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**A FIVE-YEAR MANAGEMENT STRATEGY FOR
RECREATIONAL FISHING IN THE
PILBARA/KIMBERLEY REGION OF WESTERN
AUSTRALIA**

*Final Report of the
Pilbara/Kimberley Recreational Fishing Working Group*

FISHERIES MANAGEMENT PAPER No. 193

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for Recreational Fishing
in the Pilbara/Kimberley Region
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SECTION 1 FOREWORD

The development of this strategy represents a significant step in protecting recreational fishing quality in the Pilbara/Kimberley Region and meeting the long-term needs for the sustainable management of recreational fishing.

In its discussion paper (Fisheries Management Paper No. 181 '*A Quality Future For Recreational Fishing in the Pilbara/Kimberley Region*'), which was widely distributed and publicised, the Pilbara/Kimberley Recreational Fishing Working Group put forward a range of proposals for community discussion. These proposals were developed after meeting directly with recreational fishers in key regional centres and building on the outcomes of the regional planning processes already undertaken.

The discussion paper attracted widespread comment, with around 200 people attending public meetings in the region. In addition, 152 written submissions were received from recreational fishers, angling clubs, and other stakeholders. The Recreational Fishing Advisory Committee (RFAC) and the Pilbara/Kimberley Recreational Fishing Working Group would like to thank those people and organizations that took the time to provide this valuable feedback.

All recommendations contained in this final report, along with the action that needs to be taken to protect the long-term sustainability of our fish stocks, were only made after detailed consideration of the issues that were raised in submissions and at public meetings.

The working group recognized that some of the most pressing concerns raised during public meetings and in submissions related to the interaction between the commercial and recreational fishing sectors, as well as the provision of adequate compliance and education resources for recreational fishing.

The working group acknowledged the strong public opinion on these issues and recognized the need to take community views into the development of the final recommendations.

Finally, as Chairman, I would like to thank all the members of the working group for their voluntary efforts during the comprehensive 18-month review process. Their efforts, along with those of Western Australians who took the time to participate in the review process, will go a long way to safe guarding the future of recreational fishing in WA.

Doug Bathgate
Chairman, Recreational Fishing Advisory Committee

SECTION 2 SUMMARY OF RECOMMENDATIONS

2.1 Guiding Principles for Management

Recommendation 1 - Key Principles for Management

It is proposed that recreational fisheries management in the region be based on the following key principles, which were endorsed during the Gascoyne and West Coast planning processes:

- Government should ensure that adequate funding is available for the comprehensive research and management necessary for the effective management of recreational fishing.
- A key aim should be to ensure that the biodiversity of fish communities and their habitats and sustainability of fish stocks are preserved.
- Fisheries management should incorporate controls and measures that cover and anticipate increasing numbers of recreational fishers and their impact on fish stocks.
- Management should be based on the best available information and where critical information is unavailable a precautionary approach, which seeks to minimise risk to fish stocks, should be adopted.
- Fishing rules should acknowledge that equitable access to fishing opportunities across recreational user groups is important.
- The value of recreational fishing should be clearly recognised and given proper weight in all government and community planning processes, e.g. marine parks, industrial developments and the future development of the environment surrounding the Ord River (Ord Stage 2).
- Fishing rules should be kept simple and, where possible and practical, made uniform across the region.
- Recreational fishing rules should be designed to protect the sustainability of stocks and manage the total recreational catch, as well as protect fish at vulnerable stages in their life cycle, e.g. during spawning aggregations.
- The benefits from management of the total recreational catch should flow back to the recreational sector and be reflected in maintained or improved fishing quality and sustainability.
- Clear processes should be put into place to resolve resource-sharing issues and support the integrated management of fish stocks.

2.2 Information for Management – Biology, Catch and Fishery Performance

Recommendation 2 – Major Catch Survey

A major recreational catch survey should be undertaken every three years at a minimum to provide detailed information about the spatial and temporal distribution of recreational activity and catches on which to base management decisions. Information should also be collected on an annual basis on indicator species and areas used to monitor recreational fishing quality.

Recommendation 3 – Structured Logbook Program

The Department of Fisheries should introduce a structured angler logbook program in the Pilbara/Kimberley Region to provide ongoing information on catch trends for key species in specific regional areas. The logbook program needs to be monitored and coordinated by the Department of Fisheries, with regular feedback provided to the voluntary logbook participants.

Recommendation 4 – Priority Species for Research

Research should be undertaken on the following key recreational species in the Pilbara/Kimberley to provide information on species biology and stock structure. Predictive fisheries stock assessment models and, where practical, indices of recruitment, should then be developed for these key species:

Species	RESEARCH STATUS			
	Biology (Age at maturity, max. size, etc.)	Stock assessment (Size of the stock, health of the population, etc.)	Exploitation status (Is the current catch sustainable?)	Breeding stock level (Are there adequate numbers of mature fish?)
Tropical emperors	Limited	N/A	N/A	N/A
Tropical snappers, e.g. mangrove jack, fingermark bream	Limited	N/A	N/A	N/A
Giant and golden trevally	Limited	N/A	N/A	N/A
Giant threadfin salmon	Limited	Stock assessment in progress	N/A	N/A
Tusk fish	Limited	N/A	N/A	N/A
Cherabin	N/A	N/A	N/A	N/A
Mud crabs	Yes	N/A	N/A	N/A
Blue swimmer (manna) crabs	Yes	N/A	N/A	N/A
Estuary cod	Limited	N/A	N/A	N/A
Spanish mackerel	Yes	Yes – Commercial catch only	Fully exploited	Adequate
Sailfish	Limited	N/A	N/A	N/A
Coral trout	Limited	N/A	N/A	N/A
Barramundi	Limited	Yes - Commercial catch only	Fully exploited	Adequate
Black jewfish (northern mulloway)	Limited	N/A	N/A	N/A

NOTE: N/A indicates that data for a particular item in this table is not available.

Recommendation 5 – Fishing Quality Indicators

A range of ‘fishing quality indicators’ based on angler surveys should be developed to identify trends in fishing quality in the region and assist in the review of the effectiveness of this strategy.

These indicators should cover fishing quality, diversity and the value associated with the fishing experience.

It is proposed that the following species be used as key indicator species:

Indicator species	ENVIRONMENT WHERE SPECIES IS MOST OFTEN FOUND			
	Creeks	Near shore	Offshore demersal	Offshore pelagic
Barramundi		Giant threadfin salmon	Red emperor	Spanish mackerel
Mangrove jack		Fingermark	Spangled emperor	Sailfish
Sooty grunter		Mulloway (black jewfish)	Trevally	Cobia
Mud crabs		Blue-lined emperor	Coral trout	Northern bluefin tuna (long tail)
Cherabin			Tusk fish	Mackerel tuna
Cod - estuary and Malabar			Rankin cod	Black Marlin
Blue-nose salmon			The impact of sharks on the mortality of fish caught by line also needs to be addressed	

2.3 Protecting Vulnerable Fish and Managing the Recreational Catch

Recommendation 6 – Bag and Size Limits, Pilbara/Kimberley Region

6(a) Category 1 Fish

Category 1 Fish – total mixed daily bag limit of seven

Category 1 fish are considered to have the highest risk of overexploitation. Many fish in this category have low catch rates and levels of abundance, while others may be highly valued for their fishing and eating qualities. Many Category 1 fish are slow-growing and mature at four years-plus. For these reasons, Category 1 fish require a high degree of protection.

(Note: *denotes recommended change to current management)

Species	Species bag limit	Size limit (mm)	Other controls
Barramundi NOTE: State-wide possession limit of two. There is a bag/possession limit of one in the Ord River and a bag limit of one in the Broome area.	2	550	Max. size 800* (Ord & Fitzroy Rivers)
Billfish (sailfish, swordfish, marlins)	1*		
Cobia	2*	750*	
Cod – combined Within this bag limit you may not have more than two Rankin, estuary or Malabar cod.	4		Max. size 1000*
Coral trout and coronation trout (combined) when taken south of the De Grey River	2*	450	
when taken north of the De Grey River	1*		
Emperors – spangled, blue-lined and NW snappers (combined)	4*	410 – spangled 320 – blue-lined 280 – other	
Mackerel – shark	4	500	
Mackerel – Spanish, broad –barred	2*	750	
Mackerel – Spanish, narrow-barred	2	900	
Mackerel – wahoo	2*	900	
Mahi mahi	4	500*	
Mangrove jack When taken around the Dampier Archipelago between Cape Lambert and Cape Preston	4 2	300	
Mulloway – northern	2*	700*	
Parrot fish	4*		
Pearl perch	4*		
Pink snapper	4*	410	
Red emperor	2*	410	
Amberjack/yellowtail kingfish/Samson fish (combined)	2*	600	
Sharks and rays (combined)	2*		
Scarlet, crimson, saddle tail sea perch (combined)	4*		
Threadfin salmon – giant,	2*	450*	
Triple tail	1*	300*	
Tuna – sth, nth bluefin, yellowfin, bigeye and dogtooth	2*		
Wrasse (inc. blue bone, baldchin groper and tuskfish)	2*	400	

6(b) Category 2 Fish

Category 2 Fish – total mixed daily bag limit of 16			
<p>Category 2 fish have a moderate risk of overexploitation. Many fish in this category have moderate catch rates and levels of abundance. Category 2 fish are mostly found in inshore and estuarine areas, are highly sought after by recreational fishers and mature at three to four years. (Note: *denotes proposed change to current management)</p>			
Species	Species bag limit	Size limit (mm)	Other controls
Barracuda	4*		
Bone fish and giant herring (combined)	4*		
Bonito and tunas – (other)	8		
Bream- north-west and yellowfin(combined)	8*	350 – yellowfin* 250 – north-west	
Catfish, all species combined	8*		
Dart	8		
Flathead and flounder (combined)	8*	300 – flathead 250 – flounder	
Goatfish	8*		
Javelinfinch and sweetlips (combined)	8*	300*	
Leatherjacket	8*	250	
Mackerel – Queensland school and spotted (combined)	4	500	
Queenfish	4		
Snook and pike (combined)	8*	300	
Sooty grunter	8*	250*	
Tarwhine	16*	230	
Threadfin salmon – other species (combined)	4		
Trevally (combined)	4*		
Tropical sea perch and snappers – other Lutjanus species including fingermark and job fish (combined)	4*	300 (stripey sea perch and fingermark)*	

6(c) Category 3 Fish

Category 3 Fish – total mixed daily bag limit of 40		
<p>Category 3 fish have a lower risk of overexploitation. Fish in this category generally have higher catch rates and levels of abundance and are mainly found inshore. These fish have a widespread distribution and mature at two-plus years. Category 3 fish include all fish not listed in other categories except baitfish of the sardine, anchovy and hardyhead families (Clupeidae, Engraulididae and Atherinidae), redfin perch, gold fish, carp and tilapia. (Note: *denotes proposed change to current management)</p>		
Species	Species bag limit	Other controls
Garfish	40 combined*	
Longtom		
Milkfish		
Mullet, sea and yellow-eye		
Whiting		
Unlisted species - (all species not specified except baitfish and feral freshwater species)		

6(d) Baitfish

Baitfish of the sardine, anchovy and hardyhead families (Clupeidae, Engraulididae and Atherinidae - mulies, whitebait, scaly mackerel, anchovies and hardyheads) are not included in Category 3. For these species, it is proposed to have a combined bag limit of 9 litres.

It is also proposed that mullet be treated the same as garfish and removed from the general finfish possession limit. The daily bag limit of 40 for mullet would still apply.

