intra-sectoral catch shares remain approximately at their 2005/06 levels.

Recommendation 7

That for allocation purposes the recreational catch be considered to be 30 per cent greater than the revised 2005/06 recreational creel survey catch.

Recommendation 8

The estimate of the recreational catch for 2005/06 should be increased by 39 tonnes to take account of the Abrolhos Islands recreational catch.

Recommendation 9

The 2005/06 commercial sector's catch in the Metropolitan Area should not be taken into account when determining the sectoral allocations for the west coast demersal scalefish resource.

Recommendation 10

That the allocation of shares in the total suite of species in the west coast demersal scalefish resource should be 64 per cent to the commercial sector and 36 per cent to the recreational sector.

Recommendation 11

Within each sector's allocation, the proportions of the five indicator species be monitored and managed so that as far as practicable, they remain with their relative catch share of:

Western Australian dhufish – recreational sector 62 per cent, commercial sector 38 per cent

Pink snapper – recreational sector 21 per cent, commercial sector 79 per cent
Baldchin groper – recreational sector 65 per cent, commercial sector 35 per cent
Emperors – recreational sector 9 per cent, commercial sector 91 per cent
Bight redfish – recreational sector 14 per cent, commercial sector 86 per cent

Recommendation 12

A system of monitoring and managing the sectoral catches, based on the principles set out in the document “*Considerations for the Implementation of Western Rock Lobster Sectoral Allocations*” should be established to manage allocations in the West Coast Demersal Scalefish Fishery.

Recommendation 13

Monitoring of boat fishing for silver trevally, King George whiting and other nearshore fish stocks should take place to ensure transfer of effort does not result in overfishing nearshore species.

Recommendation 14

That the initial management changes to enable the sectors to meet their allocation be taken at the same time as any changes to the sustainability management arrangements are made by the Minister for Fisheries as a result of the 2012 review of management arrangements.

Recommendation 15

That a moving five-year average be used when determining if sectoral catches have remained within their allocation.

Recommendation 16

A reallocation mechanism should be implemented for the west coast demersal scalefish resource as soon as practicable.

Recommendation 17

The Department of Fisheries should continue to improve its collection methodology for recreational fishing data and improve its community education strategies on the status and management of the west coast demersal scalefish resource.

2.0 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, so that they can be managed on a sustainable basis.

The Minister for Fisheries established the Integrated Fisheries Management Allocation Advisory Committee (the Allocation Committee), 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 Allocation Committee has prepared this report, which documents the committee’s position on allocations for the west coast demersal scalefish resource, along with the reasons for its conclusions after widespread community consultation. This report follows the Allocation Committee’s preliminary investigation of the west coast demersal scalefish resource sharing issues, consultation with stakeholders, public consultation meetings and the receipt of 41 written submissions.

The Allocation Committee considered all submissions, comments from public meetings, comments from key stakeholder groups and input from experts in socio-economic issues before finalising its advice to the Minister for Fisheries on allocations for the west coast demersal scalefish resource.

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

3.0 BACKGROUND

The Integrated Fisheries Management (IFM) policy was adopted in 2004. In summary, IFM involves:

- setting the total sustainable harvest level of each resource that allows for an ecologically sustainable level of fishing;
- allocation of explicit catch shares for use by commercial, recreational and Customary fisheries;
- 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 Allocation Committee

The members of the Allocation Committee who prepared this report are Mr Ian Longson (Chair), Mr Norman Halse, Ms Elizabeth Woods and Mr Steve Lodge. In addition, Dr Lindsay Joll, General Manager Aquatic Management, Department of Fisheries is a non-voting member of the Committee.

Mr Ian Longson was appointed Chair of the Allocation Committee on 1 December 2009. Mr Longson has had a distinguished career in both the private and public sector. He is currently

a business development consultant. Prior to June 2009 he was the Director General of the Western Australian Department of Agriculture and Food for five years. Prior to that he was on the Executive team and held the position of Deputy Director General at the Department of Agriculture since 1998. He has previously worked as a senior consultant and manager of the Perth Office of ACIL Consulting (now ACIL Tasman), the Dairy Industry Authority of Western Australia, the Asian Development Bank and early in his career as an extension adviser with the Western Australian Department of Agriculture in the South West.

Mr Norman Halse is a keen recreational fisher, conservationist and researcher. Mr Halse worked for WA's Department of Agriculture for 40 years, his career culminating as that department's Director General. His conservation interests included serving as past President of the Conservation Council of WA, as Chairman of the National Parks and Conservation Authority and as a member of the Environmental Protection Authority. Mr Halse has a strong interest in recreational fishing, which is demonstrated by his service as a past Chair, and board member, of peak body Recfishwest.

Ms Elizabeth (Libby) Woods is Deputy Chief Magistrate. Ms Woods chaired the Wetline Review Commercial Access Panel, which recommended the commercial access arrangements for the West Coast Demersal Scalefish Fishery, and was Chair of the Allocation Committee following the retirement of Mr McKiernan until the appointment of a new Chair.

Mr Steve Lodge owns the Geraldton Fish Markets and the Shark Bay Fish Factory. He also has interests in the rock lobster fishery and other processing establishments and owns Goldenwest Ice. Mr Lodge was a member of the West Coast and Gascoyne Management Planning panel that recommended management arrangements for the West Coast Demersal Scalefish Fishery and was a member of the Purse Seine Management Advisory Committee.

3.1.1 Disclosure of interest

Mr Lodge has an interest in the processing sector of this fishery. No other conflict of interest was declared by any other member of the Allocation Committee that was relevant to this allocation report.

3.1.2 Guiding principles

Following a review of the 2004 Integrated Fisheries Management (IFM) Policy during 2009, the Minister, the Hon. Norman Moore, MLC, provided the Allocation Committee with the following *Guiding Principles and Terms of Reference*.

Government has adopted the principles, outlined below, as the basis for IFM (Appendix 1). The Allocation Committee should ensure that any advice to the Minister for Fisheries is consistent with these principles:

- i) Fish resources are a common property resource managed by the Government for the benefit of present and future generations.
- ii) Sustainability is paramount and ecological requirements must be considered in the determination of appropriate harvest levels.
- iii) Decisions must be made on best available information and where this information is uncertain, unreliable, inadequate or not available, a precautionary approach adopted to manage risk to fish stocks, marine communities and the environment. The absence of, or any uncertainty in, information should not be used as a reason for delaying or failing to make a decision.

- iv) A harvest level, that as far as possible includes the total mortality consequent upon the fishing activity of each sector, should be set for each fishery¹ and the allocation designated for use by the commercial sector, the recreational sector, the Customary sector, and the aquaculture sector should be made explicit.
- v) The total harvest across all user groups should not exceed the allowable harvest level. If this occurs, steps consistent with the impacts of each sector should be taken to reduce the take to a level that does not compromise future sustainability.
- vi) Appropriate management structures and processes should be introduced to manage each sector within their prescribed allocation. These should incorporate pre-determined actions that are invoked if that group's catch increases above its allocation.
- vii) 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.
- viii) It should remain open to government policy to determine the priority use of fish resources where there is a clear case to do so.
- ix) Management arrangements must provide sectors 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.

3.1.3 The Allocation Committee's Terms of Reference

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

- i. allocations between sectors, now and into the future;
- 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 sector as referred by the Minister for Fisheries;
- iv. more specific principles to provide further guidance around allocation and reallocation 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, a former Minister for Fisheries, the Hon. Kim Chance, MLC, requested the Allocation Committee to provide advice and recommendations on allocations for west coast rock lobster, abalone (with emphasis on the Perth metropolitan region), and west coast demersal scalefish (with emphasis on dhufish, baldchin groper and pink snapper).

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.

The IFM Government Policy released in October 2004 and amended in December 2009 (**Appendix 1**) is the principal source of guidance for the Allocation Committee in developing its recommendations on sectoral allocations. The Minister for Fisheries has also provided the Allocation Committee with additional advice on 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 12, Appendix 1), the Minister determines the process and timeframes for resolving allocation issues in each fishery based on the advice of the Chief Executive Officer of the Department of Fisheries and the Allocation Committee. The Minister has approved a four-stage IFM allocation process developed by the Allocation Committee (**Appendix 2**). The four stages involve:

A. Determining the need for a formal allocation process in a fishery.

In the case of the west coast demersal scalefish resource, this first stage of the process was unnecessary, as the former Minister for Fisheries, the Hon. Jon Ford, MLC, had already requested that the Allocation Committee provide advice and recommendations on allocations;

B. Development of an Integrated Fisheries Management Resource Report by the Department of Fisheries;

C. The Allocation Committee process is Steps 1, 2 and 3 of Stage C, which includes;

Step 1. Investigation of the allocation issue;

Step 2. The Allocation Committee settling a draft allocation report and releasing it for public comment. This second stage of the process for west coast demersal scalefish resource was completed in July 2010, after the Department of Fisheries provided the IFM Resource Report to Allocation Committee;

Step 3. Following consultation, the Allocation Committee preparing a final report recommending allocations to the Minister for Fisheries; and

Step 4. The Minister determining allocations; and

D. Determining mechanisms for future allocations between sectors.

This document represents Step 3 of Stage C.

The Allocation Committee wishes to thank the many people who attended public meetings and particularly those who provided written submissions on its draft Allocation Report. A list of those organisations, associations and individuals who provided written submissions is in **Appendix 3**.

3.2 Ministerial Advice

The Minister for Fisheries, the Hon. Norman Moore, MLC, has advised the Allocation Committee of the continuation of the policy that the IFM initiative was designed to determine allocation between commercial, recreational (including charter) and Customary fishing sectors that are extractive users, and that he was not seeking a recommendation from Allocation Committee on allocations to non-extractive users of the resource (**Appendix 4**).

3.3 Optimising Benefit to the Community

Guiding policy vii (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 West Coast Demersal Scalefish Fishery was one of three fisheries used as case studies in a research project entitled “*A Socio-economic Valuation of Resource Allocation Options between Commercial and Recreational Use*” (McLeod and Nicholls, 2004).

Optimising benefits to the community was a major issue raised with Allocation Committee during public consultation meetings and was highlighted in around 75 per cent of the written submissions. As a result of the importance placed on these issues, the Allocation Committee was briefed by two experts on socio-economic matters, Dr Jacki Schirmer of the Australian National University and Dr Daryl McPhee (a board member of the Fisheries Research and Development Corporation) of Bond University, to underpin further consideration by the Allocation Committee as to how these issues should best be addressed and to ensure there were no other relevant and more contemporary socio-economic value studies that the Allocation Committee should take into account.

3.4 Additional Guiding Principles Adopted by the Allocation Committee

The Allocation Committee has also adopted five other allocation principles, in addition to those referred to previously (Section 3.1.2) as determined by the Minister. These are listed below.

1. The approach should be pragmatic and incremental;
2. There was a need to make explicit allocations (as distinct from making a general statement of principle about how allocations should be made);
3. Allocations should not have the effect of merely deferring a decision indefinitely;
4. That until there are re-allocation mechanisms, the Allocation Committee should be cautious in making recommendations that would have the effect of immediately and significantly impacting on a sector; and
5. Re-allocation mechanisms should be developed within a specified timeframe, which should be set at not more than five years for west coast demersal scalefish.

3.5 Description of the Fishery

The fishery is a multi-species fishery which may catch the full suite of over 200 west coast demersal scalefish species, which is at **Appendix 5**. It is located along the southern part of the west coast of Western Australia from 26°30' south (north of Kalbarri) to 115°30' east (east of Augusta) (Figure 1).

The principal method of fishing is line fishing, with additional catch by other methods, such as demersal gillnet and demersal longline in the commercial sector and diving by the recreational sector. The West Coast Demersal Scalefish (Interim) Managed Fishery and the recreational sector use lines to catch fish, while the demersal gillnet and demersal longline fisheries use either gillnets or longlines to target sharks, but also catch a bycatch of demersal scalefish.

Barotrauma is a potential problem for all demersal, or seafloor-dwelling species when taken from deep water. Barotrauma is the effects of gas expansion in the body caused by rapid changes in water pressure and is like “the bends” in divers. Most important demersal scalefish species are susceptible to barotrauma, although release weights can assist to reduce that mortality. High

grading (retaining the best fish of a particular species and discarding other, possibly dead, fish of that species) and selectively fishing for the most desirable species are undesirable practices.

The line fishing and gillnetting methods used to target these demersal species are unable to discriminate between species. Therefore, the fishery is managed taking a multi-species approach, rather than on an individual species basis, as individual species cannot be managed in isolation from one another.

Fisheries Research Report No. 163² provides information on catch and effort data as well as age frequency data and fishing mortality estimates.

Because of the increasing concerns regarding the status of dhufish stocks in the late 1990s and the early 2000s, a number of the Fisheries Research and Development Corporation (FRDC) and other funded projects were undertaken to gather more data on this and other west coast demersal species. In addition, surveys of recreational fishing on these stocks were repeated using Department of Fisheries funds (these projects are discussed further in Sections 5.2).

Despite the substantial increase in information generated over the past five years, the limited availability of useful historical data meant it was not possible to develop stock assessment models that could reliably estimate biomass. Therefore the current assessment for the West Coast Demersal Scalefish Fishery has been based on a ‘weight-of-evidence’ approach.

The ‘weight-of-evidence’ approach led the Department of Fisheries to conclude that the total level of fishing for west coast demersal scalefish species has been unacceptably high and reductions in catch of at least 50 per cent of 2005/06 levels are required. The method and conclusion was endorsed by Malcolm Haddon and by Michael O’Neill, in their separate scientific reviews of Research Report No. 163.

3.5.1 Recreational sector

Recreational fishing from boats for demersal scalefish has always been a popular Western Australian past-time. Anglers typically use rods and reels or handlines, although a small proportion is taken by divers. Charter fishing using these same methods is also popular.

Limited entry was introduced for licensed fishing tour (charter) operators in 2001 and the West Coast Bioregion has the highest number of charter operators in the State. Log books became compulsory in 2001 and recent analysis of log book data show that there has been an overall contraction in total charter effort and operational area of charter activity in the west coast since then. However, charter effort has been consistently high off Perth, Kalbarri and at the Abrolhos Islands. In 2005/06 the charter sector took about 10 per cent of the total recorded recreational catch of dhufish and about 30 per cent of the recreational pink snapper catch.

3.5.2 Commercial sector

The major commercial demersal scalefish fishery on the west coast is the West Coast Demersal Scalefish (Interim) Managed Fishery (WCDSFIMF), which accounts for approximately 90 per cent of the commercial catch. The WCDSFIMF extends from north of Kalbarri (26° 30’ south latitude – around Steep Point) to Black Point (115° 30’ east longitude), east of Augusta (Figure 1) and seaward from the coastline to the 200 nautical mile boundary of the Australian Fishing Zone. It incorporates the habitats of the major demersal species targeted in the fishery.

² Wise, B, St John, J, Lenanton, R, (2007) “*Spatial scales of exploitation among populations of demersal scalefish: implications for management*”, Fisheries Research Report No. 163

The West Coast Demersal Scalefish Interim Managed Fishery Plan describes the zones of the fishery as “Areas”. To avoid confusion, the Allocation Committee has adopted this terminology in the document. Therefore when the word Area is used to describe a section of water in the West Coast Demersal Scalefish Interim Managed fishery, it is equivalent to a zone.

The fishery comprises five management areas, four “Inshore” Areas (out to 250 metres) and an Offshore Area (250 metres depth to 200 nautical miles offshore), with the Abrolhos Islands as a sub-area of the Mid-west Inshore Area. Each area has a suite of demersal fish that are typically caught within its waters. These are:

Area³	Typical catch
Kalbarri Inshore Area	Dhufish, pink snapper, sweetlip emperor
Mid-west Inshore Area	Dhufish, pink snapper, sweetlip emperor
Abrolhos (sub-Area)	Baldchin groper, pink snapper
Metropolitan Inshore Area	Dhufish, pink snapper
South-west Inshore Area	Dhufish, pink snapper, Bight redfish
Offshore Area	Hapuku, ruby snapper, blue eye trevalla and grey banded cod.

There are three other commercial fisheries also landing these species in the West Coast Bioregion, which collectively account for approximately 10 per cent of the commercial catch. These are:

- the West Coast Demersal Gillnet and Demersal Longline (Interim) Managed Fishery (WCDGDLF);
- the Joint Authority Southern Demersal Gillnet and Demersal Longline Managed Fishery (JASDGDLF); and
- the Commonwealth-managed Western Deepwater Trawl Fishery.