6(e) Crustaceans

Crustaceans		
(Note: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cherabin	9 litres	Gear controls
Crab, blue swimmer (manna)	20*	Boat limit of 40*, size limit, gear controls
Crab, mud	5*	Boat limit of 10*, size limit, gear controls Note boat limit of 20 in King Sound
Prawns, school and king	9 litres	
Rock lobster	4*	Boat limit of 8
Within this bag limit you may have no more than 2 ornate and 2 western rock lobster		Recreational licence required. Possession limit of twice bag limit outside place of residence

6(f) Molluscs and Other Reef Animals

Molluscs and other reef animals		
(Note: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cockles	9litres	
Mussels	9 litres	
Oysters	9 litres*	
Razorfish	20*	
Sea urchins	20*	
Squid, cuttlefish and octopus (combined)	15	Boat limit of 30*
All other species of edible mollusc not specifically mentioned (combined)	2 litres	

Recommendation 7 - Proposed Changes to the Current Legal Size Limits

Note: Any changes to the size limit will apply to all sectors, including commercial fishers.

Species	Old Size (mm)	New Size (mm)	Size when 50% of the stock reach maturity (mm)
Cobia		750	Reach maturity by 75cm
Cod	1200(max)	1000(max)	Change sex from female to male
Estuary cod		400	Change sex from female to male
Fingermark (golden snapper)		300	Not known
Mahi mahi (dolphin fish)		500	not known
Mulloway, northern	500	700	750
Sooty grunter		250	not known
Stripey sea perch		300	Not known
Threadfin salmon - giant		450	not known
Triple tail		300	Not known
Yellowfin bream	250	350	Change sex from female to male at around 350mm

Recommendation 8 - Totally Protected Fish

The following species are vulnerable to overfishing due to their limited distribution or low abundance levels and should be totally protected:

- Sawfish, all species (Family Pristidae);
- Speartooth shark (*Glyphis sp*);
- Queensland groper (*Ephinephelus lanceolatus*);
- Barramundi cod (*Cromileptes altivelis*); and
- Baler shells (*Melo sp*) - proposed prohibition on the collection of live shell.

Recommendation 9 - Haul Net Fishing

Haul nets should only be permitted to target species that cannot be caught by line and where there is a low risk of other species being taken. Therefore the use of haul nets should be prohibited in the Pilbara/Kimberley Region, with the only exception being that haul netting should be allowed in the waters of the Dampier Archipelago with the following conditions:

- Maximum length of haul net to be 30 metres.
- Mullet be the only species permitted to be retained when using a net.

Recommendation 10 – Red Claw Traps in Lake Kununurra

Due to the number of red claw in Lake Kununurra, a structured gear trial should be undertaken to assess the viability of using rigid traps to allow the take of red claw. The gear trial should be supervised by the Department of Fisheries and involve members of the East Kimberley Regional Recreational Fishing Advisory Committee.

2.4 Protecting and Enhancing Recreational Fishing Quality

Recommendation 11 – Fishing Competitions

11 (a) All fishing competitions with greater than 50 participants should be formally registered in advance with the Department of Fisheries.

11 (b) Competition organisers should be required to keep an accurate record of the participation, catch and effort in each competition and forward catch returns to the Department of Fisheries for inclusion in the recreational fisheries database. If possible, information should be entered in an electronic format which is compatible with the recreational fishing database. The Department of Fisheries will be responsible for issuing data sheets and an identified ‘contact person’ should exist in the Department of Fisheries to liaise with the fishing clubs.

11 (c) To ensure fishing competitions are conducted in line with recreational fishing ethics and meet requirements under the *Animal Welfare Act 2002*, a formal code of conduct for fishing competitions should be developed by the Department of Fisheries in consultation with fishing clubs and organising bodies.

Recommendation 12 - Recreational Fishing Priority Areas

The importance of recreational fishing as a component of tourism and lifestyle should be recognised in fisheries management and other planning processes that impact on fish, fish habitats or fishing activity.

In particular, recreational fishing should be recognised as a priority activity in the following areas:

- Ord River;
- King Sound;
- Inshore waters and creeks around Broome;
- Dampier Archipelago;
- Monte Bello Islands;
- Fitzroy River;
- Keep River, near Kununurra (joint management arrangements should be developed with Northern Territory Fisheries, as this river is located within the borders of the NT);
- Cambridge Gulf;
- Rowley Shoals;
- Buccaneer Archipelago;
- Cape Keraudrin;
- De Grey River;
- Cape Lambert to Reef Island (Shirlock Bay);
- Nickol Bay to Cape Lambert (crabs, barramundi, threadfin salmon);
- Offshore island groups in the Pilbara;
- Rowley Shoals;
- Scott Reef; and
- Inshore waters around Port Hedland.

Recommendation 13 – Code of Conduct for Accessing Pastoral and Mining Leases and Aboriginal Land

That a code of conduct be developed for recreational fishers accessing fishing locations through pastoral and mining leases and Aboriginal land. The code should be developed in consultation with land owners/lease holders and should contain the following elements:

- Any fish frames or offal are removed, dumped in the ocean or buried.
- All gates that are shut must be left shut.
- No standing trees or shrubs are to be cut down for firewood.
- All human waste must be buried at least 50 metres from any water course.
- Under no circumstance should any fences be cut or interfered with.
- No rubbish should be left behind.
- Any machinery or equipment that is the property of the station owner should not be interfered with.
- Aboriginal land can only be entered with the approval of the Aboriginal land owners.
- People should not camp within 200 metres of any watering point to avoid disturbing stock.
- Firearms or dogs should not be taken onto stations without the approval of the station owner.

Recommendation 14 – Access to Pastoral and Mining Leases and Aboriginal Land

That recreational fishing representatives in each region should enter into negotiations with owners/lease holders owners to define access routes to fishing locations. These routes and the code of conduct should be promoted by the Department of Fisheries in advisory material.

Recommendation 15 - Stock Enhancement

To assist with the creation of an inland still water barramundi fishery, the Government should support the construction of a ‘fishway’ at Lake Kununurra, if it proves to be both feasible and environmentally acceptable.

2.5 Protection of Fish Habitats

Recommendation 16 - Resource Sharing

16 (a) The following species should be considered as a priority for total catch management under an integrated management framework:

- Northern demersal species;
- Mackerel;
- Barramundi;
- Threadfin salmon; and
- Blue swimmer (manna) crabs.

For each species, a forum should be held with key stakeholders, including from the recreational, commercial, indigenous and conservation sectors, to identify key issues which need to be taken into consideration in the development of an integrated management plan for the Pilbara/Kimberley Region.

16 (b) As an interim step to integrated fisheries management the ‘Barramundi Accord’ should be reviewed as a matter of priority to resolve spatial resources sharing issues within the fishery.

16 (c) That unmanaged commercial wetline fishing in the Pilbara be brought under management as a matter of priority for reasons of sustainability.

2.6 Improving Community Stewardship – Education and Compliance

Recommendation 17 – Low Impact Wilderness Fishing Experiences

A number of ‘wilderness fishing areas’ should be established to provide opportunities for high-quality fishing experiences. The following guiding principles should be used for the management of the wilderness areas:

- Low take;
- Low environmental impact; and
- A code of practice should be developed for recreational fishing in the area.

The following areas should be managed on a trial basis as remote wilderness fishing areas:

- Kalumburu;
- Rowley Shoals;
- Scott Reef;
- Ord River;
- Dampier Archipelago;
- Fortescue River to Robe River;
- Cockatoo Island to Wyndham; and
- Highly valued 'wild rivers' which are pristine in nature. These rivers should be considered as potential Fish Habitat Protection Areas and closed to commercial fishing.

Recommendation 18 - Pilbara/Kimberley Region Community Education Plan

A recreational fisheries community education plan should be developed for the Pilbara/Kimberley Region which focuses on the issues and species that are most important in the region. The plan should seek to keep the recreational fishing community informed of management decisions, give a clear lead on the values and attitudes which will assist in sustaining fish stocks, and develop a broad community recognition of the value of recreational fishing.

The plan should, at minimum, contain the following elements:

18(a) Regional Fishing Guide

A comprehensive regional guide to recreational fishing in the Pilbara/Kimberley Region should be produced to inform and educate fishers about recreational fishing management arrangements, fishing ethics, research, conservation issues and promoting stewardship for fish stocks and the environment.

18(b) Educational Resource Materials

Adequate quantities of practical educational tools such as measuring gauges, fish rulers, adhesive bag limit guides and boat ramp and fishing venue signs should be produced to support the regional fishing guide.

18(c) Annual Media Campaign

An annual media campaign should be implemented to promote recreational fishing and fishing ethics in the region.

18(d) Volunteer Involvement in Education

The establishment and development of volunteer groups in structured fisheries education activities should be encouraged across the region.

Recommendation 19 – Additional Patrol Capacity

That an additional three patrols (six Fisheries and Marine Officers) should be dedicated to recreational field compliance and education activities during peak fishing seasons in the Pilbara/Kimberley Region.

These resources should be allocated to the following areas:

- Port Hedland/Karratha
- Derby/Broome
- Kununurra

Recommendation 20 - VFLO Program

That the Volunteer Fisheries Liaison Officer (VFLO) program should be established in all key regional centres in the Pilbara/Kimberley Region to promote awareness of the fishing rules and encourage fishers to treat fish stocks with a sense of personal responsibility and stewardship.

Recommendation 21 – Regional Fishing Management Officer

A regional Fisheries Management Officer should be appointed to coordinate the implementation of the Pilbara/Kimberley Regional Review, assist with the development of integrated fisheries management plans for key fisheries in the region and coordinate the regional VFLO program.

SECTION 3 REVIEW PROCESS AND OVERVIEW OF PUBLIC SUBMISSIONS

3.1 Review Process

The Pilbara/Kimberley Regional Recreational Fishing Strategy is the third regional planning strategy to be undertaken in Western Australia. Regional recreational strategies have already been implemented for the Gascoyne and West Coast Regions.

The development of the Pilbara/Kimberley strategy commenced with a Recreational Fishing Advisory Committee (RFAC) planning day in April 2003. The purpose of this planning day was to review the outcomes of the Gascoyne and West Coast planning processes and develop proposals for the future management of recreational fishing in the Pilbara/Kimberley Region.

The outcomes from this planning day laid the foundation for the Pilbara/Kimberley strategy. A Drafting and Review Working Group was appointed to oversee the development of a draft strategy and assist with the review of public submissions. The working group consisted of the following membership:

Chairman – Mr Doug Bathgate, Chairman of RFAC

Executive Officer – Mr Nathan Harrison, Department of Fisheries

Working Group Members

Mr Dennis Bryan-Smith, Community Representative (Dampier)

Ms Sara Hennessy, RFAC, West Kimberley Regional RFAC

Mr Scott Goodson, RFAC, East Kimberley Regional RFAC

Mr Frank Prokop, Recfishwest

Mr Ian Curnow, Department of Fisheries.

The draft strategy (Fisheries Management Paper No. 181 ‘*A Quality Future For Recreational Fishing in the Pilbara/Kimberley Region*’) was released in July 2004 for public comment. The draft strategy was publicised through print and electronic media and by direct mail. Public meetings were held in the following regional centres to brief the community on the issues and proposals raised in the discussion paper:

- Karratha
- Port Hedland
- Broome
- Derby
- Kununurra

Most of the public meetings were well attended and members of the community used the opportunity to comment on the virtues of the different proposals contained in the discussion paper. A total of 152 submissions had been received at the close of the submission period.

Following the close of public submission, the drafting and review working group met in late 2004 to discuss the submissions and formulate final recommendations to the Minister for Fisheries.

All matters raised in submissions or at public meetings were carefully considered by the working group, prior to finalising the recommendations contained in this report.

3.2 Overview of Public Submissions

The Department of Fisheries and the working group would like to thank the individuals and associations who took the time to complete submissions on the proposals and issues outlined in its discussion paper.

A total of 152 written submissions were received from:

- 129 individuals;
- Six charter operators;
- Five fishing clubs and recreational fishing associations
- Two interest groups;
- Three Regional Recreational Fishing Advisory Committees;
- Six commercial operators and commercial fishing associations; and
- One Government department.

The comments and suggestions put forward in the submissions provided valuable feedback for the Pilbara/Kimberley Recreational Fishing Working Group. The working group considered not only the frequency with which issues were raised, but also discussed the validity of various comments. The working group also noted and considered views and issues raised during the public meetings held around the region.

The working group's proposals on managing the recreational catch and resource sharing attracted the greatest comment. The key issues raised by the community on all proposals are detailed in Section 4 - Issues and Recommendations.

A summary of the level of support for each proposal as indicated in submissions is attached in Appendix B.

SECTION 4 ISSUES AND RECOMMENDATIONS

The Pilbara/Kimberley Recreational Fishing Working Group's draft strategy (Fisheries Management Paper No. 181) provided detailed rationale on the proposals and should be read in conjunction with this paper.

4.1 Guiding Principles for Management

The discussion paper proposed guiding principles for the management of recreational fishing in the Pilbara/Kimberley Region. These principles were consistent with those endorsed during the Gascoyne and West Kimberley planning processes.

There was strong community support (90 per cent) for the proposed principles for management. The working group did not consider that any of the matters raised by persons who disagreed warranted change to the original proposal. On this basis, and given the strong community support and the endorsement for these principles in previous reviews, the working group recommended that the draft principles for management apply to the region.

Recommendation 1 – Key Principles for Management

- Government should ensure that adequate funding is available for the comprehensive research and management necessary for the effective management of recreational fishing.
- A key aim should be to ensure that the biodiversity of fish communities and their habitats and sustainability of fish stocks are preserved.
- Fisheries management should incorporate controls and measures that cover and anticipate increasing numbers of recreational fishers and their impact on fish stocks.
- Management should be based on the best available information and where critical information is unavailable a precautionary approach, which seeks to minimise risk to fish stocks, should be adopted.
- Fishing rules should acknowledge that equitable access to fishing opportunities across recreational user groups is important.
- The value of recreational fishing should be clearly recognised and given proper weight in all government and community planning processes, e.g. marine parks, industrial developments and the future development of the environment surrounding the Ord River (Ord stage 2).
- Fishing rules should be kept simple and where possible and practical, made uniform across the region.
- Recreational fishing rules should be designed to protect the sustainability of stocks and manage the total recreational catch, as well as protect fish at vulnerable stages in their life cycle, e.g. during spawning aggregations.

- The benefits from management of the total recreational catch should flow back to the recreational sector and be reflected in maintained or improved fishing quality and sustainability.
- Clear processes should exist to resolve resource-sharing issues and support the integrated management of fish stocks.

4.2 Information for Management – Biology, Catch and Fishery Performance

The Pilbara/Kimberley Recreational Fishing Working Group's proposal for a major catch survey to collect quality time-series data on recreational fishing activity and introduce a volunteer angler logbook program received 90 per cent support in submissions.

Comments in the submissions agreed that comprehensive catch and effort information is essential for the effective management of recreational fishing and also to assist with the resolution of resource-sharing issues.

The working group believe that major creel surveys should be conducted at a minimum of every three years and, preferably, over shorter periods if funding is available.

Around 70 per cent of submissions supported the establishment of a volunteer angler logbook program. The primary reasons given as to why some people did not support this proposal were concerns over the accuracy of information recorded in a voluntary logbook, and that the log books may not give an accurate representation of recreational catches.

The working group is of the view that the logbook should not be used to provide quantitative assessment of total recreational catches, but rather will provide valuable information on trends among regular fishers. This information may provide an early indication of problems requiring further research or management.

The working group also noted that for any logbook program to work effectively, it is important that the volunteers who supply information receive feedback on a regular and ongoing basis. For a logbook program to be successful, adequate resources must be set aside for the coordination and administration of the logbook program.

Recommendation 2 – Recreational Catch Survey

A major recreational catch survey should be undertaken every three years at a minimum to provide detailed information about the spatial and temporal distribution of recreational activity and catches on which to base management decisions. Information should also be collected on an annual basis on indicator species and areas used to monitor recreational fishing quality.

Recommendation 3 – Volunteer Angler Logbook Program

The Department of Fisheries should introduce a structured angler logbook program in the Pilbara/Kimberley Region to provide ongoing information on catch trends for key species in

specific regional areas. The logbook program needs to be monitored and coordinated by the Department of Fisheries, with regular feedback provided to the voluntary logbook participants.

4.3 Species Biology

In its discussion paper, the working group identified the need for more research on key recreational species in the Pilbara/Kimberley Region. While a considerable amount of biological information is known about some species, little stock assessment information is available on most species.

The working group's proposal for a list of priority species for research received 93 per cent support in submissions. Given the strong community support and the need for additional research to assist with the sustainable management of key species, the working group endorsed the proposed list of species with the inclusion of black jewfish (northern mullet), because of its importance as a key recreational species around Port Hedland.

Recommendation 4 – Priority Species for Research

Species	RESEARCH STATUS			
	Biology (Age at maturity, max. size etc.)	Stock assessment (Size of the stock, health of the population, etc.)	Exploitation status (Is the current catch sustainable?)	Breeding stock level (Are there adequate numbers of mature fish?)
Tropical emperors	Limited	N/A	N/A	N/A
Tropical snappers, e.g. mangrove jack, fingermark bream	Limited	N/A	N/A	N/A
Giant and golden trevally	Limited	N/A	N/A	N/A
Threadfin salmon	Limited	Stock assessment in progress	N/A	N/A
Tusk fish	Limited	N/A	N/A	N/A
Cherabin	N/A	N/A	N/A	N/A
Mud crabs	Yes	N/A	N/A	N/A
Blue swimmer (manna) crabs	Yes	N/A	N/A	N/A
Estuary cod	Limited	N/A	N/A	N/A
Spanish mackerel	Yes	Yes – Commercial catch only	Fully exploited	Adequate
Sailfish	Limited	N/A	N/A	N/A
Coral trout	Limited	N/A	N/A	N/A
Barramundi	Limited	Yes - Commercial catch only	Fully exploited	Adequate
Black jewfish (northern Mullet)	Limited	N/A	N/A	N/A

NOTE: N/A indicates that data from a particular item in this table is not available.

4.4 Quality Indicators for Recreational Fishing

The working group’s proposed list of species ‘fishing quality indicators’ received 86 per cent support in submissions. The working group did not consider that any of the matters raised by persons who disagreed warranted change to the original proposal.

During the public meetings and in submissions, many anglers expressed a desire to be involved in research, which will assist in the effective management of the recreational fishery. Collecting information on key ‘signature’ species, which are recognised as important to the recreational fishery, represents a real opportunity for anglers to participate in recreational fisheries research.

The indicators should cover fishing quality, diversity and the value associated with the fishing experience.

Importantly, data collected on indicator species may provide valuable trend information on the level of abundance and sizes for each key species in years between major creel surveys. Due to the targeting of pelagic species by recreational fishers in the Pilbara and West Kimberley, the working group supported the inclusion of long tailed tuna (northern bluefin), mackerel tuna and black marlin in the list of indicator species.

Recommendation 5 – Fishing Quality Indicators

A range of ‘fishing quality indicators’ based on angler surveys should be developed to identify trends in fishing quality in the region and assist in the review of the effectiveness of this strategy.

The following species should be used as key indicator species.

Indicator species	ENVIRONMENT WHERE SPECIES IS MOST OFTEN FOUND			
	Creeks	Near shore	Offshore demersal	Offshore pelagic
Barramundi	Giant threadfin salmon	Red emperor	Spanish mackerel	
Mangrove jack	Fingermark	Spangled emperor	Sailfish	
Sooty grunter	Mulloway (black jewfish)	Trevally	Cobia	
Mud crabs	Blue-lined emperor	Coral trout	Northern bluefin tuna (long tail)	
Cherabin		Tusk fish	Mackerel tuna	
Cod- estuary and Malabar		Rankin cod	Black Marlin	
Blue nose salmon		The impact of sharks on the mortality of fish caught by line also needs assessment		

4.5 Protecting Vulnerable Fish and Managing the Recreational Catch

4.5.1 Bag limits

In the draft discussion paper (Fisheries Management Paper No. 181) the working group endorsed the implementation of the three-tiered bag limit structure that was developed during the West Coast and Gascoyne Regional Reviews.

Generally, there was strong community support for the bag limit structure and most comment related specifically to the bag limits proposed for individual species. When reviewing submissions and comments, the working group were mindful that the bag limits needed to be linked back to the abundance and biology of fish and the level of risk of over-exploitation, rather than just placing 'socially acceptable' limits on different species.

With respect to the proposed bag limit categories, the following feedback was received in submissions.

Category 1 Fish

The proposed mixed bag limit of seven for Category 1 Fish received good support (69 per cent) in submissions. Importantly, of the submissions that disagreed, 16 per cent indicated that they believed the proposed bag limits were too high (i.e. there was a minimum of 84 per cent support for the proposed new limits).

The proposed individual species bag limits received slightly less support (61 per cent) and a number of comments were received on the proposed bag limit for some key species. These comments primarily related to barramundi, mangrove jack, the mixed bag limit for scarlet, crimson and saddle-tail sea perch, triple tail and threadfin salmon:

Barramundi: Comments made in submissions and in the public meetings pointed to the fact that the Ord River is a focal area for barramundi fishing and has been managed as a high-value recreational fishery. Standardising management with other areas in the Pilbara/Kimberley will result in a loss of 'premier' fishery status for the Ord, which could have implications in the long-term management of this area as a priority area for high-quality recreational fishing. The working group support this view and recommend that the current management arrangements for the Ord, including the possession limit of one barramundi, be maintained.

Mangrove jack: The working group's original proposal was that the bag limit for mangrove jack be split within the Pilbara/Kimberley Region, with a bag limit of two applying south of the De Grey River and a bag limit of four applying to the north. Comments were made in submissions and during the public meetings that people often fish specifically for mangrove jack in creek systems in the Pilbara, particularly around Port Hedland. Given their level of abundance a bag limit of 4 was suggested for the whole region.

The working group also noted that there was strong community support for the proposed bag limit of two around the Dampier area because of the value associated with mangrove jack, which is often treated as a 'catch and release' species. Some community members around Dampier saw a reduced bag limit as a way of improving the quality of the recreational fishery for this species.

The working group was advised that the mangrove jack which are targeted in creek systems are juvenile fish and that the bulk of the breeding population is located offshore. Given that the recreational fishing pressure is not largely based on the adult population, the working group

believed a more uniform bag limit could be adopted around the region. Taking into account the views expressed in the Dampier/Karratha area, the working group support a bag limit of four for mangrove jack, with a separate bag limit of two in the Dampier Archipelago (Cape Lambert to Cape Preston).

Scarlet, crimson and saddle-tail sea perch: A number of comments were made that the combined bag limit of two for these species represents a tighter control than the proposed bag limit for similar species such as red emperor (proposed bag limit of two). Given levels of abundance and fishing pressure, it was suggested that a bag limit of between four to seven apply as a combined bag limit for these species.

The principle that has been adopted for Category 1 Fish is that a species bag limit of four should apply, unless otherwise justified. Many of these species are long-lived, slow-growing and targeted by anglers for their eating qualities. For these reasons, the working group support a mixed bag limit of four for scarlet, crimson and saddle-tail sea perch.

Triple tail: Due to low levels of abundance and targeting, it was proposed in some submissions that the bag limit be one rather than four fish. Catch data is not available for triple tail, but anecdotal evidence suggests these fish are targeted around moorings and are vulnerable to over fishing. Tagging results have also indicated that these fish are highly residential in nature. The working group support a bag limit of one for triple tail because of their highly vulnerable nature.

Giant threadfin salmon: Comments in some submissions supported a bag limit of two for giant threadfin salmon. The primary reasons put forward were the size of the fish, significant targeting of migrating schools after the wet season and their relative level of abundance.

Threadfin salmon are highly targeted in the West and East Kimberley and besides being valued as a food fish, catch surveys indicate over half the threadfin captured in the Pilbara are released. For these reasons, the working group supported a bag limit of two for giant threadfin salmon. The working group also noted that identification issues exist between the different threadfin salmon species and any proposal that results in different limits between species would need to be accompanied by comprehensive educational materials.