³ Kalbarri area (26°30’S to 28°S), Mid-west Area (28°S to 31°S), Metropolitan Area (31°S to 33°S), South West Area (33°S to 115°30’ east). All inshore areas extend between the coastline and the 250 metre-depth contour.

The Offshore Area extends south from 26°30’ S to 115°30’ east between the 250 metre-depth contour and the 200 nautical mile boundary of the Australian Fishing Zone.

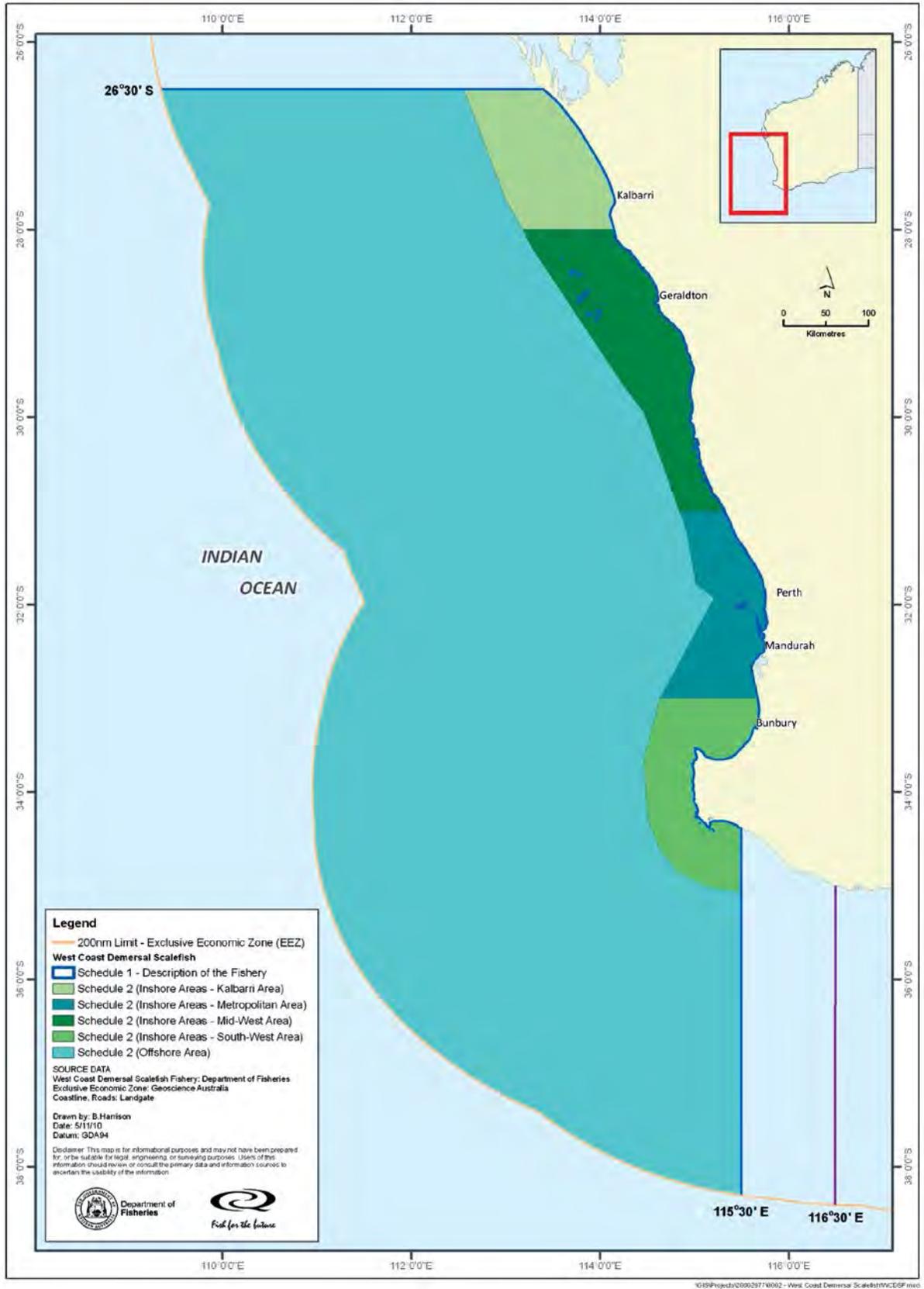


Figure 1. West Coast Demersal Scalefish Fishery.

There are eight other method-based commercial fisheries that are excepted from the prohibitions on taking demersal scalefish and take negligible amounts of demersal scalefish. These are:

- the South West Trawl Managed Fishery
- the Cockburn Sound Line & Pot Managed Fishery;
- the Cockburn Sound Fish Net Fishery;
- the Marine Aquarium Fish Managed Fishery;
- the South West Salmon Fishery
- the West Coast Beach Bait Fish Net Managed Fishery;
- the West Coast Purse Seine Fishery; and
- the Western Rock Lobster Fishery, which has an exemption to retain demersal scalefish, caught in rock lobster pots as a bycatch for personal consumption only.

3.5.3 Customary sector

The National Native Title Tribunal's Research Report of April 2005⁴ indicated that historically there was shore-based fishing for "schnapper" (sic) in the Swan River, whereby schools of "schnapper" were driven into the mouth of the Swan River and speared.

The Allocation Committee understands from a submission it received to its draft allocation report that some Customary shore fishing for demersal species continues to occur, but this report and consequent recommended allocations do not include shore fishing for Customary or other purposes.

4.0 ALLOCATION ISSUES

Prior to providing its recommended allocation, the Allocation Committee considered that it needed to first consider the following issues:

1. the multi-zonal aspects of the fishery;
2. an appropriate suite of species;
3. appropriate reference year;
4. Customary sector catch;
5. the multi-user nature of the fishery; and
6. optimisation of community benefits.

⁴ Wright, G, (2005) "*An overview of the evidence for Indigenous fisheries on the west and south coasts of Western Australia*", Research Report, National Native Title Tribunal

4.1 The Multi-zonal Aspects of the Fishery

The commercial fisheries that catch the west coast demersal scalefish resource are multi-zoned fisheries (see Figure 1). As explained earlier, no commercial fishing is permitted in the Metropolitan Area of the fishery.

As the majority of the commercial take of demersal scalefish is caught in the west coast is from the West Coast Demersal Scalefish (Interim) Managed Fishery (WCDSFIMF), and the boundaries of that fishery align with what is considered to be the West Coast Bioregion, the Allocation Committee recommends that the area of the West Coast Demersal Scalefish Fishery to be included in the resource allocation should be the area covered by the WCDSFIMF.

The Allocation Committee noted that there were three areas within the WCDSFIMF where one or the other sector had either no or very small catches. These were the Metropolitan Area (no commercial fishing is permitted), the Offshore Area (in waters deeper than 250 metres), where there is very little recreational catch, and the Kalbarri Area, where most of the catch is taken by the commercial sector.

The Allocation Committee, in discussion with the Department of Fisheries and key stakeholder groups, considered whether any of the area subdivisions applying to the commercial fisheries should also apply to the recreational fishery so that there would be separate allocations for different Areas. Management of the recreational fishery is difficult because there are large numbers of recreational fishers and they are highly mobile. Catch information for any particular Area is, therefore, unavoidably imprecise. The Allocation Committee decided, for practical reasons and ease of management, the allocations to sectors should initially apply across the whole fishery.

If at a later stage more precise recreational catch data becomes available, or when reallocations take place, differential area management may be required. Separate allocations for commercial and recreational sectors by Area could be introduced, or reallocation transactions could be restricted to specific Areas.

Recommendation 1: The initial allocation for the west coast demersal scalefish resource be made for the entire area covered by the West Coast Demersal Scalefish Interim Managed Fishery, 26°30' South to 115°30' East (north of Kalbarri to east of Augusta).

4.2 An Appropriate Suite of Species

The Allocation Committee considered appropriate alternative suites of species to use in allocating the shares of the west coast demersal scalefish resource between the commercial and recreational sector. These were:

- (i) **The predominant 15 species** of each sector, as shown in **Appendix 6**, account for 93 per cent of the commercial catch and more than 98 per cent (by weight) of the recreational sector's. The Department of Fisheries has length/weight relationships for the recreational sector's catch for all of these species.
- (ii) **The suite of species to which the recreational fishing closure is applied (48 species)**, which, according to Fisheries Management Paper No. 247, accounts for 99.3 per cent, by weight, of the commercial catch and 93.2 per cent, by number, of the recreational catch.
- (iii) **The top species caught by both sectors.** These are:
 - dhufish, that account for 50 per cent of the recreational sector's catch and 18 per cent of the commercial sector's catch;

- pink snapper, that account for 15 per cent of the recreational sector's catches and 30 per cent of the commercial sector's catches;
- baldchin groper, that account for 13 per cent of the recreational sector's catch and four per cent of the commercial sector's catches;
- bight redfish, that accounts for two per cent of the recreational sector's catch and eight per cent of the commercial sector's catches; and
- emperors, that account for four per cent of the recreational sector's catch and 24 per cent of the commercial sector's catch.

(iv) **The total list of west coast demersal scalefish species**, which comprises over 200 species of fish, is shown in **Appendix 5**. The total catch for the commercial sector is known because it is a statutory obligation for the commercial sector to provide accurate fishing returns. The recreational creel survey records the recreational catch in numbers, but weight data for the recreational sector is only available for the predominant 15 species. However, the weight data for species without length/weight relationships can be calculated using estimated weight per fish. This information and sampling techniques can be used to provide estimates of the total recreational catch of all demersal species (see Figure 3).

In its draft report, the Allocation Committee favoured using the recreational fishing closure list as the appropriate suite of species for determining the allocation between the commercial and recreational sectors. However, following further consideration and consultation with the Department of Fisheries, it was decided to use the total suite of west coast demersal scalefish. The practical difficulty of estimating and monitoring the whole suite of species for the recreational sector was considered and an appropriate way of dealing with this issue is discussed in Section 5.5.

Recommendation 2: The total recorded commercial catch of all west coast demersal species and the estimated total recreational catch of all west coast demersal species should be used for allocating the west coast demersal scalefish resource.

4.3 Appropriate Reference Year

Recreational creel surveys on the west coast were undertaken in 1996/97, 2005/06, 2008/09 and 2009/10. It is a statutory obligation for commercial fishers to provide monthly catch information.

When the Allocation Committee started its west coast demersal scalefish investigations and issued its draft Allocation Report, the 2005/06 creel survey was the most recent creel survey data available.

The catch information for the West Coast Demersal Scalefish Fishery in 2005/06 was the basis on which the Department of Fisheries Research Division determined that at least a 50 per cent reduction in catch was required for sustainable management of the fishery.

2005/06 was also the year before substantial management changes commenced for both sectors. While recreational bag limits for key species were halved in the early 2000s, recreational catches continued to increase up until 2005/06. Management changes for both the commercial and recreational sectors post-2005/06 made it difficult to separate out the impact of these management changes on the proportional catch between the sectors.

The Allocation Committee therefore used 2005/06 as the reference year, this being the most recent year to compare the relative catch prior to differential management changes being put in place for the commercial and recreational sectors and it being the baseline year against which the 50 per cent reductions in demersal scalefish catches for all sectors were referenced.

Recommendation 3: 2005/06 should be used as the reference year for the allocation of the west coast demersal scalefish resource.

4.4 Customary Sector Catch

As discussed in Section 3.5.3, the Allocation Committee concluded there was no need for an allocation for a share of the resource to the Customary sector, as the west coast demersal resource allocation does not include shore-based fishing for Customary or other purposes.

The Customary practice can therefore continue in accordance with existing Customary fishing arrangements.

Recommendation 4: No specific allocation to the Customary sector is required and Customary fishing can continue in accordance with existing Customary fishing arrangements.

4.5 The Multi-user Nature of the Fishery

This fishery is a multi-user fishery with inter and intra-sectoral users. For instance there are three elements of the recreational sector that target the resource, the recreational boating fishers, divers and the charter sector. The Allocation Committee considered whether to formally allocate the resource within sectors. But this would lead to a multi-layered allocation process, so the Allocation Committee concluded that it would be simpler to make a broad allocation between the sectors.

Appendix 7 lists the catches of west coast demersal scalefish by charter boats and private boats within the recreational sector and by the ‘wetline’ fishery (now the West Coast Demersal Scalefish Interim Managed Fishery), the two demersal gillnet and demersal longline fisheries within the commercial fishery, the Cockburn Sound Line and Pot Fishery and the Commonwealth Trawl Fishery.

The State has no jurisdiction over the Commonwealth-managed Western Deepwater Trawl Fishery. The Allocation Committee noted that the catch of this trawl fishery is extremely variable from year to year and generally at a low level. The Commonwealth trawl fishery principally operates in deeper water than most fishing for west coast demersal scalefish, but there is some overlap. The Allocation Committee understands that when setting an allowable harvest level for the resource, the Chief Executive Officer of the Department of Fisheries takes into account the Commonwealth-managed trawl fishery’s catch. As the Western Australian Government does not have jurisdiction over this Commonwealth-managed fishery it would not be appropriate to include it in an allocation for State-managed fisheries. The Allocation Committee suggests that the Department of Fisheries should engage with the Commonwealth to ensure that the take by the Western Deepwater Trawl Fishery does not impact harmfully on the sustainability of the West Coast Demersal Scalefish Fishery.

Recommendation 5: The formal allocations in the fishery should be made to the recreational and commercial sectors.

Recommendation 6: The Department of Fisheries should manage the fishery so that the intra-sectoral catch shares remain approximately at their 2005/06 levels.

4.6 Optimisation of Community Benefits

During the consultation period on the draft Allocation Report there were a number of comments made to the Allocation Committee about optimising community benefits and the need to take social and economic factors into account when weighing up how to optimize community benefits.

The only formal socio-economic assessment of this fishery was the McLeod and Nicholls' study "*A Socio-economic Valuation of Resource Allocation Options between Commercial and Recreational Use*" 2003, based on data from 2001-02, which pointed to a small reallocation of catch from the recreational sector to the commercial sector in order to maximise the net economic benefits from the use of the resource. However, the authors cautioned against using the results at the present time, because some of the underlying assumptions that were present at the time of writing their report are not current.

While noting that there was no recent objective information for this particular fishery and substantial social and economic benefits of the recreational sector were difficult to measure, the Allocation Committee believed it was important to take these issues into account.

In response to the 18 submissions received on the draft Allocation Report which mentioned this issue, and the consultation meetings where socio-economic issues were raised, the Allocation Committee sought further advice from Dr Jacki Schirmer of the Australian National University and Dr Daryl McPhee of Bond University and a member of the Fisheries Research and Development Corporation Board. Dr Schirmer specializes in social issues with respect to natural resource management, and Dr McPhee is a specialist in fisheries economic issues.

Many of the submissions on the draft Allocation Report by recreational fishers stressed the importance of recreational fishing to associated tourism and service industries (such as accommodation, fuel and tackle businesses) in local and regional economies. Some also stated that recreational fishing provided a higher return to the community than commercial fishing, with some suggesting that there would be an increase in tourism if commercial fishing was removed.

The lifestyle aspect of recreational fishing was also highlighted in submissions. One submission stated that although the writer had never caught a dhufish it was the lure of catching one that kept him spending money on his boat, fuel, tackle etc. From the consultation meetings, the Allocation Committee received a good understanding that lifestyle factors were a very important benefit perceived by recreational fishers.

Some submissions, including Recfishwest's, suggested that the large number of participants in the recreational fishery compared to the much smaller number of commercial fishing boats provided a reason to increase the allocation to the recreational sector. Recfishwest also stressed there was a need to allow for population growth and that capping the recreational sector at current historic levels would lead to inter-sectoral conflict.

The Allocation Committee noted that recreational boat-based line fishing effort has increased from 269,600 days in 1996/97 to 311,400 days in 2005/06⁵.