Given the level of community support for the remainder of the Category 1 species, the working group endorsed the Category 1 bag limits with the amendments identified above.

Recommendation 6 – Bag and Size Limits, Pilbara/Kimberley Region

The following bag limits be adopted in the Pilbara/Kimberley Region:

6(a) Category 1 Fish

Category 1 Fish – total mixed daily bag limit of seven			
<p>Category 1 fish are considered to have the highest risk of overexploitation. Many fish in this category have low catch rates and levels of abundance, while others may be highly valued for their fishing and eating qualities. Many Category 1 fish are slow growing and mature at four years plus. For these reasons, Category 1 fish require a high degree of protection.</p> <p>(Note: *denotes change to current management)</p>			
Species	Species bag limit	Size limit (mm)	Other controls
Barramundi	2	550	Max. size 800mm (Ord & Fitzroy Rivers)
Note: State-wide possession limit of 2 Bag/possession limit of 1 in the Ord River Bag limit of 1 in the Broome area Billfish (sailfish, swordfish, marlins)	1*		
Cobia	2*	750*	Max. size 1000mm*
Cod – combined Within this bag limit you may not have more than 2 Rankin, Estuary or Malabar cod	4		
Coral trout and coronation trout (combined) when taken south of the De Grey River when taken north of the De Grey River	2 1	450	
Emperors – spangled, blue-lined and NW snappers (combined)	4*	410 – spangled 320 – blue-lined 280 – other	
Mackerel – shark	4	500	
Mackerel – Spanish, narrow-barred	2*	900	
Mackerel – Spanish, broad-barred	2	750	
Mackerel – wahoo	2*	900	
Mahi mahi	4	500*	
Mangrove jack when taken around the Dampier Archipelago (between Cape Lambert and Cape Preston)	4 2	300	
Mulloway – northern	2*	700*	
Parrot fish	4*		
Pearl perch	4*		
Pink snapper	4*	410	
Red emperor	2*	410	
Samson fish/amberjack/yellowtail kingfish (combined)	2*	600	
Sharks and rays (combined)	2*		
Scarlet, crimson, saddle-tail sea perch (combined)	4*		
Threadfin salmon – giant,	2*	450*	
Triple tail	1*	300*	
Tuna – sth, nth bluefin, yellowfin, bigeye and dogtooth	2*		
Wrasse (inc. blue bone, baldchin groper and tuskfish)	2*	400	

6(b) Category 2 Fish

The proposal by the working group of a mixed bag limit of 16 for Category 2 Fish received good support (66 per cent in submissions). However, the working group noted 25 per cent of those submissions that disagreed felt the proposed mixed bag limit was too high. That is, the majority (91 per cent) of submissions supported the proposed limits as a minimum.

The proposed individual species limits also received a high level of support (86 per cent) in submissions. Comments raised in submissions indicated that fingermark and job fish are key demersal species in the region and required specific inclusion in the bag limit for other tropical emperors and snappers.

Recfishwest also identified ‘dart’ as being a key recreational species that is often targeted by people fishing sheltered embayments and shallow flats. Dart may share a similar biology to trevally which can be long-lived. The working group therefore support the inclusion of dart in Category 2. Given the high level of community support, the working group endorsed the Category 2 bag limits with the amendments identified above.

Category 2 Fish – total mixed daily bag limit of 16			
Category 2 fish have a moderate risk of overexploitation. Many fish in this category have moderate catch rates and levels of abundance. Category 2 fish are mostly found in inshore and estuarine areas, are highly sought after by recreational fishers and mature at three to four years. (Note: *denotes proposed change to current management)			
Species	Species bag limit	Size limit (mm)	Other controls
Barracuda	4*		
Bone fish and giant herring (combined)	4*		
Bonito and tunas – (other)	8		
Bream- north-west and yellowfin (combined)	8*	350 – yellowfin* 250 – north-west	
Catfish, all species combined	8*		
Dart	8		
Flathead and flounder (combined)	8*	300 – flathead 250 – flounder	
Goatfish	8*		
Javelinfinch and sweetlips (combined)	8*	300*	
Leatherjacket	8*	250	
Mackerel – Queensland school and spotted (combined)	4	500	
Queenfish	4		
Snook and pike (combined)	8*	300	
Sooty grunter	8*	250*	
Tarwhine	16*	230	
Threadfin salmon – other species (combined)	4		
Trevally (combined)	4*		
Tropical sea perch and snappers – other Lutjanus species including fingermark and job fish (combined)	4*	300 (stripey sea perch and fingermark)*	

6(c) Category 3 Fish

The working group’s proposed mixed bag limit of 40 for Category 3 Fish received good support (68 per cent) in submissions. However, the working group noted 24 per cent of the submissions that disagreed felt the proposed mixed bag limit was too high (i.e. the majority [92 per cent] of submissions showed support for the proposal or limits). There was also strong community support (88 per cent) for the proposed mix of species.

While the working group noted that one in four people supported a lower bag limit, based on the strong support for the proposal and the lower risk status of the species, the working group endorsed the proposed Category 3 bag limits.

Category 3 Fish – total mixed daily bag limit of 40		
<p>Category 3 fish have a lower risk of overexploitation. Fish in this category generally have higher catch rates and levels of abundance and are mainly found inshore. These fish have a widespread distribution and mature at two-plus years. Category 3 fish include all fish not listed in other categories except baitfish of the sardine, anchovy and hardyhead families (Clupeidae, Engraulididae and Atherinidae), redfin perch, gold fish, carp and tilapia.</p> <p>(Note: *denotes change to current management)</p>		
Species	Species bag limit	Other controls
Garfish Longtom Milkfish Mullet, sea and yellow-eye Whiting Unlisted species - (all species not specified except baitfish and feral freshwater species)	40 combined*	

6(d) Baitfish

Baitfish of the sardine, anchovy and hardyhead families (Clupeidae, Engraulididae and Atherinidae. NOTE: Mulies, whitebait, scaly mackerel, anchovies, hardyheads are not included in Category 3. For these species it is recommended a combined bag limit of 9 litres apply.

The proposal to have a bag limit on baitfish received strong support (84 per cent) in submissions. The working group endorsed the bag limit for baitfish.

The working group also recommend that mullet be treated the same as garfish and removed from the general finfish possession limit. The daily bag limit of 40 for mullet would still apply.

It should be noted that commercially-caught bait is not included in the bag or possession limits.

6(e) Crustaceans

There was a high level of support in submissions for the proposed changes in the crustacean bag limits (blue swimmer crab 83 per cent, mud crabs 73 per cent, rock lobster 86 per cent). Those people opposed to the bag limit for mud crabs were primarily from the Derby (King Sound) area, where the catch is predominately brown mud crabs of a small size.

In recognition of the lower fish pressure and abundance of crabs in King Sound, the East Kimberley and West Kimberley RRFAC suggested that a separate boat limit of 20 and bag limit of five mud crabs apply in King Sound, defined as “all waters south of a line from Stokes Bay to Goodenough Bay.” The working group accepted this suggestion.

Submissions from the Pilbara also indicated that it must be made clear in advisory material that the boat limit for rock lobster applies regardless of the number days the boat has been at sea - that is that the boat limit cannot be ‘accumulated’ (i.e. multiplied) by the number of days at sea. To place a ceiling on accumulated catches, the working group also support the establishment of a rock lobster possession limit outside of a person’s place of residence of twice the daily bag limit of rock lobster.

Given the overall high level of community support, the working group endorsed the crustacean bag limits with the amendments to mud crabs in King Sound identified above.

Crustaceans		
(Note: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cherabin	9 litres	
Crab, blue swimmer (manna)	20*	Boat limit of 40*, size limit, gear controls
Crab, mud	5*	Boat limit of 10*, size limit, gear controls Note boat limit of 20 in King Sound
Prawns, school and king	9 litres	
Rock lobster within this bag limit you may have no more than 2 ornate and 2 western rock lobster	4*	Boat limit of 8 Recreational licence required. Possession limit of twice the daily bag limit

6(f) Molluscus and Other Reef Animals

The proposed bag limits for molluscs and other reef animals received a high level of support (82 per cent) in submissions. A number of submissions noted that scallops were not taken by recreational divers in the region and accordingly they were removed from the table.

No other issues were raised which warranted change to the other proposed bag limits. Due to the high level of support in submissions, the working group supported the proposed bag limits with the exception of scallops, which were removed from the table.

Molluscs and other reef animals		
NOTE: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cockles	2 litres	
Mussels	9 litres	
Oysters	9 litres*	
Razorfish	20*	
Sea urchins	20*	
Squid, cuttlefish and octopus (combined)	15	Boat limit of 30*
All other species of edible mollusc not specifically mentioned (combined)	2 litres	

4.5.2 Size limits

The working group's proposed changes to the size limits for a number of species received strong community support with the exception of the proposed change to mud crabs, which received support of 61 per cent of submissions. Comments were made on the size limits for estuary cod, barramundi, cobia, sooty grunter and other tropical sea perches and snappers, which were carefully considered by the working group.

Mud crabs: The majority of the opposition to the proposed mud crab size limit was centred in Derby, where the catch is predominantly brown mud crabs. Comments made in submissions and at the public meetings indicated that the vast majority of mud crabs caught around Derby are under 150mm.

The change in the mud crab size limit was initially proposed because of problems in identifying the difference between the two mud crab species and in an effort to improve the quality of the catch by taking brown mud crabs at a larger size.

Due to the fact that there is no information to indicate there is a sustainability issue with brown mud crabs and the significant impact this change would have on the recreational catch in King Sound, the working group therefore does not support the proposed change to the size limit for brown mud crabs.

Estuary Cod: In submissions and public meetings, fishers raised concern over the targeting of juvenile estuary cod in creek and inshore environments. It was suggested by the East and West Kimberley RRFACs that a size limit of 400mm apply as a precautionary measure to protect juvenile fish which are found in the inshore environment. The working group support this suggestion.

Barramundi: Comments made in Derby suggested as an alternative to the maximum size limit a slot limit should apply where only one fish over 800mm can be retained. The working group noted that the 'Barramundi Accord' is due to be reviewed in 2005.

The Accord provides an opportunity for members of the commercial fishing industry and recreational fishing groups to meet and discuss issues around the management of the barramundi fishery. Given that a change to the maximum size limit for barramundi would affect the commercial fishing industry, the working group feel it is appropriate that this issue be referred to

the Accord review process, noting the suggested slot limit from Derby and the strong community support (80 per cent) for a maximum size limit of 800mm for barramundi.

Cobia: The East and West Kimberley RRFAC's submission suggested a size limit for cobia of 900mm. Research on the biology of cobia has not been undertaken in Australia, but research overseas indicates cobia reach maturity at three years of age, when they are around 750mm in length.

The working group believe that, where possible, the minimum size limit should be set at the size at maturity, provided significant mortality issues do not exist with released fish. Given anecdotal evidence that suggests cobia is a robust fish which can survive being released, the working group support a minimum size limit of 750mm rather than the original proposed size limit of 600mm.

Sooty grunter: The proposed minimum size of 250mm received 80 per cent support in submissions. Some submissions in the East Kimberley did not support a size limit for sooty grunter, due to the use of this species as live bait.

Members of the working group believed sooty grunter were being increasingly targeted as a sport fish and given that other species such as mullet are available to be used as live bait, a size limit to protect juvenile fish is justified. Taking into consideration the high level of support (80 per cent) in submissions, the working group endorsed the draft proposal for a size limit of 250mm.

Tropical sea perches and snappers: The proposed minimum size limit of 300mm received 73 per cent support in submissions, but it must be noted that opposition was received from the Pilbara Trap and Trawl Fishery and the Western Australian Fishing Industry Council. In 2002, a total of 543 tonnes of Spanish flag (striped sea perch) and red snapper (*Lutjanus erthropterus*) was caught in the Pilbara area by commercial line, trap and trawl fishing.

Operators in the commercial fishery also indicated that due to the gear and depth that fish are caught, any fish returned to the water would have a high mortality rate. Given the vast majority of the emperor and snapper catch is taken by the commercial fishery in offshore waters, the working group consider that a blanket minimum size limit for all tropical emperors and snappers may have limited value as a conservation measure.

As a result, rather than apply a size limit to all snappers and emperors, the working group believe it may be more appropriate to have a size limit for fingermark bream and stripey sea perch that are predominantly found in the near shore waters.

After seeking further advice from a Department of Fisheries research scientist, the working group noted that the stripey sea perch (Spanish flag) caught in inshore waters by recreational fishers is a different species to the striped sea perch (flag fish) caught in the offshore commercial trap and trawl fishery.

Recommendation 7 - Proposed Changes to the Current Legal Size Limits

Note: Any changes to the size limit will apply to all sectors including commercial fishers

Species	Old Size (mm)	New Size (mm)	Size when 50% of the stock reach maturity (mm)
Cobia		750	Around 75cm
Cod	1200(max)	1000(max)	May change sex from female to male
Estuary cod		400	May change sex from female to male
Finger mark (golden snapper)		300	Not known
Mahi mahi (dolphin fish)		500	not known
Mulloway, northern	500	700	750
Sooty grunter		250	not known
Stripey sea perch		300	Not known
Threadfin salmon – giant		450	not known
Triple tail		300	Not known
Yellowfin bream	250	350	Change sex from female to male at around 350mm

4.6 Protecting and Enhancing Recreational Fishing Quality

4.6.1 Totally protected fish

The working group's proposal to protect some species received strong community support (over 80 per cent) in submissions. Opposition to the proposal for barramundi cod was received from commercial operators in the Pilbara Trap and Trawl Fishery. This was due to mortality issues associated with the capture of this species from deep water.

While the working group acknowledged this issue, it was of the opinion that, on the basis of anecdotal evidence, barramundi cod were very low in abundance and should be treated in a similar fashion to humphead maori wrasse, which are totally protected.

The working group also noted that identification issues exist with the different species of sawfish. Taking this into consideration and the fact that sawfish are generally not retained as a food fish, the working group is of the opinion that all species of sawfish should be protected. However, it should be noted that further consultation with the Aboriginal groups may be required, due to customary fishing considerations.

Recommendation 8 – Totally Protected Fish

- Freshwater sawfish – all species (Family Pristidae);
- Speartooth shark (*Glyphis sp*);
- Queensland groper (*Ephinephelus lanceolatus*);
- Barramundi cod (*Cromileptes altivelis*); and
- Baler shells (*Melo sp*) - proposed prohibition on the collection of live shell.

4.6.2 *Net fishing*

Submissions on the two netting proposals were divided, either strongly in favour of prohibiting all netting (76 per cent) or allowing netting (31 per cent) to continue in specific areas.

The working group noted that the majority of submissions supporting netting related specifically to the Dampier Archipelago, where fishers target mullet for bait. Of those submissions received supporting netting in the Archipelago, three submissions were from associations representing groups of anglers. These associations included:

- The King Bay Gamefishing Club;
- Rosemary Island Gamefishing Club; and the
- Dampier Archipelago Preservation Association (DAPA).

During the public meetings, concern was expressed about the potential impact of haul netting in the Pilbara/Kimberley Region on threadfin salmon stocks. This was highlighted as a key issue in places like 80-Mile Beach. The working group noted that, with the exception of mullet, the majority of species caught in haul nets could be caught by line. The working group support the principle that recreational netting only be permitted to target species that cannot be caught by line, e.g. mullet. Where a bycatch of another species is likely, netting should not be permitted.

On this basis, the key issue is whether recreational fishers should be allowed to continued access to sea mullet through netting – the only means of catching this species – and what fishing methods or gear configuration should be allowed to minimise bycatch of other species.

Based on anecdotal evidence, the working group believe the bycatch issues could not be overcome in the inshore waters. However, to some extent, this could be overcome on offshore islands such as the Dampier Archipelago, where mullet aggregate in the sheltered bays and species like threadfin salmon are absent.

Recommendation 9 - Haul Net Fishing

Haul nets should only be permitted to target species that cannot be caught by line and where there is a low risk of other species being taken. Therefore the use of haul nets should be prohibited in the Pilbara/Kimberley Region, with the only exception being that haul netting should be allowed in the waters of the Dampier Archipelago with the following conditions:

- Maximum length of haul net to be 30 metres.
- Mullet be the only species permitted to be retained when using a net

4.6.3 *Fishing gear*

The working group's proposal for a gear trial to determine if red claw can be taken by purpose-built traps that overcome bycatch issues received 64 per cent support in submissions. It should be noted that 32 per cent responded that they did not have an opinion.

The working group noted that if bycatch issues are overcome, the use of traps may have application in other freshwater bodies. Given the level of community support and the fact that red claw are a feral species, the working group endorsed the gear trial proposal.

Recommendation 10 – Red Claw Traps in Lake Kununurra

Due to the number of red claw in Lake Kununurra, a structured gear trial should be undertaken to assess the viability of using rigid traps to allow the take of red claw. The gear trial should be supervised by the Department of Fisheries and involve members of the East Kimberley RRFAC.

4.6.4 Fishing competitions

The working group's proposal for registering fishing competitions and collecting catch data received a high level of support (80 per cent) in submissions. Information from fishing competitions could provide valuable information on recreational catches to assist in the management of recreational fishing. The working group endorse this proposal with the modification that the Department of Fisheries should provide a 'catch and effort' data sheet and that an identified contact person should exist in the Department of Fisheries to liaise with the fishing clubs.

Recommendation 11 – Fishing Competitions

11 (a) All fishing competitions with greater than 50 participants should be formally registered in advance with the Department of Fisheries.

11 (b) Competition organisers be required to keep an accurate record of the participation, catch and effort in each competition and forward catch returns to the Department of Fisheries for inclusion in the recreational fisheries database. If possible, information should be entered in an electronic format which is compatible with the recreational fishing database. The Department of Fisheries will be responsible for issuing data sheets and an identified 'contact person' should exist in the Department of Fisheries to liaise with the fishing clubs.

11 (c) To ensure fishing competitions are conducted in line with recreational fishing ethics and meet requirements under the *Animal Welfare Act 2002*, a formal code of conduct for fishing competitions should be developed by the Department of Fisheries in consultation with fishing clubs and organising bodies.

4.6.5 Recreational fishing priority areas

The working group's proposal for recreational fishing priority areas received a high level of support in submissions (83 per cent). Comments in submissions supported the concept of priority area for recreational fishing, which could be established to protect recreational fishing quality and managed primarily for recreational fishing values.

After reviewing comments in submissions, the working group support the addition of the Rowley Shoals, Scott Reef and the inshore waters around Port Hedland to the draft list of priority areas.

The working group reaffirmed that this initiative should be progressed through the Integrated Fisheries Management planning process for the Pilbara/Kimberley Region.

Recommendation 12 - Recreational Fishing Priority Areas

The importance of recreational fishing as a component of tourism and lifestyle should be recognised in fisheries management and other planning processes that impact on fish, fish habitats or fishing activity.

In particular recreational fishing should be recognised as a priority activity in the following areas:

- Ord River;
- King Sound;
- Inshore waters and creeks around Broome;
- Dampier Archipelago;
- Monte Bello Islands;
- Fitzroy River;
- Keep River near Kununurra (joint management arrangements should be developed with Northern Territory Fisheries, as this river is located within the borders of the NT);
- Cambridge Gulf;
- Rowley Shoals;
- Buccaneer Archipelago;
- Cape Keraudrin;
- De Grey River;
- Cape Lambert to Reef Island (Shirlock Bay);
- Nickol Bay to Cape Lambert (crabs, barramundi, threadfin salmon);
- Offshore island groups in the Pilbara;
- Rowley Shoals;
- Scott Reef; and
- Inshore waters around Port Hedland.

4.6.6 Access for recreational fishers

The working group's proposal for a code of conduct for accessing pastoral and mining leases and Aboriginal land received strong support (96 per cent). The working group endorsed this proposal, noting that state and national working groups are also taking up the issue of access to Aboriginal land.

Recommendation 13 – Code of Conduct for Accessing Pastoral and Mining Leases and Aboriginal Land

That a code of conduct be developed for recreational fishers accessing fishing locations through pastoral and mining leases and Aboriginal land. The code should be developed in consultation with land owners/lease holders and should contain the following elements:

- Any fish frames or offal are removed, dumped in the ocean or buried.
- All gates which are shut must be left shut
- No standing trees or shrubs are to be cut down for fire wood.
- All human waste must be buried at least 50 metres from any watercourse.
- Under no circumstance should any fences be cut or interfered with.
- No rubbish should be left behind.

- Any machinery or equipment that is the property of the station owner should not be interfered with.
- Aboriginal land can only be entered with the approval of the Aboriginal landowners.
- People should not camp within 200 metres of any watering point to avoid disturbing stock.
- Firearms or dogs should not be taken onto stations without the approval of the station owner.

4.6.7 Defined access routes

There was a high level of support (87 per cent) for the working group's proposal for negotiations to be undertaken with owners/lease holders to define access routes to fishing locations. Based on the strong community support, the working group endorse this proposal and considered the code of conduct should be promoted by the Department of Fisheries in advisory material.

Recommendation 14 – Access to Pastoral and Mining Leases and Aboriginal Land

That recreational fishing representatives in each region should enter into negotiations with owners/lease holders owners to define access route to fishing locations and that these routes and the code of conduct be promoted by the Department of Fisheries in advisory material.

4.6.8 Translocation and restocking

The working group's proposal for stock enhancement received a high level of support for Lake Kununurra (88 per cent) and also for Harding Dam (74 per cent). Since the release of the discussion paper (Fisheries Management No. 181), the proposal for restocking of Lake Kununurra has gained momentum.

It has been determined that a fishway is the most suitable method to allow the upstream migration of barramundi into Lake Kununurra. This particular issue will be further progressed at a fishway conference in Kununurra in 2005.

The working group noted that Harding Dam is also a drinking water supply dam and approval to undertake stocking is unlikely. The working group believes if it is feasible and environmentally acceptable, support should be given to the construction of a fishway at Lake Kununurra.

Recommendation 15 - Stock Enhancement

To assist with the creation of an inland still water barramundi fishery, the Government should support the construction of a fishway at Lake Kununurra if it proves to be both feasible and environmentally acceptable.

4.7 Resource Sharing

The working group's proposal on resource sharing received a high level of support (80 per cent). Comments in submissions and at the public meetings indicated that the recreational community supported the proposed changes to the management of the recreational fishery. However, there was a strong desire to see management changes in the commercial fishery that will help protect recreational fishing quality in the region.

A number of submissions raised specific concerns over the commercial catch of finfish from inshore waters that was believed to be directly affecting the abundance of fish available for recreational 'take', particularly near major population centres and key holiday destinations. Commercial netting in Roebuck Bay and the commercial take of demersal finfish in the Pilbara were the two activities which attracted the greatest comment.

The working group reaffirmed its position that to achieve better management of the finfish resource, a more integrated approach to management should be adopted.

The working group believe an integrated management approach is essential for managing the total impacts on the fish resources within the region. This includes not only the impacts of commercial and recreational fishers, but also takes into account customary fishing, aquaculture and wider ecological requirements.

The working group acknowledged that, given other priorities, it may be a number of years before finfish stocks in the region are managed under an integrated management framework. Despite this fact, the working group felt strongly that the management of the barramundi fishery needed to be moved forward, particularly given the progress already made under the 'Barramundi Accord'.

The working group believes the 'Accord' is a valuable interim step on the path to integrated fisheries management, which can be used to resolve spatial resource sharing issues in the fishery. In addition, the working group believe the unmanaged commercial wetline fishing in the Pilbara should be brought under management as a matter of priority for reasons of sustainability.