Boat registration information from the Department for Planning and Infrastructure shows a steady increase in the number of new boats registered. In 2002, 69,166 boats were registered in WA. By 2006 this number had grown to 81,417 with over 50 per cent of these based in the Metropolitan Area. Both the growth in boat numbers and the additional launching facilities have

⁵ Department of Fisheries (2007), "*Managing the Recreational Catch of Demersal Scalefish in the West Coast, Future Management Scenarios for Community Consideration*", Fisheries Management Paper No. 225

the potential to place further pressure on fish stocks. The Metropolitan Area has the greatest number of registered boats. This indicates a higher level of fishing pressure is being exerted on stocks within this area.

In March 2010, the Department of Fisheries introduced a new Recreational Fishing from Boat Licence (RFBL). The 115,000 RFBL Licences that have been issued by the Department of Fisheries since March 2010 are concentrated in the West Coast Bioregion. This can be seen in Table 1, which shows particularly high concentrations in the Metropolitan and South West Areas, based on the postal address of licence holders.

Table 1. Summary of major regions holding a recreational fishing from boat licence in the West Coast Bioregion as at March 2011.

Area	Approximate Number of Recreational Fishing from Boat Licences by Area
Kalbarri	1,200
Mid-west	7,000
Metropolitan	70,000
South West	16,000
Total West Coast Bioregion	94,200
Rest of State	20,800
Statewide Total	115,000

On the other hand, submissions by WAFIC and commercial operators noted that there was a shortage of west coast demersal scalefish for local consumers who do not go recreational fishing.

The Allocation Committee understands from the public consultation meetings that the vast majority of west coast demersal scalefish caught by commercial operators is sold locally to seafood outlets and restaurants. None of the product is exported and a small amount is occasionally sold to eastern states' markets. WAFIC's submission also quoted a study which indicated that 87 per cent of Western Australians bought, rather than caught, their seafood.

WAFIC's submission noted that a well-known retailer indicated they needed another 25 per cent of demersal scalefish to ensure they could supply affordable seafood for their customers. The west coast demersal resource is considered a premium product because the fish is caught within close proximity to the Perth market, unlike fish from the North West. Unlike northern fisheries, less time is spent at sea, resulting in a fresher product. The fish are line-caught, which is considered higher quality than trap or trawl-caught fish and the licence holders have a good reputation of handling their fish well. Fish from the demersal gillnet and demersal longline fisheries were also of importance to retailers in terms of continuity of supply, quality and proximity to market.

The Allocation Committee recognises that Western Australian dhufish, pink snapper and baldchin groper are very important to the recreational sector. The commercial sector targets a wider variety of species. It will be important to ensure both sectors maintain their existing proportions of the different species in their catch.

The Allocation Committee also recognises that not all RFBL holders fish for west coast demersal scalefish, and that commercial operators also take a variety of non-demersal scalefish species.

The Allocation Committee recognises that matters of intrasectoral use of fish resources have social and economic implications. For example, improving the balance between those recreational fishers who never or rarely catch a demersal fish and those that catch significant quantities could improve the social benefit for a large number of recreational fishers. Likewise,

within the commercial sector, achieving the optimal economic outcomes from available shark and demersal scalefish catch will require that the shares of the commercial demersal catch between the handline and demersal gillnet and longline fishery be considered. The Allocation Committee considered that optimising intrasectoral social and economic outcomes may need further consideration in fisheries management arrangements.

5.0 CATCH INFORMATION

5.1 Sources of Catch Information

The sources of catch information on the west coast demersal scalefish resource used by the Allocation Committee were:

- Fisheries Management Paper No. 247⁶, which is the resource report prepared by the Department of Fisheries and is required under the IFM policy. This report provides information on the west coast demersal scalefish resource and associated fishing activity and gives the sustainable harvest level for the fishery.
- Fisheries Research Report No. 163⁷.
- A boat-based recreational fishing creel survey that incorporated the catches of the charter sector was undertaken during 2005-06⁸, and an assessment of the finfish catch by fishers in the Abrolhos Islands was made in 2006.⁹
- Recreational phone diary survey of 2005/06 (information on the predominant 15 species caught).
- Annual Department of Fisheries “*State of the Fisheries*” Reports.

Based on the submissions received on the draft Allocation Report, the Allocation Committee requested that the Department of Fisheries review the catch data provided in Fisheries Management Paper No. 247 and *State of the Fisheries Reports*. Fisheries Management Paper No. 248 provides a further history of management, a review of the catch information provided in Fisheries Management Paper No. 247 and provides further data from the creel surveys that were undertaken in 2007/08 (for the Metropolitan Area), 2008/09 and 2009/10.

While there was substantial available information, there were problems with the reliability of the overall recreational fishing catch data which was of concern to the Allocation Committee. However, the Allocation Committee was bound by Guiding Principle (iii) set by the Minister for Fisheries that “Decisions must be made on best available information and where this information is uncertain, unreliable, inadequate or not available, a precautionary approach

⁶ Department of Fisheries “*Integrated Fisheries Management Report West Coast Demersal Scalefish Resource*”, Fisheries Management Paper No. 247, 2010

⁷ Fisheries Research Report 163 provides information on catch and effort data as well as age frequency data and fishing mortality estimates.

⁸ Sumner, N R, Williamson, P C, Blight, S J & Gaughan, D J, “*A 12-month survey of coastal recreational boat fishing between Augusta and Kalbarri on the west coast of Western Australia during 2005-06*”, Fisheries Research Report No. 177, 2008

⁹ Sumner, N R, “*An assessment of the finfish catch by recreational fishers, tour operators, commercial lobster fishers and commercial wetline fishers from the Houtman Abrolhos Islands during 2006*”, Fisheries Research Paper No. 175, 2008

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.” (See Section 3.1.2.)

Accordingly, the Allocation Committee made the best use of the revised data in estimating the recreational catch and used its own judgement in reaching conclusions in areas of uncertainty.

5.2 Recreational Sector

The first 12-month survey of recreational boat fishing in the West Coast Bioregion, including the Metropolitan area, was conducted during 1996/97. This survey provided the initial data on the recreational boat-based catch for the West Coast Bioregion.

A further creel survey was undertaken in 2005/06. This survey was conducted at boat ramps throughout the West Coast Bioregion between 9.00 am to 5.00 pm seven days a week from 1 July, 2005, to 30 June, 2006. A higher level of sampling was carried out on weekends and public holidays and survey interviewers spent more time at busy boat ramps to maximize the amount of recreational data collected. 15,999 boat crews were interviewed for this survey, of which 82 per cent had been fishing, and 79 per cent had been ocean line fishing.

Dr Aldo Steffe, in his review of Fisheries Research Report No. 177¹⁰, indicated that levels of total catch (recreational catch) were under-estimated for a variety of reasons, and the measures of variability (precision) associated with the estimates have been greatly under-estimated.

A phone diary survey was also conducted during 2005/06, which interviewed 504 registered boat owners with a West Coast Bioregion postcode. The phone diary survey also takes account of boats launched from private jetties and beaches, some Abrolhos Islands catch, and boat landings outside of 9am to 5pm.

The charter sector has had a statutory obligation to provide catch returns to the Department of Fisheries since 2001.

5.3 Commercial Sector

The commercial sector has a statutory obligation to provide monthly fishing catch returns.

5.4 Revalidation of Catch Data

As a result of the public consultation meetings and written submissions on the draft Allocation Report, the Allocation Committee asked for the data published in Fisheries Management Paper No. 247 on recreational and commercial catches to be reviewed by the Department of Fisheries, and the revised data is shown in (**Appendices 6, 7 and 8**).

This led to a correction due to an anomaly in the reporting of commercial catches in the block between 115° East and 116° East (Cape Leeuwin to Point D’Entrecasteaux). Fisheries Management Paper No. 247 included all the commercial catches from this block, whereas the definition of the West Coast Demersal Scalefish Fishery for this purpose only runs to 115° 30’ East.

As a result, the Department of Fisheries applied business rules which provided for half the reported commercial catches between 115° East and 116° East to be reported as being caught in the West Coast Demersal Scalefish Fishery. In addition, some further refinement of the commercial sector’s 2005/06 catches were also made. These adjustments are shown in Table 2.

¹⁰ Steffe, A (2009) “*Review of Fisheries Research Report (177)*” Fisheries Occasional Publication No. 67,

A separate revalidation of data from the Demersal Gillnet and Longline Fisheries was undertaken and relevant adjustments made.

Appendix 6 shows the revised and revalidated commercial and recreational catch of the predominant 15 species caught in 2005/06, **Appendix 7** shows the revised summary of west coast demersal scalefish catch of the predominant 15 species of both sectors by Area and **Appendix 8** breaks down this data by predominant 15 species caught by Area and sector.

Tables 2 and 3 use data from **Appendices 6** and **7** to provide the revised and revalidated commercial and recreational catch data in 2005/06 for the west coast demersal scalefish fishery.

A revised estimate of the Commonwealth Western Deepwater Trawl Fishery catch of five tonnes of west coast demersal scalefish is also included in Table 2.

Table 2. Revalidated 2005/06 commercial catch of west coast demersal scalefish (Kalbarri to Augusta) taken from statutory fishing returns.

Commercial Sector	Total Demersal FMP 247 (tonnes)	Revalidated Total Demersal (tonnes)
*Commercial sector (now WCDSFIMF)	935.8	917.8
*JASDGDLF	51.3	41.1
*WCDGDLF	56.8	55.9
CSLP	0.7	0.7
Commonwealth Western Deepwater Trawl Fishery		5**

* Note: Not all the catch of the commercial sector are demersal scalefish, although this table includes only demersal scalefish. As gear-based fisheries, managed by units of effort, they also take small amounts of non-demersal scalefish.

** Note: The Commonwealth Western Deepwater Trawl Fishery is outside of State jurisdiction and is included in the determination of the allowable harvest level, but not the allocation

The Department of Fisheries used Dr Aldo Steffe's findings to review the 2005/06 creel survey data that was provided in Fisheries Management Paper No. 247. The revised creel survey catch utilised the methods of estimation recommended by Dr Steffe, which, together with the other reasons for the under-estimation of the creel survey, are covered in Section 6.1. The revised creel survey catch is shown in Table 3.

Table 3. Revised 2005/06 recreational catch¹¹ of west coast demersal scalefish (Kalbarri to Augusta) taken from 2005/06 recreational creel survey and revalidated charter sector statutory fishing returns

Recreational Sector	Total Demersal FMP 247 (tonnes)	Revalidated Total Demersal (tonnes)*
Recreational creel survey	311	299.5*
Charter	74.4	75.5

* Revalidated recreational creel survey data has 95 per cent confidence interval (+/- 16.9 tonnes)

¹¹ Note: Length-weight relationships that are needed to convert numbers to weight are not available for all of the demersal species that comprise the recreational and charter catches. The most accurate and representative estimate of the total catch weight taken by both sectors is provided by the predominant ten demersal species taken by that sector (for which length-weight relationships are available). This comprises a total of 15 species across sectors, representing in excess of 93 per cent of the total catch in weight retained by each sector.

The footnote to Table 3 indicating the confidence interval for the revalidated recreational creel survey shows a high level of precision for the creel survey. This means that if you carried out a creel survey of the estimated catch landed at public boat ramps between 9am to 5pm in 2005/06, it could be expected that the result would be between 282.6 and 316.4 tonnes in 95 out of every 100 times such a survey was carried out.

However, the accuracy of the survey is different to its precision as an estimate of the total recreational catch. In the case of the 2005/06 creel survey, the limitations in respect to accuracy are discussed in Section 6.1.

5.5 Catch Information Post-2005/06

In addition to the 2005/06 creel survey, further surveys were undertaken in 2007/08 (Metropolitan Area only), 2008/09 and 2009/10.

All the commercial sector fisheries have undergone substantial effort and catch reductions to meet sustainability objectives of reducing demersal scalefish catches by at least 50 per cent of the sector's 2005/06 catches.

The Joint Authority Southern Demersal Gillnet and Demersal Longline fishery and the West Coast Demersal Gillnet and Demersal Longline fishery were, and are, managed using effort controls in the form of time/gear units. Significant changes were put in place in 2001/02 to reduce effort by 40 per cent.

In November 2007, then Minister for Fisheries, the Hon. Jon Ford, MLC, announced a ban on the commercial catch of scalefish and sharks in the Metropolitan Area (between Lancelin and south of Mandurah) (**Appendix 9**). This issue is covered further in Section 5.6.

Until January 2008, the West Coast Demersal Scalefish Fishery was an open access or 'wetline' fishery for the commercial sector. Access to the fishery was limited in January 2008 and the West Coast Demersal Scalefish Interim Managed Fishery (WCDSFIMF), came into effect in January 2009.

In its submission WAFIC noted that the speed of introduction and the scale of the management changes and effort reductions undertaken by the commercial sector have not been properly understood or appreciated by the public.

The estimated catch figures for the predominant 15 species caught by both sectors from 1996/97 to 2009/10 and the trend lines are shown in Figure 2 below. The graph also shows charter log book data from 2005/06 onwards.

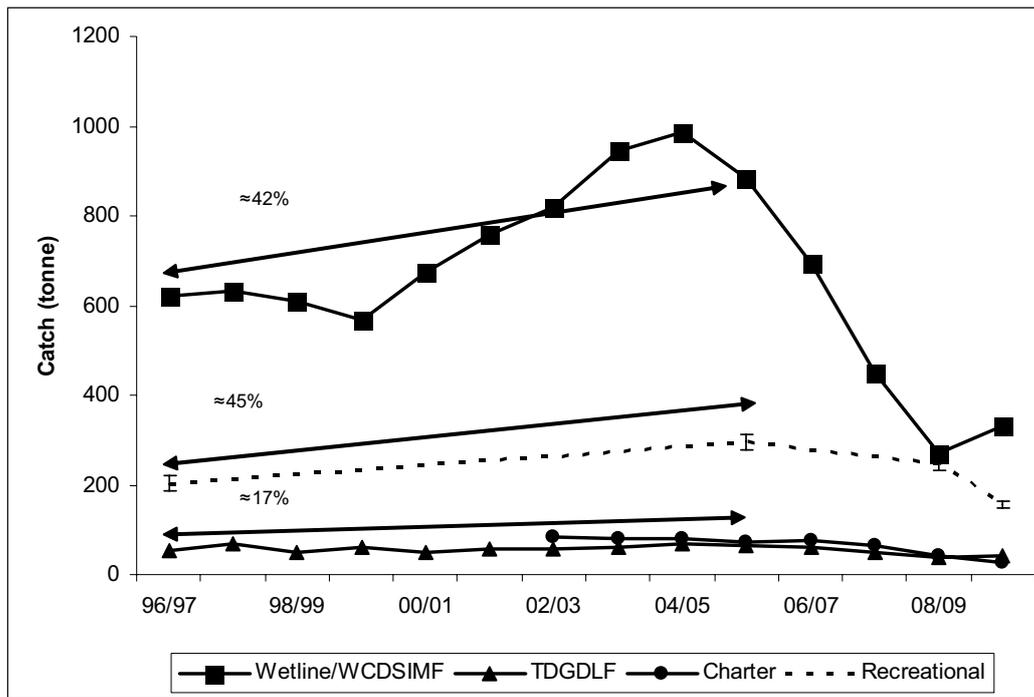


Figure 2. Estimated catch figures for predominant 15 species from 1996/97 to 2009/10.

The commercial line catch increased by 42 per cent between 1996/97 and 2005/06 while the estimated recreational catch increased by 45 per cent over the same period. Catches for both sectors had been reduced by around 50 per cent in 2009/10 as a result of management changes.

6.0 SECTOR ALLOCATIONS UNDER AN ALLOWABLE CATCH

6.1 Adjustments to the Recreational Sector's 2005/06 Catch

The Allocation Committee considered the findings in Dr Steffe's review and other reasons why the catch reported in the 2005/06 recreational creel survey has been under-estimated. These include:

- the creel survey was carried out from 9am to 5pm.
- only boat-ramps, (not marinas or other launching sites) were used;
- the dive catch was not measured by the recreational creel survey;
- the creel survey did not include the Abrolhos Islands catch; and
- the methods of estimations used.

An alternative to adjusting the creel survey is to use the 2005/06 phone diary survey which takes two of these factors into account, but this also does not address the dive catch or adequately address the Abrolhos Islands catch.

The Allocation Committee noted that the phone diary survey estimated that 23 per cent of the boats were not launched from boat ramps. In addition, information from the Hillarys boat ramp camera survey provided an estimate of 25 per cent of boats being recovered outside of the creel survey hours.

In their submission on the draft Allocation Report, Recfishwest noted that as catches for the three key demersal species were reported at around 30 per cent higher in the phone diary survey than the creel survey, that the adjustment to the catch estimate for the creel survey should be closer to 30 per cent.

Information provided by the Director of Research indicated that the weight estimate of the catch of the predominant 15 demersal species reported in the phone diary survey undertaken in 2005/06 was 29 per cent higher than that reported in the creel survey. However, given the small sample size there was significant variance around this estimate.

The Allocation Committee noted that neither the creel survey nor the phone diary survey included the catch of divers. In the draft Allocation Report a five per cent adjustment for the dive catch was suggested by the Allocation Committee to account for the catches taken by divers, but not recorded in the creel survey. Subsequent information from the Department of Fisheries taken from the 2008/09 and 2009/10 creel surveys indicated a one per cent adjustment would be more appropriate.

Based on all the above, the Allocation Committee settled on 30 per cent as the most appropriate adjustment to use for the underestimation of the recreational catch as measured by the creel survey.

Recommendation 7: That for allocation purposes the recreational catch be considered to be 30 per cent greater than the revised 2005/06 recreational creel survey catch.

Recfishwest noted in its submission on the draft Allocation Report that almost all of the catches reported as taken in the Abrolhos Islands by camp visitors and residents should be considered as recreational sector catches.

The 2005/06 creel survey did not include the catch in the Abrolhos Islands. The phone diary survey for 2005/06 indicated around 13.5 tonnes of the top three species was taken from the Abrolhos Islands. The catch recorded as being taken by recreational fishers at the Abrolhos Islands in Fisheries Research Report No. 175 was 17.3 tonnes and the Allocation Committee used this in its draft Allocation Report. The estimated catch taken by commercial rock lobster fishers and occupants of the islands' camps was 43.4 tonnes. The Report indicated that it was not possible to separate the recreational catch from commercial fishers from that of the visitors staying in their camps, since they fished together and the catches were combined. The Allocation Committee therefore concludes that half of this catch (21.7 tonnes) should be considered as recreational catch. This has the effect of increasing the creel survey's estimate of the recreational sector's catch in the Abrolhos Islands to 39 tonnes.

Recommendation 8: The estimate of the recreational catch for 2005/06 should be adjusted upwards by 39 tonnes to take account of the Abrolhos Islands recreational catch.

6.2 Adjustments to the Commercial Sector's 2005/06 Catch

In 2007 the former Minister for Fisheries, the Hon. Jon Ford, MLC, announced a ban on the commercial catch of scalefish and sharks in the Metropolitan Area between Lancelin to south of Mandurah (31° South to 33° South).

The Minister's media release (**Appendix 9**) noted that there were growing concerns about the sustainability of key demersal fish based on evidence of escalating fishing effort, particularly by the burgeoning recreational fishing sector.

A number of submissions to the Allocation Committee’s draft report, including Recfishwest’s submission, suggested that the Metropolitan Area catch should be removed from the commercial sector and be allocated to the recreational sector. The Allocation Committee noted that the decision by the former Minister for Fisheries in 2007 to exclude commercial fishing from the Metropolitan Area, for sustainability reasons, consequently provided a socio-economic benefit to recreational fishers based in the Metropolitan Area. As a result, recreational fishers were able to fish without direct competition from commercial fishers and their allocation was larger than if the ban on commercial fishing had not been imposed.

Commercial ‘wetline’ fishers who would otherwise have gained access to the Metropolitan Area of the West Coast Demersal Scalefish Interim Managed Fishery were provided with an Act of Grace payment for their loss of access to the Metropolitan Area of the fishery, and a Voluntary Fisheries Adjustment Scheme was established to compensate West Coast Demersal Gillnet and Demersal Longline fishers.

In view of the Minister’s decision to close the area to the commercial sector on sustainability grounds, the Allocation Committee determined that the catch forgone by the commercial sector from the Metropolitan Area should not be added to the recreational sector’s catch history. The revised commercial sector’s catch (excluding the Metropolitan Area catch) is shown in Table 4.

Recommendation 9: The 2005/06 commercial sector’s catch in the Metropolitan Area should not be taken into account when determining the sectoral allocations for the west coast demersal scalefish resource.

Table 4. Revalidated commercial sector catch of west coast demersal scalefish from 2005/06.

FISHERY	FMP247 Table 11 (not including metropolitan catches*) (tonnes)	Revalidated estimated catch (not including the metropolitan catches** & adjusted ½ block***) (tonnes)
“Open access”/ WCDIMF	835.1	816.7
WCDGDLF	38.1	37.1
JASDGDLF	51.7	41.1
Commonwealth Western Deepwater Trawl		5.0 [^] (not included in allocation)
CSLP	0.7	0.7
Other Commercial		0
TOTAL	925.6	895.6 [^]

*119.5 tonnes Metropolitan Area catch was deducted from FMP247 Table 11 catch

** 119.9 tonnes Metropolitan Area catch was deducted from the revalidated catch.

*** 27.8 tonnes adjusted ½ block from 115° East to 116° East was deducted from revalidated catch.

[^] Note: The Commonwealth Western Deepwater Trawl Fishery is outside of State jurisdiction and is included in the determination of the allowable harvest level, but not the allocation

A further issue was raised during consultation and in submissions to the draft Allocation Report with regard to the *State of the Fisheries Reports’* comments about the commercial sector exceeding its target catches in the fishery for several years prior to the impending restrictions aimed at reducing the commercial catch by 50 per cent.

The Allocation Committee asked the Department of Fisheries to examine this matter and in particular to look at the change in demersal scalefish catches in the five years ending 2005/06.

The results are shown graphically in **Appendix 10**. This analysis showed that the average annual catch for the five years to 2005/06 was essentially the same as the 2005/06 catch.

The Allocation Committee therefore concluded that there was no case for any adjustment for this factor.

6.3 Adjustment for Socio-economic Issues

The social and flow-on economic benefits of both recreational and commercial fishing were explored in Section 4.6.

While there was subjective and anecdotal information provided as to the social and cultural attributes of recreational and commercial fishing, the Allocation Committee was unable to satisfy itself that there was any contemporary objective data on which to base a recommendation to increase one sector's allocation share relative to the other for socio-economic reasons.

Accordingly, in the absence of any hard data, the Allocation Committee considered that the most equitable allocation would be that which was based on the relative shares of the fishery in 2005/06, prior to substantive management changes being introduced for both the recreational and commercial sectors to bring the total allowable catch down by 50 per cent.

The Allocation Committee acknowledges that as the population of Western Australia grows, so will the number of recreational fishers and with it the demand pressure on the available share of the fishery for recreational fishers. However, this is not a reason in itself to recommend a higher allocation to the recreational sector. Rather it highlights the need for a reallocation mechanism whereby the recreational sector can increase its share of the total allowable catch through administrative and/or market mechanisms which compensate commercial fishers for voluntarily relinquishing their access. This is discussed further in section 7.3.

6.4 Recommended Allocation Between Sectors

The Allocation Committee developed its recommended allocation to the sectors as set out in Table 5 (below) based on the following adjustments:

- a) 119.9 tonnes was subtracted from the commercial total to allow for the Ministerial decision to prohibit commercial fishing in the Metropolitan Area.
- b) 27.8 tonnes was subtracted from the commercial total for adjustments for boundary changes and revalidation of data;
- c) 30 per cent was added to the 2005/06 creel estimates as discussed in Section 6.1; and
- d) 39 tonnes is added to recreational catch to allow for recreational boat catches from the waters of the Abrolhos Islands.

Table 5. Catch proportions of commercial and recreational sectors based on adjusted 2005/06 catch.

	Commercial catches 2005/06 of WC demersal scalefish (tonnes)	Recreational catches 2005/06 of WC demersal scalefish (tonnes)	Total catch of WC demersal scalefish 2005/06 (both sectors) (tonnes)
Commercial Sector			
Total from Table 4	895.6		
Recreational Sector			
Recreational Creel Survey*		299.5*	
Add 30% under-estimate in creel survey, and diving catches		89.9	
Add estimated recreational Abrolhos catch**		39**	
Charter		75.5	
Total	895.6	503.9	1,399.5
Share of the catch	64%	36%	

* Revalidated recreational creel survey data has 95 per cent confidence interval (+/- 16.9 tonnes)

** From Fisheries Research Report No. 175

Recommendation 10: That the allocation of shares in the total suite of species in the west coast demersal scalefish resource should be 64 per cent to the commercial sector and 36 per cent to the recreational sector.

The Allocation Committee would like to emphasise that the revalidated catch figures and adjustments to the recreational and commercial sectors that are covered above, are for the purpose of allocating shares of the resource only. The Department of Fisheries Chief Executive Officer sets the total allowable harvest level for the west coast demersal scalefish resource. At the time of writing, this was set at 715 tonnes.

7.0 OTHER ISSUES

7.1 Management of Allocations

The two relevant policies regarding management of allocations are:

Guiding Principle vi (see Section 3.1.2) states that:

Appropriate management structures and processes 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.

Catch allocations establish a set share of access to a fish resource, giving all concerned a clear understanding of how much each sector may fish at an allowable level.

Guiding Principle ix (see section 3.1.2) states that:

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

The Integrated Fisheries Management policy identifies who has a stake in the fishery and makes that share explicit through an exhaustive and transparent process. Under IFM all sectors should be managed within their allocation and within the overall allowable harvest level.

The initial IFM policy stated 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 FRMA to incorporate allocation processes.

The implementation of allocation decisions in legislation will provide added security and confidence to sectors about their access to their share of the resource and the Allocation Committee supports the current plans to incorporate IFM into a new Fisheries Act.

7.2 Monitoring Allocations

Many submissions on the draft Allocation Report, including Recfishwest's, noted that Western Australian dhufish were the most sought-after and important west coast demersal scalefish species for the recreational sector.

The Recfishwest submission asked the Allocation Committee to consider an allocation based on the three indicator species Western Australian dhufish, pink snapper and baldchin groper.

The Allocation Committee considered that having the allocation apply to the whole suite of species, with a sub-component of important recreational species monitored, would guard against shifts in targeting of the resource by the commercial sector. Shifts in targeting by the recreational sector will need to be monitored through separate targeted monitoring mechanisms.

The Allocation Committee is aware that Western Australian dhufish, pink snapper and baldchin groper are the most important species for the recreational sector, while these three species as well as emperors and bight redfish are of importance to the commercial sector.

The 2005/06 proportions for the five species are:

Table 6. Sectoral proportions of five indicator species based on revised and adjusted 2005/06 catch.

	Dhufish (tonnes)	Dhufish %	Pink snapper (tonnes)	Pink snapper %	Baldchin groper (tonnes)	Baldchin groper %	Emperors (Tonnes)	Emperors %	Bight redfish (tonnes)	Bight redfish %
Recreational sector										
Creel survey*	176.3		37.5		25.4		8.8		5.9	
30% of creel survey	52.9		11.2		7.6		2.7		1.8	
**Abrolhos	4.9		6.7		22.1		2.4		0	
Charter	18.8		18.1		10.2		8.1		4.6	
Total recreational sector	252.9	62%	73.5	21%	65.3	65%	22	9%	12.3	14%
Commercial sector										
Total 26°S - 115°30'E	201.5		314.6		38.5		220.2		83.6	
Less Metropolitan Area	43.1		41.1		4		0.5		7.1	
Total commercial sector	158.4	38%	273.4	79%	34.5	35%	219.8	91%	76.5	86%

* Revalidated recreational creel survey data has 95 per cent confidence interval

**From Fisheries Research Report No. 175

While recognizing the difficulty of managing proportions in isolation, the Allocation Committee recommends the Department of Fisheries manage the five species around the proportions in Table 5.

Recommendation 11: Within each sector’s allocation, the proportions of the five indicator species, be monitored and managed so that as far as practicable, they remain with their relative catch share of:

- **Western Australian dhufish – recreational sector 62 per cent, commercial sector 38 per cent**
- **Pink snapper – recreational sector 21 per cent, commercial sector 79 per cent**
- **Baldchin groper – recreational sector 65 per cent, commercial sector 35 per cent**
- **Emperors – recreational sector 9 per cent, commercial sector 91 per cent**
- **Bight redfish – recreational sector 14 per cent, commercial sector 86 per cent**

The Allocation Committee previously prepared and published a document “*Considerations for the Implementation of Western Rock Lobster Sectoral Allocations*” and believes that the principles set out in that document can be applied to a set of business rules for the West Coast Demersal Scalefish Fishery.

Recommendation 12: A system of monitoring and managing the sectoral catches, based on the principles set out in the document “*Considerations for the Implementation of Western Rock Lobster Sectoral Allocations*” should be established to manage allocations in the West Coast Demersal Scalefish Fishery.

The proposed methodology would necessitate the development of business rules around the use of a species subset, for which there was quantitative data as a basis for monitoring the recreational sector’s catch (eg the top three or five species). In essence an allowable catch for the whole suite of species would be set at periodic intervals (probably every four to five years) and, based on the recreational sector’s allocated share of the suite and the proportion that the species subset are of the entire suite, determine a target figure for management of that subset of species. The Allocation Committee believes that the species suite to be monitored should comprise a small number of major species caught by both sectors, such as dhufish, pink snapper, baldchin groper, emperors and bight redfish.

The proposed allocation and monitoring methodology is illustrated in Figure 3.

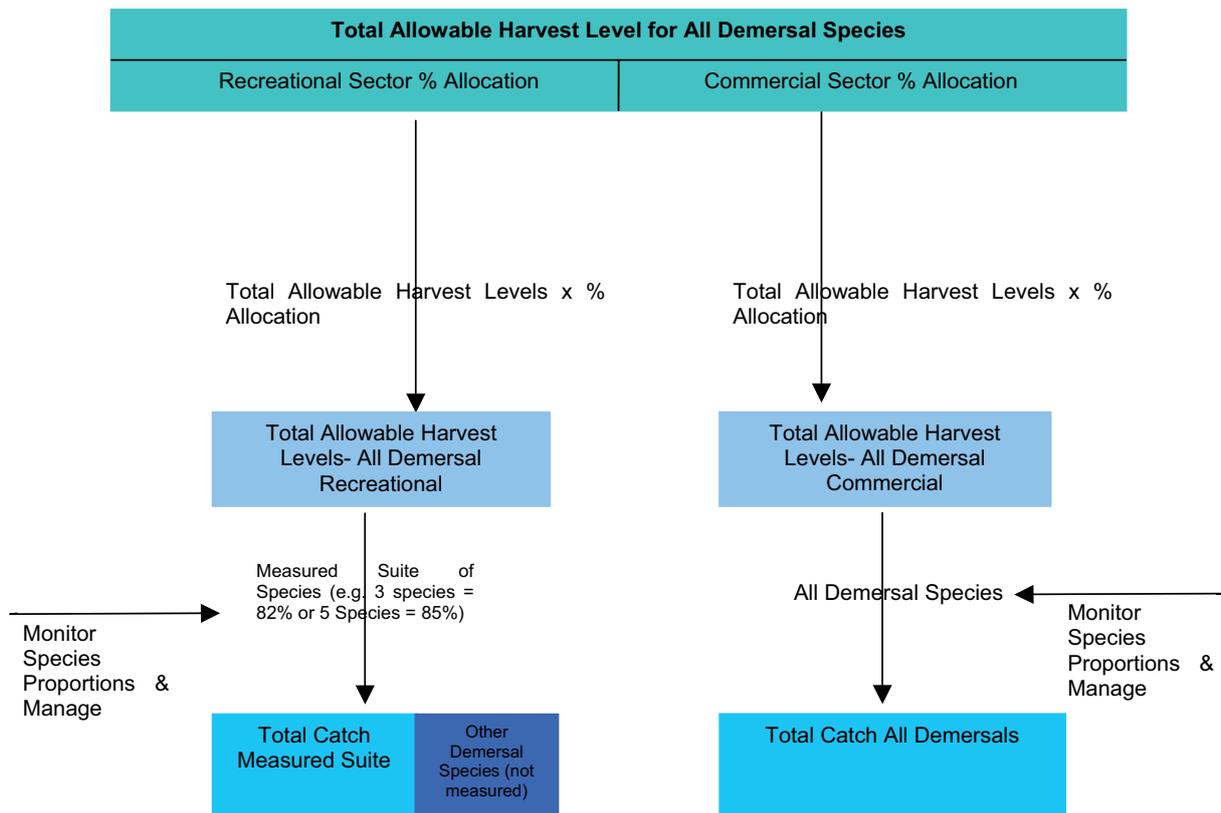


Figure 3. Measuring and Managing the Total Allowable Harvest Level.