In the draft strategy, the working group noted that the Government was in the process of developing a strategy for Aboriginal fishing in Western Australia. At the time of writing this report, no decisions had been made by the Government with respect to customary fishing by Aboriginal people.

On this matter the working group reaffirmed its position that the recommendations contained in the final report are of general application and should apply to anyone recreational fishing. Any different rules relating to customary fishing should be developed through the Aboriginal Fishing Strategy.

Recommendation 16 - Resource Sharing

16 (a) As a priority the following species should be considered for total catch management under an integrated management framework:

- Northern demersal species;
- Mackerel;
- Barramundi;

- Threadfin salmon; and
- Blue swimmer (manna) crabs

For each species, a forum should be held with key stakeholders, including from the recreational, commercial, indigenous and conservation sectors, to identify key issues which need to be taken into consideration in the development of an integrated management plan for the Pilbara/Kimberley Region.

16 (b) As an interim step to integrated fisheries management the ‘Barramundi Accord’ should be reviewed as a matter of priority to resolve spatial resources sharing issues within the fishery.

16 (c) That unmanaged commercial wetline fishing in the Pilbara be brought under management as a matter of priority for reasons of sustainability.

4.8 Protection of Fish Habitats

4.8.1 ‘Wilderness fishing areas’

The Pilbara/Kimberley Recreational Fishing Working Group’s proposal for low impact ‘wilderness’ fishing experiences received a high level of support (76 per cent). After reviewing submissions the working group endorsed the proposal with the inclusion of the Ord River, Rowley Shoals and Scott Reef.

Recommendation 17 – Low Impact Wilderness Fishing Experiences

A number of “wilderness fishing areas” be established to provide opportunities for high quality fishing experiences. The following guiding principles should be used for the management of the wilderness areas:

- Low take;
- Low environmental impact; and a
- Code of practice should be developed for recreational fishing in the area.

The following areas should be managed on a trial basis as remote “wilderness fishing areas”.

- Kalumburu;
- Rowley Shoals;
- Scott Reef;
- Ord River;
- Dampier Archipelago;
- Fortescue River to Robe River;
- Cockatoo Island to Wyndham; and
- Highly valued ‘wild rivers’ which are pristine in nature. These rivers should be considered as Fish Habitat Protection Areas and closed to commercial fishing.

4.9 Improving Community Stewardship - Education and Compliance

The Pilbara/Kimberley Recreational Fishing Working Group's proposal for a community education plan received a very high level of support (86 per cent) in submissions. The working group believe an education plan for the region is essential for promoting awareness of fishing rules and encouraging recreational fishers to fish for the future.

With recreational fishers fishing over such a diverse range of environments within the region that are often located in remote areas, educating fishers to fish with a strong conservation ethic remains the primary strategy to ensuring compliance within the region.

Based on the very high level of community support and the need for the education plan the working group support the proposals for community education and stewardship.

Recommendation 18 - Pilbara/Kimberley Region Community Education Plan

A recreational fisheries community education plan should be developed for the Pilbara/Kimberley Region which focuses on the issues and species most important in the region. Such a plan should seek to keep the recreational fishing community informed of management decisions, give a clear lead on the values and attitudes which will assist in sustaining fish stocks and develop a broad community recognition of the value of recreational fishing.

The plan should, at minimum, contain the following elements:

18(a) – Regional Fishing Guide

A comprehensive regional guide to recreational fishing in the Pilbara/Kimberley Region be produced to inform and educate fishers about recreational fishing management arrangements, fishing ethics, research, conservation issues and promoting stewardship for fish stocks and the environment.

18(b) - Educational Resource Materials

Adequate quantities of practical educational tools, such as measuring gauges, fish rulers, adhesive bag limit guides and boat ramp and fishing venue signs, should be produced to support the regional fishing guide.

18(c) - Annual Media Campaign

An annual media campaign be implemented to promote recreational fishing and fishing ethics in the region.

18(d) Volunteer Involvement in Education

Encourage the establishment and development of volunteer groups in structured fisheries education activities across the region.

4.9.1 Field management and compliance

There was a very high level of support for the working group's proposal for additional compliance resources (86 per cent) and expanding the VFLO program (84 per cent).

The working group noted comments in submissions which indicated that the level and strength of community support for fish stock conservation is linked to the frequency of a visible fisheries management presence, as well as an effective education program.

At every public meeting there were calls for an enhanced presence of Fisheries Officers in order to provide a more effective deterrent to illegal and irresponsible fishing behaviour, and also to strongly reinforce the positive community attitudes and behaviours needed to ensure fish for the future.

The working group received positive feedback on the mobile recreational fisheries patrols which have been established over the last two years. However, communities in Derby, Kununurra and Port Hedland all supported having additional fisheries compliance resources stationed within these regional centres. Kununurra residents also pointed to the fact that Kununurra was the first town that tourists passed through when leaving the Northern Territory and visitors were often unaware of WA fishing rules.

Based on the need to provide additional compliance and education resources within the region and the strong community support, the working group endorsed the education and compliance proposals with the additional comment that Derby, Kununurra and Port Hedland should be viewed as a priority for additional compliance resources within the region.

Recommendation 19 – Additional Patrol Capacity

That an additional three patrols (six Fisheries and Marine Officers) be dedicated to recreational field compliance and education activities during peak fishing seasons in the Pilbara/Kimberley Region.

These resources should be allocated to the following areas:

- Port Hedland/Karratha;
- Derby/Broome; and
- Kununurra

Recommendation 20 - VFLO Program

That the Volunteer Fisheries Liaison Officer (VFLO) program be established in all key regional centres in the Pilbara/Kimberley Region to promote awareness of the fishing rules and encourage fishers to treat fish stocks with a sense of personal responsibility and stewardship.

4.9.2 Implementing management and education strategies

The working group's proposal that a Fisheries Management Officer be appointed to the Pilbara/Kimberley received a high level of support (77 per cent) in submissions.

The working group believe a specific person should be appointed to assist with the implementation of the plan, coordination of the VFLO program, review and implementation of the "Barramundi Accord" and provide a point of contact for recreational fisheries management within the region.

Recommendation 21 – Recreational Fishing Management Officer

A regional Fisheries Management Officer be appointed to coordinate the implementation of the Pilbara/Kimberley Regional Review, assist with the development of integrated fisheries management plans for key fisheries in the region and coordinate the regional VFLO program.

APPENDIX A LEVEL OF COMMUNITY SUPPORT FOR PROPOSALS IN DISCUSSION PAPER (FISHERIES MANAGEMENT PAPER NO. 181)

Proposal 1 - Key Principles for Management

- a) Government should ensure adequate funding is available for comprehensive research and management necessary for the effective management of recreational fishing.

Proposal 1a	Totals	%
Strongly Agree	90	72.6
Agree	31	25.0
Don't Know	1	0.8
Disagree	2	1.6
Strongly Disagree	0	0.0

- b) A key aim should be to ensure that the biodiversity of fish communities and their habitats and sustainability of fish stocks are preserved.

Proposal 1b	Totals	%
Strongly Agree	88	69.3
Agree	38	29.9
Don't Know	1	0.8
Disagree	0	0.0
Strongly Disagree	0	0.0

- c) Fisheries management should incorporate controls and measures that cover and anticipate increasing numbers of recreational fishers and their impact on fish stocks.

Proposal 1c	Totals	%
Strongly Agree	60	47.2
Agree	57	44.9
Don't Know	3	2.4
Disagree	7	5.5
Strongly Disagree	0	0.0

- d) Management should be based on the best available information and where critical information is unavailable a precautionary approach, which seeks to minimise risk to fish stocks, should be adopted.

Proposal 1d	Totals	%
Strongly Agree	46	36.8
Agree	61	48.8
Don't Know	5	4.0
Disagree	12	9.6
Strongly Disagree	1	0.8

- e) Fishing rules should acknowledge that equitable access to fishing opportunities across recreational user groups is important.

Proposal 1e	Totals	%
Strongly Agree	61	48.8
Agree	56	44.8
Don't Know	6	4.8
Disagree	2	1.6
Strongly Disagree	0	0.0

- f) The value of recreational fishing should be clearly recognised and given proper weight in all government and community planning processes, e.g. Marine Parks, industrial developments and the future development of the environment surrounding the Ord River.

Proposal 1f	Totals	%
Strongly Agree	90	71.4
Agree	32	25.4
Don't Know	3	2.4
Disagree	1	0.8
Strongly Disagree	0	0.0

- g) Fishing rules should be kept simple and, where possible and practical, made uniform across the region.

Proposal 1g	Totals	%
Strongly Agree	77	61.1
Agree	27	21.4
Don't Know	0	0.0
Disagree	21	16.7
Strongly Disagree	1	0.8

- h) Recreational fishing rules should be designed to protect the sustainability of stocks and manage the total recreational catch, as well as protect fish at vulnerable stages in their life cycle, e.g. spawning aggregations.

Proposal 1h	Totals	%
Strongly Agree	88	69.8
Agree	36	28.6
Don't Know	1	0.8
Disagree	1	0.8
Strongly Disagree	0	0.0

- i) The benefits from management of the total recreational catch should flow back to the recreational sector and be reflected in maintained or improved fishing quality and sustainability.

Proposal 1i	Totals	%
Strongly Agree	62	50.0
Agree	59	47.6
Don't Know	2	1.6
Disagree	0	0.0
Strongly Disagree	1	0.8

- j) Clear processes should exist to resolve resource sharing issues which support the integrated management of fish stocks.

Proposal 1j	Totals	%
Strongly Agree	60	47.6
Agree	44	34.9
Don't Know	5	4.0
Disagree	17	13.5
Strongly Disagree	0	0.0

Proposal 2 – Major Catch Survey

A major recreational catch survey be undertaken every three years to provide detailed information about the spatial and temporal distribution of recreational activity and catches on which to base management decisions.

As a subset, on an annual basis information should be collected on indicator species and areas to monitor recreational fishing quality.

Proposal 2	Totals	%
Strongly Agree	43	34.4
Agree	70	56.0
Don't Know	7	5.6
Disagree	3	2.4
Strongly Disagree	2	1.6

Proposal 3 – Structured Logbook Program

The Department of Fisheries introduce a structured angler logbook program in the Pilbara/Kimberley Region for key species in specific regional areas. The logbook program needs to be tightly controlled by the Department of Fisheries with regular feedback to logbook participants.

Proposal 3	Totals	%
Strongly Agree	25	20.2
Agree	63	50.8
Don't Know	11	8.9
Disagree	18	14.5
Strongly Disagree	7	5.6

Proposal 4 – Priority Species for Research

Research should be undertaken on the following key recreational species in the Pilbara/Kimberley (in order of priority) to provide information on species biology and stock structure. Predictive fisheries stock assessment models and, where practical, indices of recruitment, are to then be developed for these key species:

Species	Research status			
	Biology	Stock assessment	Exploitation status	Breeding stock level
Tropical emperors	Limited	N/A	N/A	N/A
Tropical snappers, e.g. mangrove jack, fingermark bream	Limited	N/A	N/A	N/A
Giant and golden trevally	Limited	N/A	N/A	N/A
Threadfin salmon	Limited	N/A	N/A	N/A
Tusk fish	Limited	N/A	N/A	N/A
Cherabin	N/A	N/A	N/A	N/A
Mud crabs	Yes	N/A	N/A	N/A
Blue swimmer (manna) crabs	Yes	N/A	N/A	N/A
Estuary cod	Limited	N/A	N/A	N/A
Spanish mackerel	Yes	Yes – Commercial catch only	Fully exploited	Adequate
Sailfish	Limited	N/A	N/A	N/A
Coral trout	Limited	N/A	N/A	N/A
Barramundi	Limited	Yes - Commercial catch only	Fully exploited	Adequate

(NOTE: N/A indicates where data in this table is not available)

Proposal 4	Totals	%
Strongly Agree	53	42.7
Agree	63	50.8
Don't Know	5	4.0
Disagree	3	2.4
Strongly Disagree	0	0.0

Proposal 5 – Fishing Quality Indicators

A range of ‘fishing quality indicators’ based on angler surveys should be developed to identify trends in fishing quality in the region and assist in the review of the effectiveness of this strategy.