The Allocation Committee considers that this method of managing and monitoring the catch can take into account the concerns of the recreational sector by ensuring that the proportions of key species – dhufish, pink snapper and baldchin groper – remain within their historical proportions, while allowing for issues such as individual species recruitment pulses to flow through the sectoral catches without separate management measures for each species necessarily having to be taken.

The Allocation Committee notes that skipjack/silver trevally, or “skippy” as it is commonly known, and King George whiting are not considered as demersal scalefish species by the Department of Fisheries for management purposes. It is the Allocation Committee’s view that “skippy” would be best allocated in a near shore suite of species, as they are popular fish for shore-based anglers, while King George whiting, although generally fished in deeper waters, can be fished in a targeted manner and therefore not included in this allocation.

Recommendation 13: Monitoring of boat fishing for silver trevally, King George whiting and other nearshore fish stocks should take place to ensure transfer of effort does not result in overfishing nearshore species.

The Department of Fisheries Research Division has briefed the Allocation Committee on improvements to the collection of recreational fishing data, in line with Dr Aldo Steffe’s recommendations and a workshop that was held in early 2010. The Allocation Committee fully supports the Department of Fisheries’ efforts to improve recreational catch data collection and its proposed monitoring of the management arrangements for the resource.

The Minister for Fisheries announced in October 2010 that the current management rules for the recreational sector would remain in place for the next two years before they are reviewed.

This will provide a level of certainty in the short-term to the recreational sector in relation to the 50 per cent catch reductions. The recreational catch will be reviewed in 2012 following the completion of the 12-month recreational Western Australian Boat Fishing Survey being undertaken in 2011. This will assess the effectiveness of the current management arrangements and whether the sustainability objectives set for the fishery are being met.

It is recognised that the recreational catch has to be estimated from surveys and the impact of effort management measures can only be assessed retrospectively. For this reason, the Allocation Committee believes that management has to depend on monitoring trends in the catch. It is suggested that there should be no management changes to meet allocation targets until further catch information is available and those management changes cannot be expected to occur before 2013.

Recommendation 14: That the initial management changes to enable the sectors to meet their allocation be taken at the same time as any changes to the sustainability management arrangements are made by the Minister for Fisheries as a result of the 2012 review of management arrangements.

It should be noted that an allocated share of a resource does not automatically translate into a specific year-by-year catch level (or target) for each sector. IFM principles require that the recommended annual catch levels for each sector be based on the proportional allocation for that sector of the recommended total catch level for that year. The allowable catch each sector takes, or is later estimated to have taken, will naturally vary based on a host of factors.

IFM does not and cannot require absolute precision in hindsight, but merely requires that proportional allocations be respected when considering management arrangements for each forthcoming year¹². It is important to realise that the IFM process does not expect to manage the sectors' catches in a particular year to the exact targets but will monitor the catches and over time progressively endeavour to manage them to the total allowable harvest level and to the allocated proportions. Such a strategy is determined by the delay in getting catch information, particularly for the recreational sector.

It is recommended that a moving five-year average catch for both sectors be used as the basis for determining if management changes are necessary for one or both sectors.

Recommendation 15: That a moving five-year average be used when determining if sectoral catches have remained within their allocation.

7.3 Reallocation Mechanisms

The implementation of a reallocation mechanism is integral to the IFM process. In particular, the reallocation mechanism is essential for meeting the objective of optimal community benefit over time. The proposed recommended arrangements are contingent on the implementation of an appropriate re-allocation mechanism as soon as possible.

A Fisheries Research and Development Corporation Report¹³ into options for reallocation mechanisms for the rock lobster fishery was published in January 2010.

¹² Although the reference is to each year this does not preclude other time periods being selected – the principle remains the same.

¹³ Reid, C “*Potential reallocation mechanisms for the transfer and/or adjustment of catch shares between sectors with application to the western and south Australian rock lobster fisheries*”, Fisheries Management Paper 238, Department of Fisheries, January 2010

Following release of the draft Allocation Report and the Allocation Committee's briefing by experts in the field of socio-economics, the Allocation Committee assisted the Department of Fisheries in holding a reallocation workshop in February 2011¹⁴ to examine reallocation mechanisms. The Allocation Committee considers the workshop to be an important first step towards developing reallocation mechanisms and is confident that the reallocation principles and mechanisms identified in the workshop can be developed with further consultation with key stakeholder groups to develop a mechanism for the reallocation of the west coast demersal scalefish resource.

The Allocation Committee recommends the development of these reallocation mechanisms should be given priority by the Department of Fisheries.

Recommendation 16: A reallocation mechanism should be implemented for the west coast demersal scalefish resource as soon as practicable.

7.4 Improvements in Recreational Fishing Data and Community Education

As discussed in Section 5.2, the Allocation Committee was concerned about the reliability of the overall recreational fishing catch data. It became evident during the consultation and submission phase that these concerns were shared by both the commercial and recreational sectors.

The Allocation Committee has been briefed by the Department of Fisheries on planned improvements to recreational fishing data collection methods that have been implemented. The Allocation Committee hopes that these improved methods will result in more consistent and reliable data which will enable the size of the recreational sector's catch to be more accurately estimated into the future.

The Allocation Committee also noted concerns about the accuracy of information on fish stocks and sustainability issues and how management changes that sought to reduce catch in the fishery by at least 50 per cent of the 2005/06 levels could achieve this objective. While the Minister's announcement in October 2010 that the 50 per cent reductions had been achieved by the recreational sector has reduced some of this anxiety, there was concern raised in submissions and at meetings about how these issues might affect catches at an individual level.

There was also a lack of knowledge about recent management changes in the commercial sector that have reduced its catch of west coast demersal scalefish by at least 50 per cent of the 2005/06 levels and that most, if not all, of this catch is sold on the Western Australian market.

Given these issues, the Allocation Committee supports the Department of Fisheries' efforts to improve its recreational data collection methods. It also considers that community awareness strategies should be improved in order to increase awareness of management changes, what these changes mean at individual and sectoral levels.

Recommendation 17: The Department of Fisheries should continue to improve its collection methodology for recreational fishing data and improve its community education strategies on the status and management of the west coast demersal scalefish resource.

¹⁴ Department of Fisheries " *Integrated Fisheries Management – Reallocation Workshop*", Fisheries Occasional Paper 94, Department of Fisheries, 2011.

8.0 GLOSSARY OF TERMS

AFMA	Australian Fisheries Management Authority
Barotrauma	Injuries resulting from the expansion of gases in the swim bladder and other organs when fish do not have time to adjust to rapid changes in water pressure as they are pulled to the surface.
Bioregion	A geographic area characterised by a combination of physical and biological characteristics, for example, terrain, climate and ecological communities
CPUE	Catch per unit of effort
CSLP	Cockburn Sound Line & Pot Managed Fishery
Demersal	Found on or near the seafloor
Endemic	Confined in occurrence to a local region
ESD	Ecologically sustainable development
FRMA	Fish Resources Management Act
High grading	Substituting fish already caught with larger or better fish of the same species
JASDGDLF	Joint Authority Southern Demersal Gillnet and Demersal Longline Fishery
Mortality	The rate of deaths (usually in terms of proportion of the stock dying annually) from various causes
Recruitment	A fish that has just become susceptible to a fishery; e.g. a recruit to the dhufish fishery is six to seven-years-old, whereas a recruit to the pink snapper fishery is four-years-old
TAC	Total Allowable Catch
TACC	Total Allowable Commercial Catch
TCC	Total Commercial Catch
WCDGDLF	West Coast Demersal Gillnet and Demersal Longline Managed Fishery
WCDSF	West Coast Demersal Scalefish Fishery (all sectors)
WCDSFIMF	West Coast Demersal Scalefish Interim Managed Fishery

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10.0 APPENDICES

Appendix 1. Integrated Fisheries Management Government Policy December 2009

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, inclusive and flexible.

Information requirements

3. The development and funding of an appropriate research and monitoring program encompassing all sectors is essential to provide the necessary information for sustainability and allocation issues to be addressed under an integrated policy. This policy will continue to be progressively developed and phased in over a number of years.
4. The Department of Fisheries will, in consultation with sectors, 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 Government policy as appropriate) as the basis for integrated fisheries management policy.
 - 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 impacts 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 as far as possible includes the total mortality consequent upon the fishing activity of each sector, should be set for each fishery¹⁵ and the allocation designated for use by the commercial sector, the recreational sector, the customary sector and the aquaculture sector should be made explicit.
 - v) The total harvest across all sectors should not exceed the allowable harvest level. If this occurs, steps consistent with the impacts of each sector should be taken to reduce the take to a level that does not compromise future sustainability.
 - vi) Appropriate management structures and processes should be introduced to manage

¹⁵ Fishery is defined under the *Fish Resources Management Act, 1994* (the Act) 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.

each sector within their prescribed allocation. These should incorporate pre-determined actions that are invoked if that group's catch increases above its allocation.

- vii) 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.
- viii) It should remain open to government policy to determine the priority use of fish resources where there is a clear case to do so.
- ix) Management arrangements must provide sectors 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.

Harvest levels

- 6. A sustainability report will be prepared for each fishery to be considered under the IFM Policy in accordance with the 'Policy for the implementation of ecologically sustainable development for fisheries and aquaculture in Western Australia'.
- 7. The Chief Executive Officer, Department of Fisheries, will approve a sustainability report for each fishery, which provides advice on appropriate harvest level(s), taking into account sustainability and other objectives, such as stock rebuilding, maximising economic yields and amenity values.

Effective management of each sector

- 8. The Government is committed to introducing more effective management across all fisheries. The implementation of more effective sectoral management 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.
- 9. It is important to formalise existing shares not only as a basis for future allocation discussions, but as a basis for insuring the safe harvest level. These will be formalised on the basis of proportional catch shares using the best information available at the time the Integrated Fisheries Allocation Advisory Committee starts its process (see below).

Allocation processes

- 10. An Integrated Fisheries Allocation Advisory Committee has been established under s42 of the *Fish Resources Management Act 1994* (the Act) to investigate resource allocation issues and make recommendations on optimal resource-use to the Minister for Fisheries including:
 - i) allocations between sectors, now and into the future;
 - 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 and reallocation decisions for individual fisheries; and
 - v) other matters concerning the integrated management of fisheries as referred by the Minister for Fisheries.
11. The Minister will be responsible for determining the process and timeframes for resolving allocation issues in each fishery based on advice from the CEO of the Department of Fisheries and the Integrated Fisheries Allocation Advisory Committee.
 12. The Minister will provide a statement of decision on announcement of his determination in an allocation matter.

The Minister may make public the Committee's report at the same time his statement of decision is released.

Compensation

13. Where a reallocation of resources from one sector to another results in demonstrable financial loss to a licensed commercial fisherman or licensed aquaculture operator, in principle there should be consideration of compensation.
14. Cases for compensation should be assessed on their merits.
15. 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.
16. No compensation should be payable where adjustments are made for sustainability reasons.

Funding

17. The Government will consider seeking contributions from all sectors over time corresponding to the cost of managing the resource and providing access for each sector.

Appendix 2. Four-stage Integrated Fisheries Allocation Advisory Committee Process

Integrated Fisheries Management Allocation Process

Introduction

Government Policy 2009 on Integrated Fisheries Management (IFM) states that the Minister will determine the process and timeframes for resolving allocation in each fishery based on the advice from the CEO of the Department of Fisheries and the Integrated Fisheries Allocation Advisory Committee (the Allocation Committee).

(A) Determining the Need for a Formal Allocation Process in a Fishery

The Minister for Fisheries requested that the Allocation Committee begin with the Western Rock Lobster Fishery, Abalone Fishery, the West Coast Demersal Scalefish Fishery and the Gascoyne Demersal Scalefish Fishery.

In the future the Allocation Committee 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 IFM Report will be prepared by the Department of Fisheries for each fish resource that is to be subject to the IFM process.

The reports will contain details such as:

- the current management practices for each sector;
- historical or estimated catch levels by each sector;
- the biology of the fish species involved;
- the harvest level that can be taken sustainably from the fish resource; and
- other relevant data such as regional employment, economic and social/ lifestyle issues.

In short, the report will be a robust summary of what is estimated or known about the fish resource and those who use it.

The Department, in finalising these reports, will consult with the key stakeholder groups. The IFM report will be approved by the Chief Executive Officer, 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.

The Allocation Committee 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 as the Western Australian Fishing Industry Council, Reefishwest, the Conservation Council of WA and bodies representing indigenous interests;
- drawing on the knowledge, data, technical material and experience available with regard to the particular fishery from the Department of Fisheries and as appropriate from other sources; and
- identifying areas of agreement/disagreement between the two parties.

As part of its considerations, the Allocation Committee 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, the Allocation Committee will formalise its initial position.

Step 2 - The Allocation Committee settles draft allocation report and releases for public comment.

Once the Allocation Committee has come to an initial position with regard to allocation, this will be documented, along with the reasons for its conclusions, and the Allocation Committee 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 fish resource, 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, the Allocation Committee may hold or ask Departmental officers to undertake meetings in relevant metropolitan and regional locations to enable industry, recreational fishers and community members to contribute their views into the Allocation Committee process.

The comment period will normally be for a duration of three months.

Step 3 - The Allocation Committee recommends an allocation to the Minister for Fisheries.

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

Step 4 - Determination by the Minister.

The Minister for Fisheries will then consider the recommendations of the Allocation Committee and determine the allocations. The allocations are likely to be fixed for a period of about five years.

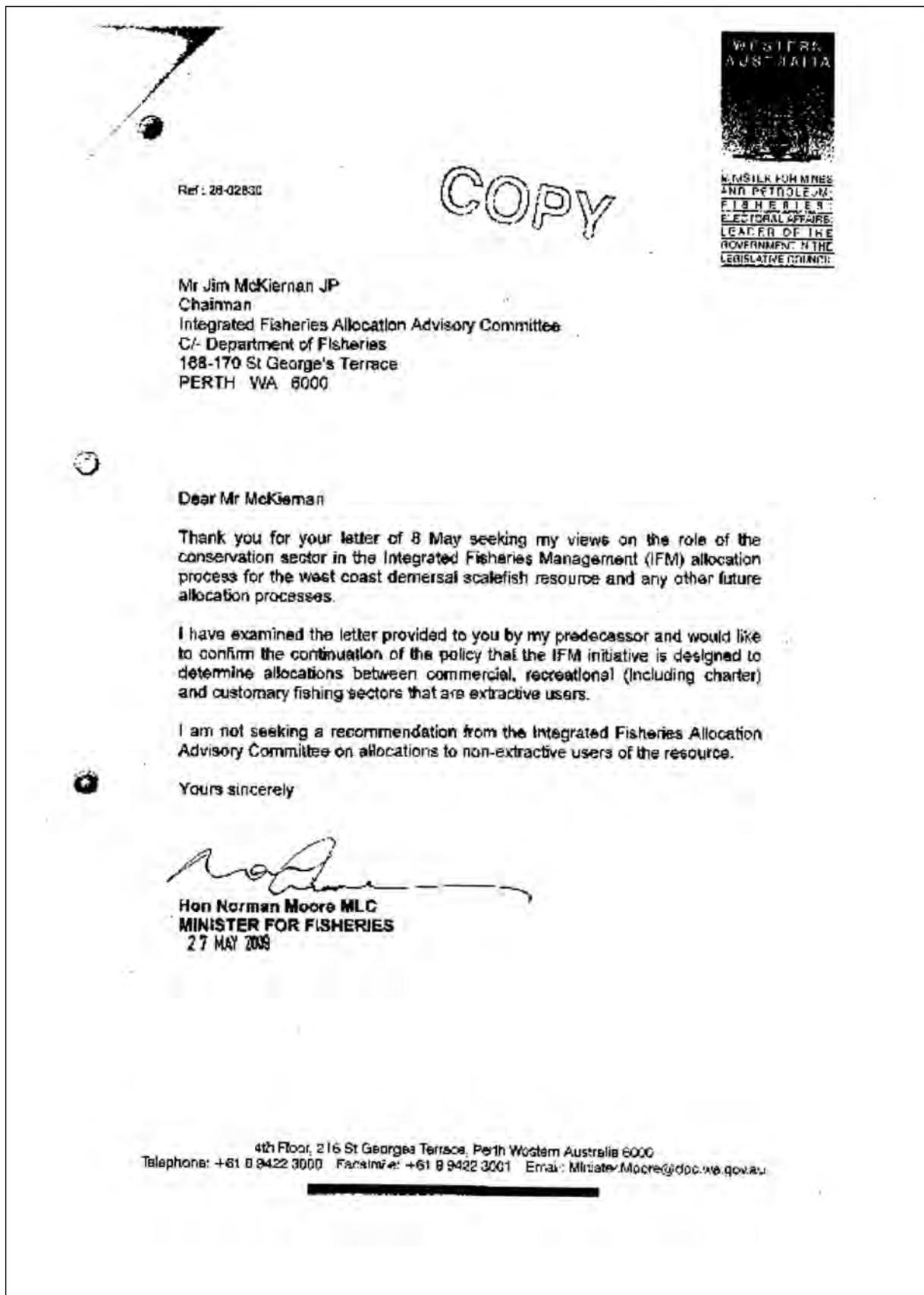
The Minister has agreed to provide a statement of decision on announcement of his determination in an allocation matter. The Minister may make the Allocation Committee’s report public at the same time as his statement of decision is released.