These indicators should cover fishing quality, diversity and the value associated with the fishing experience.

It is proposed that the following species be used as key indicator species.

Indicator species	Environment where species is most often found			
	Creeks	Near shore	Offshore demersal	Offshore pelagic
Barramundi		Threadfin salmon	Red emperor	Spanish mackerel
Mangrove jack		Fingermark	Blue lined emperor	Sailfish
Sooty grunter		Mulloway	Trevally	Cobia
Mud crabs			Coral trout	
Cherabin			Tusk fish	
			Rankin and estuary cod	
			Impact of sharks on line caught fish	

Proposal 5	Totals	%
Strongly Agree	38	31.1
Agree	67	54.9
Don't Know	13	10.7
Disagree	4	3.3
Strongly Disagree	0	0.0

Proposal 6 – Bag and Size Limits

Category 1 Fish – total mixed daily bag limit of seven			
Category 1 fish are considered to have the highest risk of overexploitation. Many fish in this category have low catch rates and levels of abundance, while others may be highly valued for their fishing and eating qualities. Many Category 1 fish are slow growing and mature at four years-plus. For these reasons, Category 1 fish require a high degree of protection. (Note: *denotes proposed change to current management)			
Species	Species bag limit	Size limit	Other controls
Barramundi NOTE: State-wide possession limit of two. It is proposed that the possession limit of one in the Ord River be increased to the state-wide possession limit of two.	2	550mm	Max. size 800mm*
Billfish (sailfish, swordfish, marlins)	1*		
Cobia	2*	600mm*	
Cod – combined Within this bag limit you may not have more than two Rankin, Estuary or Malabar cod	4		Max. size 1000mm*
Coral trout and coronation trout (combined)		450mm	
When taken south of the De Grey River	2*		
When taken north of the De Grey River	1*		
Emperors – spangled, blue-lined and NW snappers (combined)	4*	410/280mm	blue-lined 320mm
Mackerel – shark	4	500mm	
Mackerel – spanish, broad and narrow-barred	2*	750/900mm	
Mackerel – wahoo	2*	900mm	
Mahi mahi	4	500mm	
Mangrove jack		300mm	
When taken south of the De Grey River	2		
When taken north of the De Grey River	4		
Mulloway – northern	2*	700mm*	
Parrot fish	4*		
Pearl perch	4*		
Pink snapper	4*	410mm	
Red emperor	2*	410mm	
Samson fish/amberjack/yellowtail kingfish (combined)	2*	600mm	
Sharks and rays (combined)	2*		
Scarlet, crimson, saddle tail sea perch (combined)	2*	300mm*	
Threadfin salmon – giant,	2*	450mm*	
Triple tail	4*	300mm*	
Tuna – sth, nth bluefin, yellowfin, bigeye and dogtooth	2*		
Wrasse (inc. baldchin groper and tuskfish)	2*	400mm	

Mixed Daily Bag of seven		
Proposal 6a1	Totals	%
Strongly Agree	34	26.8
Agree	54	42.5
Don't Know	2	1.6
Disagree	21	16.5
Strongly Disagree	16	12.6

Individual Species limit		
Proposal 6a2	Totals	%
Strongly Agree	20	15.7
Agree	59	46.5
Don't Know	1	0.8
Disagree	29	22.8
Strongly Disagree	18	14.2

Composition of Species		
Proposal 6a3	Totals	%
Strongly Agree	23	18.5
Agree	75	60.5
Don't Know	6	4.8
Disagree	11	8.9
Strongly Disagree	9	7.3

6(b) Category 2 Fish

Category 2 Fish – total mixed daily bag limit of 16

Category 2 fish have a moderate risk of overexploitation. Many fish in this category have moderate catch rates and levels of abundance. Category 2 fish are mostly found in inshore and estuarine areas, are highly sought after by recreational fishers and mature at three to four years. Category 2 fish include all fish not listed in other categories except baitfish of the sardine, anchovy and hardyhead families (Clupeidae, Engraulididae and Atherinidae), redbfin perch, gold fish, carp and tilapia.

(Note: *denotes proposed change to current management)

Species	Species bag limit	Size limit	Other controls
Barracuda	4*		
Bone fish and giant herring (combined)	4*		
Bonito and tunas – (other)	8		
Bream- north-west and yellowfin(combined)	8*	280mm*	
Catfish, freshwater (silver cobbler)	8*		
Catfish, salmon	8*		
Flathead and flounder (combined)	8*	300/250mm	
Goatfish	8*		
Javelinfish and sweetlips (combined)	8*	300mm*	
Leatherjacket	8*	250mm	
Mackerel – Queensland school and spotted (combined)	4	500mm	
Queenfish	4		
Snook and pike (combined)	8*	300mm	
Sooty grunter	8*	250mm*	
Tarwhine	16*	230mm	
Threadfin-bream	8*		
Threadfin salmon – other species (combined)	4		
Trevally (combined)	4		
Tropical sea perch and snappers – (other lutjanus species)	4	300mm*	

Bag Limit of 16		
Proposal 6b1	Totals	%
Strongly Agree	27	21.6
Agree	56	44.8
Don't Know	2	1.6
Disagree	34	27.2
Strongly Disagree	6	4.8

Individual species limits		
Proposal 6b2	Totals	%
Strongly Agree	19	18.4
Agree	70	68.0
Don't Know	5	4.9
Disagree	2	1.9
Strongly Disagree	7	6.8

Composition of species		
Proposal 6b3	Totals	%
Strongly Agree	22	18.0
Agree	87	71.3
Don't Know	6	4.9
Disagree	4	3.3
Strongly Disagree	3	2.5

6(c) Category 3 Fish

Category 3 Fish – total mixed daily bag limit of 40

Category 3 fish have a lower risk of overexploitation. Fish in this category generally have higher catch rates and levels of abundance and are mainly found inshore. These fish have a widespread distribution and mature at two-plus years.

(Note: *denotes proposed change to current management)

Species	Species bag limit	Other controls
Dart Garfish Longtom Milkfish Mullet, sea and yellow-eye Whiting Unlisted species - (all species not specified except baitfish and feral freshwater species)	40 combined	

Mixed bag limit of 40		
Proposal 6c1	Totals	%
Strongly Agree	30	23.8
Agree	55	43.7
Don't Know	2	1.6
Disagree	30	23.8
Strongly Disagree	9	7.1

Composition of species		
Proposal 6c2	Totals	%
Strongly Agree	27	22.1
Agree	81	66.4
Don't Know	4	3.3
Disagree	8	6.6
Strongly Disagree	2	1.6

Bag limit of 9 litres for bait fish		
Proposal 6c3	Totals	%
Strongly Agree	26	21.5
Agree	75	62.0
Don't Know	9	7.4
Disagree	9	7.4
Strongly Disagree	2	1.7

6(d) Crustaceans

Crustaceans		
(Note: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cherabin	9 litres	Gear controls
Crab, blue swimmer (manna)	20*	Boat limit of 40* size limit, gear controls
Crab, mud	5*	Boat limit of 10* size limit, gear controls
Prawns, school and king	9 litres	
Rock lobster	4*	Boat limit 8 Recreational licence required. Note Proposal to lift night time fishing ban.

Bag limit blue swimmer (manna) crabs		
Proposal 6d1	Totals	%
Strongly Agree	35	28.2
Agree	68	54.8
Don't Know	8	6.5
Disagree	8	6.5
Strongly Disagree	5	4.0

Bag limit mud crabs		
Proposal 6d2	Totals	%
Strongly Agree	55	43.3
Agree	38	29.9
Don't Know	3	2.4
Disagree	17	13.4
Strongly Disagree	14	11.0

Bag limit rock lobster		
Proposal 6d3	Totals	%
Strongly Agree	40	32.3
Agree	66	53.2
Don't Know	9	7.3
Disagree	5	4.0
Strongly Disagree	4	3.2

Lift night time ban on lobster		
Proposal 6d4	Totals	%
Strongly Agree	16	12.9
Agree	36	29.0
Don't Know	26	21.0
Disagree	35	28.2
Strongly Disagree	11	8.9

6(e) Molluscs and Other Reef Fish

Molluscs and other reef animals		
(NOTE: *denotes proposed change to current management)		
Species	Bag limit	Other controls
Cockles	9litres	Boat limit of 30*
Mussels	9 litres	
Oysters	9 litres*	
Razorfish	20*	
Scallops	20*	
Sea Urchins	20*	
Squid, cuttlefish and octopus (combined)	15	
All other species of edible mollusc not specifically mentioned (combined)	2 litres	

Proposal 6e	Totals	%
Strongly Agree	30	25.0
Agree	69	57.5
Don't Know	14	11.7
Disagree	6	5.0
Strongly Disagree	1	0.8

Proposal 7 - Proposed Changes to the Current Legal Size Limits

Species	Old Size (mm)	New Size (mm)	Size when 50% of the stock reach maturity (mm)
Barramundi		800 (max)	Change sex to females at around 800
Cod	1200(max)	1000(max)	May change sex from female to male
Cobia		600	not known
Mahi Mahi (dolphin fish)		500	not known
Mulloway, northern	500	700	750
Sooty Grunter		250	not known
Threadfin salmon - giant		450	not known
Triple tail		300	Not known
Other tropical sea perches and snappers eg: spanish flag, moses perch and crimson sea perch		300	Not known
Mud crabs	150 (green) 120 (brown)	150 for both	A size limit of 150mm will ensure they breed at least once before being taken

Barramundi		
Proposal 7a	Totals	%
Strongly Agree	67	58.3
Agree	25	21.7
Don't Know	6	5.2
Disagree	8	7.0
Strongly Disagree	9	7.8

Cod		
Proposal 7b	Totals	%
Strongly Agree	66	57.4
Agree	36	31.3
Don't Know	5	4.3
Disagree	2	1.7
Strongly Disagree	6	5.2

Cobia		
Proposal 7c	Totals	%
Strongly Agree	54	47.4
Agree	35	30.7
Don't Know	9	7.9
Disagree	7	6.1
Strongly Disagree	9	7.9

Mahi Mahi		
Proposal 7d	Totals	%
Strongly Agree	57	51.4
Agree	30	27.0
Don't Know	13	11.7
Disagree	5	4.5
Strongly Disagree	6	5.4

Northern Mulloway		
Proposal 7e	Totals	%
Strongly Agree	56	48.7
Agree	27	23.5
Don't Know	5	4.3
Disagree	14	12.2
Strongly Disagree	13	11.3

Sooty Grunter		
Proposal 7f	Totals	%
Strongly Agree	38	33.3
Agree	53	46.5
Don't Know	14	12.3
Disagree	3	2.6
Strongly Disagree	6	5.3

Giant Threadfin		
Proposal 7g	Totals	%
Strongly Agree	56	50.0
Agree	35	31.3
Don't Know	7	6.3
Disagree	4	3.6
Strongly Disagree	10	8.9

Triple Tail		
Proposal 7h	Totals	%
Strongly Agree	57	50.4
Agree	32	28.3
Don't Know	14	12.4
Disagree	4	3.5
Strongly Disagree	6	5.3

Yellowfin Bream		
Proposal 7i	Totals	%
Strongly Agree	34	30.1
Agree	48	42.5
Don't Know	12	10.6
Disagree	8	7.1
Strongly Disagree	11	9.7

Sea Perches and Snappers		
Proposal 7j	Totals	%
Strongly Agree	34	29.6
Agree	50	43.5
Don't Know	6	5.2
Disagree	7	6.1
Strongly Disagree	18	15.7