Appendix 3. List of organisations, associations and individuals who made written submissions on the draft Allocation Report on west coast demersal scalefish.

Name of individual	Organisation
Aleesha Meuleners	
Tony Allen	
St.Kemp	
Briony and Jason Wasley	
George Smith	
Brad Hardie	
Nadan and Kym	
Peter McMullen	
Terry Cullen	
Phil Tickle	
Glen Passmore	
Cameron Trees	South West Aboriginal Land & Sea Council
Warren Hancock	
Terry, Bruce and Jeff Cockman	Brefjen
Rob Heslewood	
Pat Shinnick	
Ken Bentley	
Pat Shinnick	Australian Anglers Association
Anthony Longo	
Paul Longo	Perth Offshore Boat Angling Club
Paul Longo	
Peter Longo	

Robert Weir	Marmion Angling & Aquatic Club
Ian Keightley	
Trevor Gerrick	
Dion Warr	
John Baas	
Andrew Rowland	Recfishwest
Robin K Randall	
Glenn Wakelam	
Peter Babarsakas	
Stephen Wiseman	
Jamie Waite	
Sherry Donaldson	Boating Industry Assoc. of WA
Ian Stagles	
Scott Coghlan	
Gary Wotherspoon	
Glen Brodie	
Anna Cronin	Western Australian Fishing Industry Council
Gary Sloan	Lancelin Angling & Fishing Club
Allan Hocking	
Gary Passmore	

Appendix 4. Minister's letter to the Allocation Committee



Appendix 5. Whole suite of west coast demersal scalefish

Species code	Family name	Common Name	Scientific Name	Category one demersal group
437026	Acanthuridae	Spotted unicornfish	<i>Naso brevirostris</i>	
290000	Apolactinidae	Thin velvetfish	<i>Coccotropus sp.</i>	
117001	Aulopidae	Sergeant Baker	<i>Aulopus purpurissatus</i>	
465014	Balistidae	Bridled triggerfish	<i>Sufflamen fraenatum</i>	
465011	Balistidae	Starry triggerfish	<i>Abalistes stellatus</i>	
465048	Balistidae	Titan triggerfish	<i>Balistoides viridescens</i>	
465900	Balistidae	Triggerfishes general	<i>Balistid sp.</i>	
258004	Berycidae	Bight redfish	<i>Centroberyx gerrardi</i>	Red snapper-bight redfish, nannygai and swallowtail
258003	Berycidae	Redfish	<i>Centroberyx sp.</i>	Red snapper-bight redfish, nannygai and swallowtail
258005	Berycidae	Swallowtail	<i>Centroberyx lineatus</i>	Red snapper-bight redfish, nannygai and swallowtail
258006	Berycidae	Yelloweye redfish	<i>Centroberyx australis</i>	Red snapper-bight redfish, nannygai and swallowtail
346037	Caesionidae	Blue fusilier	<i>Caesio teres</i>	
346050	Caesionidae	Doubleline fusilier	<i>Pterocaesio digramma</i>	
346061	Caesionidae	Lunar fusilier	<i>Caesio lunaris</i>	
346018	Caesionidae	Yellowtail fusilier	<i>Caesio cuning</i>	
346000	Caesionidae/Lutjanidae	Fusiliers, Jobfishes	<i>Caesionidae/Lutjanidae</i>	Lutjanidae
337072	Carangidae	Black pomfret	<i>Parastromateus niger</i>	
445001	Centrolophidae	Blue-eye trevalla	<i>Hyperoglyphe antarctica</i>	Hapuku/Bass groper/ Trevalla/Grey banded cod
365066	Chaetodontidae	Western talma	<i>Chelmonops curiosus</i>	
377004	Cheilodactylidae	Blue morwong	<i>Nemadactylus valenciennesi</i>	Queen snapper (blue morwong)
374011	Cirrhitidae	Ornate hawkfish	<i>Paracirrhites hemistictus</i>	
311063	Epinephelidae	Birdwire rockcod	<i>Epinephelus merra</i>	Serranidae/Epinephelidae
311150	Epinephelidae	Blackspotted rockcod	<i>Epinephelus malabaricus</i>	Serranidae/Epinephelidae
311100	Epinephelidae	Breaksea cod	<i>Epinephelides armatus</i>	Serranidae/Epinephelidae
311047	Epinephelidae	Camouflage grouper	<i>Epinephelus polyphkadion</i>	Serranidae/Epinephelidae
311022	Epinephelidae	Chinaman rockcod	<i>Epinephelus rivulatus</i>	Serranidae/Epinephelidae
311083	Epinephelidae	Coral rockcod	<i>Cephalopholis miniata</i>	Serranidae/Epinephelidae
311041	Epinephelidae	Duskytail groper	<i>Epinephelus bleekeri</i>	Serranidae/Epinephelidae
311152	Epinephelidae	Eightbar grouper (Grey Banded cod)	<i>Hyporthodus octofasciatus</i>	Hapuku/Bass groper/ Trevalla/Grey banded cod
311021	Epinephelidae	Flowery rockcod	<i>Epinephelus fuscoguttatus</i>	Serranidae/Epinephelidae
311062	Epinephelidae	Frostback rockcod	<i>Epinephelus bilobatus</i>	Serranidae/Epinephelidae
311007	Epinephelidae	Goldspotted rockcod	<i>Epinephelus coioides</i>	Serranidae/Epinephelidae
311061	Epinephelidae	Queensland groper	<i>Epinephelus lanceolatus</i>	Serranidae/Epinephelidae
311042	Epinephelidae	Radiant rockcod/Comet grouper	<i>Epinephelus radiatus/ morrhua</i>	Serranidae/Epinephelidae
311010	Epinephelidae	Rankin cod	<i>Epinephelus multinotatus</i>	Serranidae/Epinephelidae
311045	Epinephelidae	Tomato rockcod	<i>Cephalopholis sonnerati</i>	Serranidae/Epinephelidae
311070	Epinephelidae	Whitespotted grouper	<i>Epinephelus caeruleopunctatus</i>	Serranidae/Epinephelidae
311009	Epinephelidae	Yellowspotted cod	<i>Epinephelus areolatus</i>	Serranidae/Epinephelidae

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311015	Epinephelidae	Banded grouper	<i>Epinephelus amblycephalus</i>	Serranidae/Epinephelidae
311012	Epinephelidae	Barcheek coral trout	<i>Plectropomus maculatus</i>	Coral trout and Coronation trout
311014	Epinephelidae	Blacktip rockcod	<i>Epinephelus fasciatus</i>	Serranidae/Epinephelidae
311079	Epinephelidae	Bluespotted coral trout	<i>Plectropomus laevis</i>	Coral trout and Coronation trout
311136	Epinephelidae	Bluespotted rockcod	<i>Cephalopholis cyanostigma</i>	Serranidae/Epinephelidae
311008	Epinephelidae	Brownbarred rockcod	<i>Cephalopholis boenak</i>	Serranidae/Epinephelidae
311078	Epinephelidae	Common coral trout	<i>Plectropomus leopardus</i>	Coral trout and Coronation trout
311060	Epinephelidae	Convict grouper	<i>Epinephelus septemfasciatus</i>	Serranidae/Epinephelidae
311142	Epinephelidae	Flagtail rockcod	<i>Cephalopholis urodeta</i>	Serranidae/Epinephelidae
311057	Epinephelidae	Greasy rockcod	<i>Epinephelus tauvina</i>	Serranidae/Epinephelidae
311011	Epinephelidae	Highfin grouper	<i>Epinephelus maculatus</i>	Serranidae/Epinephelidae
311138	Epinephelidae	Leopard rockcod	<i>Cephalopholis leopardus</i>	Serranidae/Epinephelidae
311086	Epinephelidae	Maori rockcod	<i>Epinephelus undulatostratus</i>	Serranidae/Epinephelidae
311081	Epinephelidae	Passionfruit coral trout	<i>Plectropomus areolatus</i>	Coral trout and Coronation trout
311082	Epinephelidae	Peacock rockcod	<i>Cephalopholis argus</i>	Serranidae/Epinephelidae
311074	Epinephelidae	Plump grouper	<i>Epinephelus trophis</i>	Serranidae/Epinephelidae
311068	Epinephelidae	Potato rockcod	<i>Epinephelus tukula</i>	Serranidae/Epinephelidae
311145	Epinephelidae	Purple rockcod	<i>Epinephelus cyanopodus</i>	Serranidae/Epinephelidae
311904	Epinephelidae	Radiant rockcod/Comet grouper	<i>Epinephelus radiatus/morrhua</i>	Serranidae/Epinephelidae
311058	Epinephelidae	Rankin cod	<i>Epinephelus multinotatus</i>	Serranidae/Epinephelidae
311149	Epinephelidae	Snubnose grouper	<i>Epinephelus macrospilos</i>	Serranidae/Epinephelidae
311162	Epinephelidae	Vermicular cod	<i>Plectropomus oligacanthus</i>	Coral trout and Coronation trout
311064	Epinephelidae	Wirenet rockcod	<i>Epinephelus hexagonatus</i>	Serranidae/Epinephelidae
311166	Epinephelidae	Yellowedge coronation trout	<i>Variola louti</i>	Coral trout and Coronation trout
311903	Epinephelidae		<i>Ephinephelus microdon/areolatus/bilobatus</i>	Serranidae/Epinephelidae
278000	Fistulariidae	Flutemouths	<i>Fistulariid sp.</i>	
439002	Gempylidae	Gemfish	<i>Rexea solandri</i>	
320001	Glaucosomatidae	Northern pearl perch	<i>Glaucosoma buergeri</i>	
320000	Glaucosomatidae	Western Australian dhufish	<i>Glaucosoma hebraicum</i>	Western Australian dhufish
350012	Haemulidae	Brown sweetlips	<i>Plectorhinchus gibbosus</i>	
350021	Haemulidae	Giant sweetlips	<i>Plectorhinchus albovittatus</i>	
350007	Haemulidae	Goldspotted sweetlips	<i>Plectorhinchus flavomaculatus</i>	
350018	Haemulidae	Manylined sweetlips	<i>Plectorhinchus multivittatus</i>	
350003	Haemulidae	Painted sweetlips	<i>Diagramma labiosum</i>	
350014	Haemulidae	Spotted sweetlips	<i>Plectorhinchus chaetodonoides</i>	

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350020	Haemulidae	Striped sweetlips	<i>Plectorhinchus lessonii</i>	
350000	Haemulidae	Sweetlips	<i>Haemulidae</i>	
261024	Holocentridae	Samurai squirrelfish	<i>Sargocentron ittodai</i>	
261027	Holocentridae	Smallmouth squirrelfish	<i>Sargocentron microstoma</i>	
261000	Holocentridae	SQUIRRELFISHES, GENERAL	<i>Holocentrid sp.</i>	
384999	Labridae	Baldchin groper	<i>Choerodon rubescens</i>	Baldchin groper and tuskfish
384010	Labridae	Blackspot tuskfish	<i>Choerodon schoenleinii</i>	Baldchin groper and tuskfish
384072	Labridae	Blue tuskfish	<i>Choerodon cyanodus</i>	Baldchin groper and tuskfish
384005	Labridae	Bluespotted tuskfish	<i>Choerodon cauteroma</i>	Baldchin groper and tuskfish
384045	Labridae	Foxfish	<i>Bodianus frenchii</i>	Foxfish and pigfish
384038	Labridae	Humphead maori wrasse	<i>Cheilinus undulatus</i>	Protected species
384904	Labridae	Pigfishes, general	<i>Bodianus spp.</i>	Foxfish and pigfish
384004	Labridae	Purple tuskfish	<i>Choerodon cephalotes</i>	Baldchin groper and tuskfish
384054	Labridae	Saddleback pigfish	<i>Bodianus bilunulatus</i>	Foxfish and pigfish
384901	Labridae	Tuskfish	<i>Choerodon sp.</i>	Baldchin groper and tuskfish
384002	Labridae	Western blue groper	<i>Achoerodus gouldii</i>	Western blue groper
384001	Labridae	Western pigfish	<i>Bodianus vulpinus</i>	Foxfish and pigfish
351001	Lethrinidae	Blue-spotted emperor	<i>Lethrinus punctulatus</i>	Emperors (Lethrinidae)
351014	Lethrinidae	Drab emperor	<i>Lethrinus ravus</i>	Emperors (Lethrinidae)
351000	Lethrinidae	Emperors, general	<i>Lethrinidae</i>	Emperors (Lethrinidae)
351021	Lethrinidae	Goldspot seabream	<i>Gnathodentex aureolineatus</i>	Emperors (Lethrinidae)
351006	Lethrinidae	Grass emperor	<i>Lethrinus laticaudis</i>	Emperors (Lethrinidae)
351004	Lethrinidae	Longnose emperor	<i>Lethrinus olivaceus</i>	Emperors (Lethrinidae)
351027	Lethrinidae	Mozambique bream	<i>Wattsia mossambica</i>	Emperors (Lethrinidae)
351911	Lethrinidae	Nor-west snapper (large/small)	<i>Lethrinus sp.</i>	Emperors (Lethrinidae)
351910	Lethrinidae	Nor-west snapper small	<i>Lethrinus sp.</i>	Emperors (Lethrinidae)
351015	Lethrinidae	Ornate emperor	<i>Lethrinus ornatus</i>	Emperors (Lethrinidae)
351022	Lethrinidae	Paddletail seabream	<i>Gymnocranius euanus</i>	Emperors (Lethrinidae)
351007	Lethrinidae	Redspot emperor	<i>Lethrinus lentjan</i>	Emperors (Lethrinidae)
351009	Lethrinidae	Redthroat emperor	<i>Lethrinus miniatus</i>	Emperors (Lethrinidae)
351005	Lethrinidae	Robinson's seabream	<i>Gymnocranius grandoculis</i>	Emperors (Lethrinidae)
351900	Lethrinidae	Seabream	<i>Gymnocranius sp.</i>	Emperors (Lethrinidae)
351008	Lethrinidae	Spangled emperor	<i>Lethrinus nebulosus</i>	Emperors (Lethrinidae)
351012	Lethrinidae	Spotcheek emperor	<i>Lethrinus rubrioperculatus</i>	Emperors (Lethrinidae)
351010	Lethrinidae	Swallowtail seabream	<i>Gymnocranius elongatus</i>	Emperors (Lethrinidae)
351002	Lethrinidae	Threadfin emperor	<i>Lethrinus genivittatus</i>	Emperors (Lethrinidae)
351014	Lethrinidae	Variiegated emperor	<i>Lethrinus variegatus</i>	Emperors (Lethrinidae)
351013	Lethrinidae	Yellowtail emperor	<i>Lethrinus atkinsoni</i>	Emperors (Lethrinidae)
346008	Lutjanidae	Bigeye snapper	<i>Lutjanus lutjanus</i>	Tropical snappers and seaperch (Lutjanidae)
346034	Lutjanidae	Blackspot snapper	<i>Lutjanus fulviflamma</i>	Tropical snappers and seaperch (Lutjanidae)

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346044	Lutjanidae	Bluestriped snapper	<i>Lutjanus kasmira</i>	Tropical snappers and seaperch (Lutjanidae)
346003	Lutjanidae	Brownstripe snapper	<i>Lutjanus vitta</i>	Tropical snappers and seaperch (Lutjanidae)
346041	Lutjanidae	Checkered snapper	<i>Lutjanus decussatus</i>	Tropical snappers and seaperch (Lutjanidae)
346017	Lutjanidae	Chinamanfish	<i>Symphorus nematophorus</i>	Tropical snappers and seaperch (Lutjanidae)
346005	Lutjanidae	Crimson snapper	<i>Lutjanus erythropterus</i>	Tropical snappers and seaperch (Lutjanidae)
346010	Lutjanidae	Darktail snapper	<i>Lutjanus lemniscatus</i>	Tropical snappers and seaperch (Lutjanidae)
346049	Lutjanidae	False fusilier	<i>Paracaesio xanthura</i>	Tropical snappers and seaperch (Lutjanidae)
346006	Lutjanidae	Fiveline snapper	<i>Lutjanus quinquelineatus</i>	Tropical snappers and seaperch (Lutjanidae)
346913	Lutjanidae	Flagfish/Spanish flag	<i>Lutjanus vitta/ quinquelineatus/ carponotatus/lutjan</i>	Tropical snappers and seaperch (Lutjanidae)
346038	Lutjanidae	Flame snapper	<i>Etelis coruscans</i>	Tropical snappers and seaperch (Lutjanidae)
346002	Lutjanidae	Goldband snapper	<i>Pristipomoides multidens</i>	Tropical snappers and seaperch (Lutjanidae)
346030	Lutjanidae	Golden snapper	<i>Lutjanus johnii</i>	Tropical snappers and seaperch (Lutjanidae)
346027	Lutjanidae	Green jobfish	<i>Aprion virescens</i>	Tropical snappers and seaperch (Lutjanidae)
346025	Lutjanidae	Indonesian snapper	<i>Lutjanus bitaeniatus</i>	Tropical snappers and seaperch (Lutjanidae)
346911	Lutjanidae	Jobfish	<i>Pristipomoides sp.</i>	Tropical snappers and seaperch (Lutjanidae)
346015	Lutjanidae	Mangrove jack	<i>Lutjanus argentimaculatus</i>	Tropical snappers and seaperch (Lutjanidae)
346016	Lutjanidae	Maori snapper	<i>Lutjanus rivulatus</i>	Tropical snappers and seaperch (Lutjanidae)
346012	Lutjanidae	Moses snapper	<i>Lutjanus russelli</i>	Tropical snappers and seaperch (Lutjanidae)
346028	Lutjanidae	Paddletail	<i>Lutjanus gibbus</i>	Tropical snappers and seaperch (Lutjanidae)
346058	Lutjanidae	Pale ruby snapper	<i>Etelis radiosus</i>	Tropical snappers and seaperch (Lutjanidae)
346910	Lutjanidae	Perch, red maroon sea perch	<i>Lutjanus sp.</i>	Tropical snappers and seaperch (Lutjanidae)
346029	Lutjanidae	Red bass	<i>Lutjanus bohar</i>	Tropical snappers and seaperch (Lutjanidae)
346004	Lutjanidae	Red emperor	<i>Lutjanus sebae</i>	Tropical snappers and seaperch (Lutjanidae)
346032	Lutjanidae	Rosy snapper	<i>Pristipomoides filamentosus</i>	Tropical snappers and seaperch (Lutjanidae)
346014	Lutjanidae	Ruby snapper	<i>Etelis carbunculus</i>	Tropical snappers and seaperch (Lutjanidae)
346001	Lutjanidae	Rusty jobfish	<i>Aphareus rutilans</i>	Tropical snappers and seaperch (Lutjanidae)
346007	Lutjanidae	Saddletail snapper	<i>Lutjanus malabaricus</i>	Tropical snappers and seaperch (Lutjanidae)
346007	Lutjanidae	Saddletail snapper	<i>Lutjanus malabaricus</i>	Tropical snappers and seaperch (Lutjanidae)

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346019	Lutjanidae	Sharptooth jobfish	<i>Pritstipomoides typus</i>	Tropical snappers and seaperch (Lutjanidae)
346000	Lutjanidae	Snappers, other	<i>Lutjanidae</i>	Tropical snappers and seaperch (Lutjanidae)
346011	Lutjanidae	Stripey snapper	<i>Lutjanus carponotatus</i>	Tropical snappers and seaperch (Lutjanidae)
346031	Lutjanidae	Tang's snapper	<i>Lipocheilus carnolabrum</i>	Tropical snappers and seaperch (Lutjanidae)
346057	Lutjanidae	Timor snapper	<i>Lutjanus timoriensis</i>	Tropical snappers and seaperch (Lutjanidae)
346040	Lutjanidae	Yellowlined snapper	<i>Lutjanus rufolineatus</i>	Tropical snappers and seaperch (Lutjanidae)
340001	Menidae	Razor moonfish	<i>Mene maculata</i>	
361002	Microcanthidae	Footballer sweep	<i>Neatypus obliquus</i>	
465039	Monacanthidae	Black reef leatherjacket	<i>Eubalichthys bucephalus</i>	
465003	Monacanthidae	Mosaic leatherjacket	<i>Eubalichthys mosaicus</i>	
465038	Monacanthidae	Modest leatherjacket	<i>Thamnaconus modestoides</i>	
465006	Monacanthidae	Ocean jacket	<i>Nelusetta ayraudi</i>	
465005	Monacanthidae	Velvet leatherjacket	<i>Meuschenia scaber</i>	
224003	Moridae	Bearded rock cod	<i>Pseudophycis barbata</i>	
224005	Moridae	Large tooth beardie	<i>Lotella rhacina</i>	
224901	Moridae	Ribaldo	<i>Mora moro</i>	
287003	Neosebastidae	Bighead gurnard perch	<i>Neosebastes pandus</i>	
287006	Neosebastidae	Thetis fish	<i>Neosebastes thetidis</i>	
228002	Ophidiidae	Pink ling	<i>Genypterus blacodes</i>	
228008	Ophidiidae	Rock ling	<i>Genypterus tigerinus</i>	
369002	Oplegnathidae	Knifejaw	<i>Oplegnathus woodwardi</i>	
466000	Ostraciidae	Boxfish/Cowfish	<i>Ostraciidae</i>	
466003	Ostraciidae	Shaw's cowfish	<i>Aracana aurita</i>	
466016	Ostraciidae	Western smooth boxfish	<i>Anoplocapros amygdaloides</i>	
466010	Ostraciidae	Whitebarred boxfish	<i>Anoplocapros lenticularis</i>	
367000	Pentacerotidae	Boarfish	<i>Pentacerotidae</i>	
367002	Pentacerotidae	Giant boarfish	<i>Paristiopterus labiosus</i>	
367003	Pentacerotidae	Longsnout boarfish	<i>Pentaceropsis recurvirostris</i>	
367001	Pentacerotidae	Yellowspotted boarfish	<i>Paristiopterus gallipavo</i>	
337076	Platycephalidae	Deepwater flathead	<i>Neoplatycephalus conatus</i>	
316009	Plesiopidae	Southern blue devil	<i>Paraplesiops meleagris</i>	
311170	Polyprionidae	Bass groper	<i>Polyprion americanus</i>	Hapuku/Bass groper/ Trevalla/Grey banded cod
311006	Polyprionidae	Hapuku	<i>Polyprion oxygeneios</i>	Hapuku/Bass groper/ Trevalla/Grey banded cod
365000	Pomacanthidae	Angelfish, general	<i>Pomacanthid sp.</i>	
365080	Pomacanthidae	Blue angelfish	<i>Pomacanthus semicirculatus</i>	
365029	Pomacanthidae	Multibar angelfish	<i>Paracentropyge multifasciata</i>	
326000	Priacanthidae	Bigeye	<i>Priacanthus sp.</i>	
326005	Priacanthidae	Lunartail bigeye	<i>Priacanthus hamrur</i>	

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326001	Priacanthidae	Spotted bigeye	<i>Priacanthus macracanthus</i>	
457001	Psettodidae	Australian halibut	<i>Psettodes erumei</i>	
313003	Pseudochromidae	Lined dottyback	<i>Labracinus lineatus</i>	
287040	Pteroidae	Common lionfish	<i>Pterois volitans</i>	
386028	Scaridae	Blackvein parrotfish	<i>Scarus rubroviolaceus</i>	Parrotfish (Scaridae)
386001	Scaridae	Bluebarred parrotfish	<i>Scarus ghobban</i>	Parrotfish (Scaridae)
386022	Scaridae	Darkcap parrotfish	<i>Scarus oviceps</i>	Parrotfish (Scaridae)
386023	Scaridae	Greencheek parrotfish	<i>Scarus prasiognathos</i>	Parrotfish (Scaridae)
386030	Scaridae	Greenfin parrotfish	<i>Chlorurus sordidus</i>	Parrotfish (Scaridae)
386009	Scaridae	Marbled parrotfish	<i>Leptoscarus vaigiensis</i>	Parrotfish (Scaridae)
386000	Scaridae	Parrotfish	<i>Scaridae</i>	Parrotfish (Scaridae)
386020	Scaridae	Steephead parrotfish	<i>Chlorurus microrhinos</i>	Parrotfish (Scaridae)
386027	Scaridae	Surf parrotfish	<i>Scarus rivulatus</i>	Parrotfish (Scaridae)
287000	Scorpaenidae	Scorpionfishes	<i>Scorpaenidae</i>	
287072	Scorpaenidae	Western red scorpionfish	<i>Scorpaena sumptuosa</i>	
361004	Scorpididae	Sea sweep	<i>Scorpius aequipinnis</i>	
287093	Sebastidae	Bigeye ocean perch	<i>Helicolenus barathri</i>	
311037	Serranidae	Banded seaperch	<i>Hypoplectrodes nigroruber</i>	Serranidae/Epinephelidae
311003	Serranidae	Barber perch	<i>Caesioperca rasor</i>	Serranidae/Epinephelidae
311044	Serranidae	Barramundi cod	<i>Cromileptes altivelis</i>	Serranidae/Epinephelidae
311135	Serranidae	Blowhole perch	<i>Caesiocorpius theagenes</i>	Serranidae/Epinephelidae
311005	Serranidae	Harlequin fish	<i>Othos dentex</i>	Serranidae/Epinephelidae
311132	Serranidae	Leopard wirrah	<i>Acanthistius pardalotus</i>	Serranidae/Epinephelidae
311133	Serranidae	Orange-lined wirrah	<i>Acanthistius paxtoni</i>	Serranidae/Epinephelidae
311098	Serranidae	Red seaperch	<i>Hypoplectrodes cardinalis</i>	Serranidae/Epinephelidae
311182	Serranidae	Red-lined seaperch	<i>Caesioperca sp.</i>	Serranidae/Epinephelidae
310000	Serranidae	Sea perches, general	<i>Caesioperca sp.</i>	Serranidae/Epinephelidae
311035	Serranidae	Western wirrah	<i>Acanthistius serratus</i>	Serranidae/Epinephelidae
311085	Serranidae	Whitelined rockcod	<i>Anyperodon leucogrammicus</i>	Serranidae/Epinephelidae
311199	Serranidae	Wirrahs, general	<i>Acanthistius sp.</i>	Serranidae/Epinephelidae
311000	Serranidae/ Epinephelidae	Cod, general	<i>Serranidae/ Epinephelidae</i>	Serranidae/Epinephelidae
353006	Sparidae	Frypan bream	<i>Argyrops spinifer</i>	
353001	Sparidae	Snapper	<i>Pagrus auratus</i>	Pink snapper
353000	Sparidae	Snappers/Bream general	<i>Sparidae</i>	
353002	Sparidae	Yellowback bream	<i>Dentex spariformis</i>	
287049	Synanceiidae	Estuarine stonefish	<i>Synanceia horrida</i>	
287022	Synanceiidae	Pacific monkeyfish	<i>Erosa erosa</i>	
287089	Synanceiidae	Reef stonefish	<i>Synanceia verrucosa</i>	
118028	Synodontidae	Common saury	<i>Saurida tumbil</i>	
118004	Synodontidae	Fishnet lizardfish	<i>Synodus sageneus</i>	
118001	Synodontidae	Largescale saury	<i>Saurida undosquamis</i>	
118000	Synodontidae	Lizardfishes/Grinners, general	<i>Synodontidae</i>	

Species code	Family name	Common Name	Scientific Name	Category one demersal group
118002	Synodontidae	Painted grinner	<i>Trachinocephalus myops</i>	
118023	Synodontidae	Variegated lizardfish	<i>Synodus variegatus</i>	
288010	Triglidae	Eye gurnard	<i>Lepidotrigla argus</i>	
288000	Triglidae	Gurnard	<i>Triglid sp</i>	
288006	Triglidae	Latchet	<i>Pterygotrigla polyommata</i>	
288001	Triglidae	Red gurnard	<i>Chelidonichthys kumu</i>	
288002	Triglidae	Spiny gurnard	<i>Lepidotrigla papilio</i>	
400007	Uranoscopidae	Marbled stargazer	<i>Uranoscopus bicinctus</i>	
400000	Uranoscopidae	Stargazer	<i>Uranoscopus sp.</i>	
269001	Veliferidae	Common veifin	<i>Metavelifer multiradiatus</i>	
264004	Zeidae	John Dory	<i>Zeus faber</i>	
264003	Zeidae	Mirror Dory	<i>Zenopsis nebulosus</i>	

Appendix 6. Revised commercial and recreational catch of the predominant 15 and total west coast demersal scalefish species in 2005/06, based on the commercial and charter sectors' fishing returns and the 2005/06 Recreational Fishing Creel Survey

Common Name	* Commercial Sector (Tonnes) Include Metro	Recreational** Creel (Tonnes)	Recreational Creel (Number Of Fish Kept)	Recreational Charter (Tonnes)	Recreational Charter (Number Of Fish Kept)
Baldchin groper	38.5	25.4	9128	7.3	3278
Bass groper	8.7			2.9	
Blue morwong	23.1	13.6	4554	7.0	2152
Blue-eye trevalla	10.9				
Breaksea cod	7.3	18.0	18567	4.2	3138
Eightbar grouper (grey banded cod)	11.9	0.4	85	0.1	33
Emperors	220.2	8.8	7665	8.1	5562
Foxfish, Western		2.5	2564	0.4	425
Hapuku	16.6			0.2	11
Redfish	83.6	5.9	5245	4.3	4946
Ruby snapper	12.1			0.4	
Sergeant Baker		3.6	3886	0.4	334
Snapper, pink	314.5	37.5	17173	18.1	10094
Sweep, sea	0.5	3.2	2919	2.1	1455
Western Australian dhufish	201.5	176.3	33770	18.8	3230
Total Predominant 15 Species In West Coast[^]	949.4	295.3	105555	74.2	34658
Predominant 15 Species %	93.0%	98.6%	93.7%	98.2%	93.8%
Other WC demersal scalefish	66.1	4.3#	7103	1.4#	2282
Add Commonwealth Trawl	5.0				
Other WC demersal scalefish %	6.5%	1.4%	6.3%	1.8%	6.2%
Total All Species	1020.6	299.5**	112658	75.5	36940

*Commercial sector: WCDSFIMF, JASDGLF, WCDGLF, Cockburn Sound Line & Pot fishery

** Revalidated recreational creel survey data has 95% confidence interval (+/- 16.9 tonnes)

[^]See Appendix 4 for total species list

7,103 fish multiplied by 600 grms = 4.3 tonnes & 2,282 fish multiplied by 600 grms = 1.4 tonnes

Appendix 7. Revised catch of the predominant 15 species of west coast demersal scalefish during 2005/06, based on the commercial and charter sectors' fishing returns and the 2005/06 Recreational Fishing Creel Survey

Area	Recreational Sector [^]			Commercial Sector ⁺				
	Charter (tonnes)	Creel survey (tonnes)	'Wetline' (tonnes)	JASDGNL* (tonnes)	WCDGNL** (tonnes)	Cockburn Sound Line & Pot (tonnes)	Commonwealth Trawl Fishery# (tonnes)	
Kalbarri	5.5	6.9	198.8		4.6			
Abrlhos	20.5	0	281.7		6.0			
Mid-west	3.2	93.5	148.0		11.2			
Metro	31.5	112.3	-99.2		-14.4	0.7		
South	3.6	82.7	157.4	27.4				
No zone***	9.8						5	
Total pre-dominant 15 species	74.2	295.3	686.7	27.4	36.2	0.7	5	
Add other demersal species	1.4	4.3	130	13.7	0.9			
Total demersal	75.4	299.5	816.7	41.1	37.1	0.7	5	

^{*} Joint Authority Southern Demersal Gillnet and Demersal Longline Fishery

^{**} West Coast Demersal Gillnet and Demersal Longline Fishery

^{***} Data within the sub-bioregions does not include the entire catch for the West Coast Bioregion, because of incomplete returns provided by operators i.e. failing to provide a block location, so these catches cannot be included in the sub-bioregions, however these catches are put under "No zone".

⁺Data does not include South West Trawl Fishery because no catches of west coast demersal scalefish are reported for 2005/06

[^] Recreational catch only includes the catches recorded in the 2005/06 creel survey, and the charter sector. Revalidated recreational creel survey data has 95% confidence interval (+/- 16.9 tonnes)

[#] The Commonwealth Western Deepwater Trawl Fishery is outside of State jurisdiction and is included in the determination of the allowable harvest level, but not the allocation

Appendix 8. Revised area catches of predominant 15 species, based on the commercial and charter sectors' fishing returns and the 2005/06 Recreational Fishing Creel Survey

Area	Species Group	Wetline/ WCDSFIMF	Weight (Tonnes)			Recreational Creel Survey*	Charter
			CSLP	SGL	WCGL		
Kalbarri	Baldchin groper	2.9			0.8	1.2	0.7
	Blue morwong					0.1	
	Breaksea cod	0.2				0.2	0.1
	Eightbar grouper (grey banded cod)	0.6					
	Emperors *	70.2			0.1	1.7	1.9
	Redfish *	0.2			0.0		
	Ruby snapper	7.6					
	Sergeant Baker					0.0	
	Snapper, pink	109.3			2.6	2.3	2.0
	Western Australian dhufish	7.8			1.1	1.4	0.9
Total Kalbarri Area		198.8			4.6	6.9	5.5
Abrolhos	Baldchin groper	18.2			0.5	22.1	4.6
	Bass groper	0.4					
	Blue morwong	0.1			0.2		
	Blue-eye trevalla	1.9					
	Breaksea cod	0.6					0.1
	Eightbar grouper (grey banded cod)	1.1					
	Emperors *	130.2			0.1	2.4	5.1
	Foxfish, Western						0.0
	Hapuku	0.6					
	Redfish *	0.1					0.0
	Ruby snapper	2.8					
	Sergeant Baker						0.0
	Snapper, pink	86.5			2.8	6.7	5.2
	Sweep, sea	0.0					0.0
Western Australian dhufish	39.1			2.4	4.9	5.5	
Total Abrolhos		281.7			6.0	36.1**	20.5
Mid-west	Baldchin groper	10.7			1.3	16.2	0.6
	Bass groper	3.0					
	Blue morwong	1.0			0.8	0.3	0.0
	Blue-eye trevalla	1.6					
	Breaksea cod	2.1				1.7	0.1
	Eightbar grouper (grey banded cod)	2.4					
	Emperors *	18.8			0.4	7.1	0.5
	Foxfish, Western					0.0	0.0
	Hapuku	0.2					
Redfish *	0.4			0.0		0.0	

Area	Species Group	Wetline/ WCDSFIMF	Weight (Tonnes)			Recreational Creel Survey*	Charter
			CSLP	SGL	WCGL		
	Ruby snapper	1.6					
	Sergeant Baker					0.2	0.0
	Snapper, pink	45.4			3.5	9.7	0.5
	Sweep, sea	0.2				0.0	0.0
	Western Australian dhufish	60.5			5.3	58.3	1.4
Total Mid- west Area		148.0			11.2	93.5	3.2
Cockburn Sound	Snapper, pink		0.7				
	Western Australian dhufish		0.0				
Total Cockburn Sound			0.7				
Metropolitan	Baldchin groper	2.8			1.2	7.9	1.4
	Bass groper	2.9					
	Blue morwong	3.2			3.2	7.4	6.2
	Blue-eye trevalla	1.5					
	Breaksea cod	2.4			0.1	11.5	3.2
	Eightbar grouper (grey banded cod)	3.0				0.4	0.1
	Emperors *	0.5			0.0	0.0	0.0
	Foxfish, Western					1.6	0.4
	Hapuku	1.6					
	Redfish *	7.0			0.1	2.9	4.0
	Ruby snapper	0.0					
	Sergeant Baker					1.2	0.3
	Snapper, pink	37.3			3.7	12.8	7.8
	Sweep, sea	0.0				2.1	1.5
	Western Australian dhufish	37.0			6.1	64.5	6.6
Total Metropolitan Area		99.2			14.4	112.3	30.1
South	Baldchin groper	0.0		0.1		0.1	0.0
	Bass groper	2.4					
	Blue morwong	2.9		11.8		5.9	0.3
	Blue-eye trevalla	5.9					
	Breaksea cod	1.9				4.7	0.4
	Eightbar grouper (grey banded cod)	4.8					
	Emperors *						0.0
	Foxfish, Western					0.8	0.0
	Hapuku	14.2					0.2
	Redfish *	73.1		2.5		3.0	0.2
	Ruby snapper	0.0					
	Sergeant Baker					2.1	0.0
	Snapper, pink	18.0		4.6		12.7	0.4

Area	Species Group	Wetline/ WCDSFIMF	Weight (Tonnes)			Recreational Creel Survey*	Charter
			CSLP	SGL	WCGL		
	Sweep, sea	0.1		0.1		1.1	0.2
	Western Australian dhufish	33.9		8.2		52.1	1.9
Total South Area		157.4		27.4		82.7	3.6
No Zone	Baldchin groper						
	Bass groper						2.9
	Blue morwong						0.5
	Blue-eye trevalla						
	Breaksea cod						0.3
	Eightbar grouper (grey banded cod)						0.0
	Emperors *						0.5
	Foxfish, Western						0.0
	Hapuku						
	Redfish *						
	Ruby snapper						0.4
	Sergeant Baker						0.0
	Snapper, pink						2.4
	Sweep, sea						0.3
	Western Australian dhufish						2.4
Total No Zone							9.8
Total Recreational Abrolhos catch**						36.1**	
Total Revalidated 2005/06 Recreational Creel Survey						295.3*	
Total All Areas		885.1	0.7	27.4	36.2	331.4	74.2

*Revalidated recreational creel survey data (excluding Abrolhos catch) has 95% confidence interval (+/- 16.9 tonnes)

**Abrolhos recreational catch taken from Fisheries Research Report No. 175

Appendix 9. Media Releases

WA Government launches fishing package to save iconic fish for the future

Date: Monday, 17 September 2007

Western Australia's coastline between Lancelin and south of Mandurah will become an exclusive zone for recreational line fishing under a State Government move to avoid the overfishing of iconic fish such as dhufish and pink snapper.

In making the announcement today, Fisheries Minister Jon Ford said the Metropolitan Fishing Zone would exclude all commercial line and net fishing of demersal finfish.

Mr Ford said it was a significant measure that demonstrated the WA Government's commitment to ensuring sustainability of fish stocks in a metropolitan coastal region.

"Creating this Metropolitan Fishing Zone is one of the world's most innovative moves to make sure our grandkids can still catch these iconic fish in years to come," he said.

While the new Zone will exclude commercial take of demersal finfish (such as sharks and demersal scalefish), it will still allow various managed fisheries such as lobster and abalone. Demersal scalefish include iconic species such as dhufish, baldchin groper, pink snapper, red snapper and breaksea cod.

The Minister said the Zone was part of a new 'fishing management package' that would impact on the whole State, particularly the West Coast Bioregion, which stretched from Kalbarri to Black Point near Augusta.

"This package will secure fish for the future in WA by preserving key demersal fish, which new research shows are at risk of collapsing," Mr Ford said.

"New research which I'm releasing today shows that unless we take action now, stocks of key demersal fish will collapse within four to five years and these fish will all but disappear from our waters.

"Two of the 'at risk' species, dhufish and baldchin groper, are not found anywhere else in the world and WA has a responsibility to preserve them.

"I am committed to ensuring these iconic species don't become a fond and distant memory to Western Australians.

"This would be a shocking legacy for Western Australians to bear, so we must take action now to guarantee future generations are able to fish for these species."

Features of the fishing management package announced today for the WA coast are:

- Metropolitan Fishing Zone stretching from Lancelin 31°S to south of Mandurah 33°S. Excludes all commercial fishing for demersal finfish and is effective as of November. State Government funding of more than \$5million has been allocated to buy out all commercial line and demersal gill-net fishers in the Metropolitan Zone;
- New research that shows key demersal fish are under such serious pressure that stocks of these fish along the West Coast Bioregion could collapse within four to five years if action is not taken now;
- More than \$5.3million research funding over four years to undertake detailed monitoring of demersal fish catches by recreational and commercial fishers. This research will evaluate the effectiveness of management practices to rebuild these fish stocks;

- Release of a discussion paper calling for the WA community to comment on the future management of recreational fishing of demersal fish. This discussion paper is the start of a process to determine a more effective long-term strategy before July next year; and
- Interim fishing measures to protect 'at risk' demersal fish species, phased in from November until the new recreational fishing strategy is determined.

These interim measures will be:

- extending the closure to fishing for pink snapper in the Cockburn area;
- extending the existing possession limit to place of residence throughout WA;
- total protection for baldchin groper in the Abrolhos Islands; and
- a limit of four Category 1 (high risk) fish per person on aquatic charter boats operating along the WA coast.

“Growing concerns about the sustainability of key demersal fish is based on evidence of escalating fishing effort, particularly by the burgeoning recreational fishing sector,” Mr Ford said.

“The number of registered recreational boats has grown rapidly as the State’s population continues to climb. Recreational fishers have also become more effective as they have quickly adopted new technology.

“In particular, global positioning systems (GPS) and high quality sounders have now become standard items on fishing boats and this has made recreational fishing much more precise and targeted.”

The Minister said the commercial fishing sector had undergone considerable transformation in the past two years and the exclusion of commercial line and net fishers from the Metropolitan Fishing Zone recognised the significance of increasing fishing pressure in the metropolitan region.

“This action will provide immediate relief to fish stocks, but further action is necessary and the burden of responsibility cannot and should not be carried alone by commercial fishers,” he said.

“Recreational fishers in WA are to be commended for the way they have supported the existing management system based on bag and size limits, but it is clear that the problems we now face require new and innovative solutions.

“The research and discussion papers show we really need to focus on cutting back the fishing mortality of our key demersal scalefish species.”

Mr Ford said interim measures were aimed at reducing the fishing pressure on key species until the consultation period was completed by July next year, when a more effective long-term management strategy would be introduced.

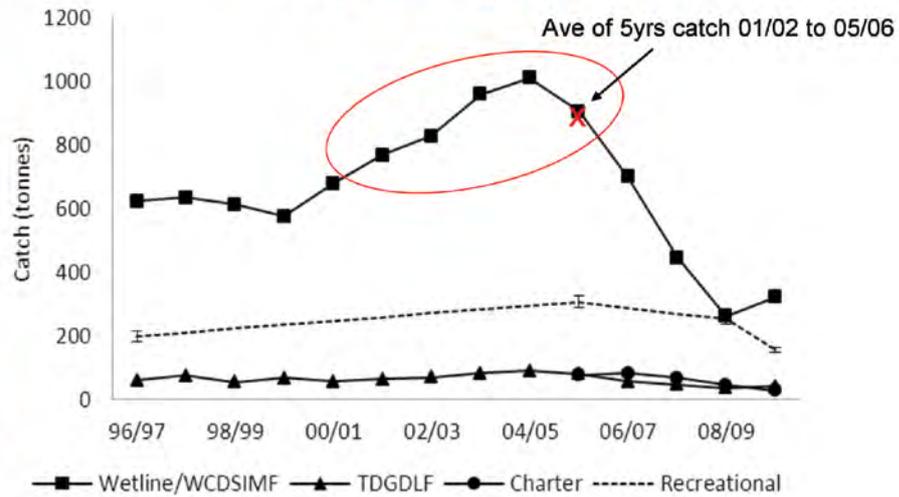
The discussion paper, which marked the beginning of the consultation process, is called 'Fisheries Management Paper No. 225 - Managing the recreational catch of demersal scalefish on the West Coast'. This paper, and the Fisheries Research Report No. 163 on the stock status of key species, is available from the Department of Fisheries website at <http://www.fish.wa.gov.au>

Media contact: N/A

Appendix 10. Long-term catch trends for each sector for the predominant 15 species of west coast demersal scalefish



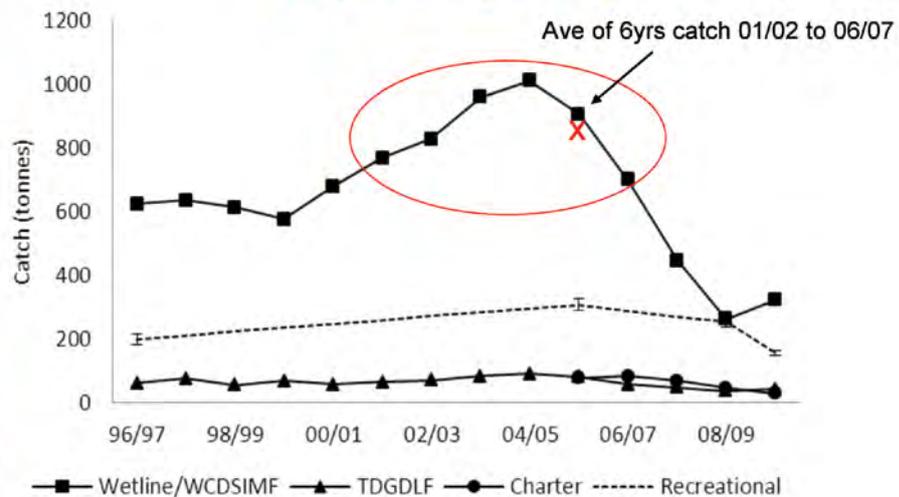
Long Term Catch Trends Top 15 species



Estimates of landed catches of **top 15 demersal species** between 1996/97 and 2009/10. Charter logbook data is presented from 2005/06 onwards. Recreational creel surveys were only undertaken in 1996/97, 2005/06, 2008/09 and 2009/10, and underestimates total recreational catch.



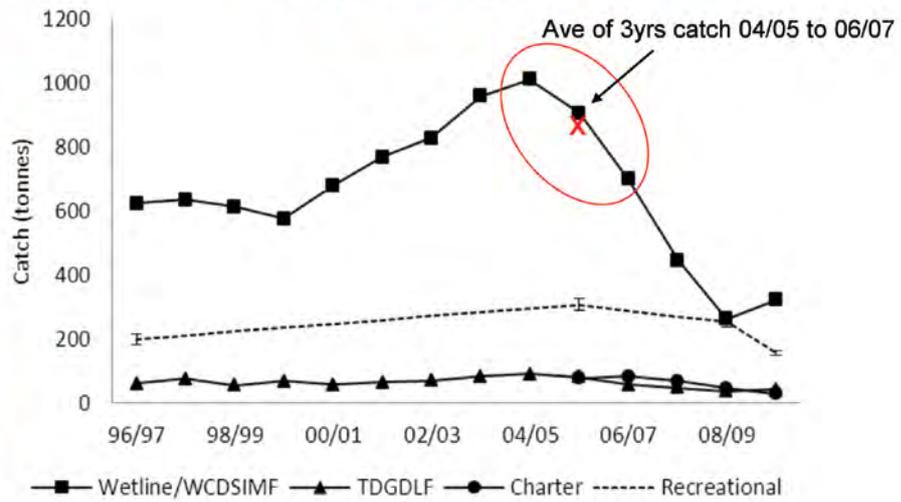
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Long Term Catch Trends Top 15 species



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