Mud Crabs		
Proposal 7k	Totals	%
Strongly Agree	57	49.6
Agree	13	11.3
Don't Know	5	4.3
Disagree	7	6.1
Strongly Disagree	33	28.7

Proposal 8 - Totally Protected Fish

Due to low abundance levels and vulnerability to over fishing the following species should be totally protected:

- Freshwater sawfish (*Pristis microdon*). Note that this species may be an important food source for indigenous people and further consultation will need to occur with this group prior to any decision to classify the freshwater sawfish as a totally protected species.
- Speartooth shark (*Glyphis sp*)
- Queensland groper (*Ephinephelus lanceolatus*)
- Barramundi cod (*Cromileptes altivelis*)
- Baler shells (*Melo sp*) - proposed prohibition on the collection of live shell

Freshwater Sawfish		
Proposal 8a	Totals	%
Strongly Agree	71	58.7
Agree	29	24.0
Don't Know	15	12.4
Disagree	4	3.3
Strongly Disagree	2	1.7

Speartooth Shark		
Proposal 8b	Totals	%
Strongly Agree	72	58.1
Agree	29	23.4
Don't Know	22	17.7
Disagree	0	0.0
Strongly Disagree	1	0.8

Queensland Groper		
Proposal 8c	Totals	%
Strongly Agree	76	62.8
Agree	30	24.8
Don't Know	13	10.7
Disagree	1	0.8
Strongly Disagree	1	0.8

Barramundi Cod		
Proposal 8d	Totals	%
Strongly Agree	67	54.0
Agree	30	24.2
Don't Know	18	14.5
Disagree	6	4.8
Strongly Disagree	3	2.4

Baler Shell		
Proposal 8e	Totals	%
Strongly Agree	59	48.8
Agree	44	36.4
Don't Know	15	12.4
Disagree	0	0.0
Strongly Disagree	3	2.5

Proposal 9 - Haul Net Fishing

Comment is being sought on two proposals, these being:

9(a) The use of haul nets be prohibited in the Pilbara/Kimberley Region.

9(b) Haul netting be allowed in defined areas with the following conditions:

- Maximum length of haul net to be 30 metres.
- Mullet be the only species permitted to be retained.

Due to the potential impact of haul nets in river and creek systems, permitted areas will only be considered in “ocean waters”.

Proposal 9a	Totals	%
Strongly Agree	84	67.7
Agree	11	8.9
Don't Know	4	3.2
Disagree	6	4.8
Strongly Disagree	19	15.3

Proposal 9b	Totals	%
Strongly Agree	11	10.6
Agree	21	20.2
Don't Know	6	5.8
Disagree	6	5.8
Strongly Disagree	60	57.7

Proposal 10 – Red Claw Traps in Lake Kununurra

Due to the number of red claw in Lake Kununurra, a structured gear trial should be undertaken to assess the viability of using rigid traps to allow the take of red claw. The gear trial should be supervised by the Department of Fisheries and involve members of the East Kimberley RRFAC.

Proposal 10	Totals	%
Strongly Agree	26	21.1
Agree	53	43.1
Don't Know	40	32.5
Disagree	3	2.4
Strongly Disagree	1	0.8

Proposal 11 – Fishing Competitions

11 (a) All fishing competitions with greater than 50 participants must formally register in advance with the Department of Fisheries.

11 (b) Competition organisers be required to keep an accurate record of the participation, catch and effort in each competition and forward catch returns to the Department of Fisheries for inclusion in the recreational fisheries database. If possible, information should be entered in electronic format which is compatible with the recreational fishing database.

11 (c) To ensure fishing competitions are conducted in line with recreational fishing ethics and meet requirements under the *Animal Welfare Act*, a formal code of conduct for fishing competitions should be developed by the Department of Fisheries in consultation with fishing clubs and organising bodies.

Proposal 11a	Totals	%
Strongly Agree	42	33.3
Agree	59	46.8
Don't Know	14	11.1
Disagree	8	6.3
Strongly Disagree	3	2.4

Proposal 11b	Totals	%
Strongly Agree	45	35.7
Agree	60	47.6
Don't Know	11	8.7
Disagree	9	7.1
Strongly Disagree	1	0.8

Proposal 11c	Totals	%
Strongly Agree	44	35.2
Agree	47	37.6
Don't Know	9	7.2
Disagree	21	16.8
Strongly Disagree	4	3.2

Proposal 12 - Recreational Fishing Priority Areas

The importance of recreational fishing as a component of tourism and lifestyle should be recognised in the Integrated Management Planning Process. Through this process, the following areas should be considered for the priority management of recreational fishing

- Ord River;
- King Sound;
- Inshore waters and creeks around Broome;
- Dampier Archipelago;
- Monte Bello Islands;
- Fitzroy River;
- Keep River near Kununurra (joint management arrangements should be developed with NT Fisheries, as this river is located within the borders of the NT);
- Cambridge Gulf;
- Rowley Shoals;
- Buccaneer Archipelago;
- Cape Keraudrin;
- De Grey River;
- Cape Lambert to Reef Island (Shirlock Bay);
- Nickol Bay to Cape Lambert (crabs, barramundi, threadfin salmon); and
- Offshore island groups in the Pilbara;

Proposal 12	Totals	%
Strongly Agree	71	55.9
Agree	35	27.6
Don't Know	10	7.9
Disagree	7	5.5
Strongly Disagree	4	3.1

Proposal 13 – Code of Conduct for Accessing Pastoral and Mining Leases and Aboriginal land

That a code of conduct be developed for recreational fishers accessing fishing locations through pastoral and mining leases and Aboriginal land. The code should be developed in consultation with land owners/lease holders and should contain the following elements:

- Any fish frames or offal are removed, dumped in the ocean or buried.
- All gates which are shut must be left shut.
- No standing trees or shrubs are to be cut down for firewood.
- All human waste must be buried at least 50m from any water course.
- Under no circumstance should any fences be cut or interfered with.
- Leave no rubbish behind.
- Any machinery or equipment that is the property of the station owner should not be interfered with.
- Aboriginal land can only be entered with the approval of the Aboriginal land owners.
- People should not camp within 200m of any watering point to avoid disturbing stock.
- Firearms or dogs should not be taken onto stations without the approval of the station owner.

Proposal 13	Totals	%
Strongly Agree	62	49.2
Agree	58	46.0
Don't Know	4	3.2
Disagree	0	0.0
Strongly Disagree	2	1.6

Proposal 14 – Access to Pastoral and Mining Leases and Aboriginal Land

The Regional RFACs in each region should enter into negotiations with owners/lease holders to define access route to fishing locations and that these routes and the code of conduct be supported and promoted by the Department of Fisheries in advisory material.

Proposal 14	Totals	%
Strongly Agree	66	52.0
Agree	45	35.4
Don't Know	10	7.9
Disagree	5	3.9
Strongly Disagree	1	0.8

Proposal 15 - Stock Enhancement

15(a) Should a proposal to restock Lake Kununurra with barramundi prove both feasible and environmentally acceptable, support should then be provided for a restocking program.

15(b) A study should be undertaken to examine the feasibility and environmental acceptability of stocking Harding Dam with barramundi.

Proposal 15a	Totals	%
Strongly Agree	63	50.8
Agree	47	37.9
Don't Know	10	8.1
Disagree	3	2.4
Strongly Disagree	1	0.8

Proposal 15b	Totals	%
Strongly Agree	54	43.5
Agree	41	33.1
Don't Know	21	16.9
Disagree	5	4.0
Strongly Disagree	3	2.4

Proposal 16 - Resource Sharing

As a priority the following species should be considered for total catch management under an integrated management framework:

- Northern demersal species;
- Mackerel;
- Barramundi;
- Threadfin salmon; and
- Blue swimmer (manna) crabs.

For each species a forum should be held with key stakeholders including recreational, commercial, indigenous and conservation to identify key issues which need to be taken into consideration in the development of an integrated management plan for the Pilbara/Kimberley Region.

Proposal 16	Totals	%
Strongly Agree	40	32.3
Agree	59	47.6
Don't Know	16	12.9
Disagree	7	5.6
Strongly Disagree	2	1.6

Proposal 17 – Low Impact Wilderness Fishing Experiences

That the following areas be managed on a trial basis as remote wilderness fishing area:

- Kalumburu;
- Dampier Archipelago;
- Fortescue River to Robe River;
- Cockatoo Island to Wyndham; and
- Highly valued ‘wild rivers’ which are pristine in nature. These rivers should be considered as Fish Habitat Protection Areas and closed to commercial fishing.

The following guiding principles should be used for the management of the wilderness area:

- Low take;
- Low environmental impact; and a
- Code of practice should be developed for recreational fishing in the area.

Proposal 17	Totals	%
Strongly Agree	44	36.7
Agree	47	39.2
Don't Know	19	15.8
Disagree	5	4.2
Strongly Disagree	5	4.2

Proposal 18 - Pilbara/Kimberley Region Community Education Plan

A recreational fisheries community education plan should be developed for the Pilbara/Kimberley Region which focuses on the issues and species most important in the region. Such a plan should seek to keep the recreational fishing community informed of management decisions, give a clear lead on the values and attitudes which will assist in sustaining fish stocks and develop a broad community recognition of the value of recreational fishing.

The plan should, at minimum, contain the following elements:

18(a) Regional Fishing Guide

A comprehensive regional guide to recreational fishing in the Pilbara/Kimberley Region be produced to inform and educate fishers about recreational fishing management arrangements, fishing ethics, research, conservation issues and promoting stewardship for fish stocks and the environment.

18(b) Educational Resource Materials

Adequate quantities of practical educational tools such as measuring gauges, fish rulers, adhesive bag limit guides and boat ramp and fishing venue signs should be produced to support the regional fishing guide.

18(c) Annual Media Campaign

An annual media campaign be implemented to promote recreational fishing and fishing ethics in the region.

18(d) Volunteer Involvement in Education

Encourage the establishment and development of volunteer groups in structured fisheries education activities across the region.

Proposal 18a	Totals	%
Strongly Agree	68	55.3
Agree	52	42.3
Don't Know	0	0.0
Disagree	3	2.4
Strongly Disagree	0	0.0

Proposal 18b	Totals	%
Strongly Agree	75	61.0
Agree	45	36.6
Don't Know	1	0.8
Disagree	1	0.8
Strongly Disagree	1	0.8

Proposal 18c	Totals	%
Strongly Agree	66	53.7
Agree	44	35.8
Don't Know	3	2.4
Disagree	7	5.7
Strongly Disagree	3	2.4

Proposal 18d	Totals	%
Strongly Agree	48	39.0
Agree	58	47.2
Don't Know	6	4.9
Disagree	7	5.7
Strongly Disagree	4	3.3

Proposal 19 – Additional Patrol Capacity

That an additional three patrols (six Fisheries and Marine Officers) be dedicated to recreational field compliance and education activities during peak fishing seasons in the Pilbara/Kimberley Region.

These resources should be allocated to:

- *Karratha*: One additional patrol crew to service peak season fishing compliance needs in the Dampier Archipelago and south to Onslow.
- *Broome*: One additional patrol crew to be based in Broome and service the area between 80 Mile Beach and Derby.
- *Kununurra*: One additional patrol crew to be based seasonally in Kununurra and provide service south to Wyndham.

Proposal 19	Totals	%
Strongly Agree	85	67.5
Agree	24	19.0
Don't Know	4	3.2
Disagree	11	8.7
Strongly Disagree	2	1.6

Proposal 20 - VFLO Program

That the Volunteer Fisheries Liaison Officer (VFLO) program be established in all key regional centres in the Pilbara/Kimberley Region.

Proposal 20	Totals	%
Strongly Agree	43	35.2
Agree	59	48.4
Don't Know	9	7.4
Disagree	7	5.7
Strongly Disagree	4	3.3

Proposal 21 – Regional Fishing Management Officer

The appointment of a specific person to coordinate the implementation of the Pilbara/Kimberley Regional Review and assist with the development of integrated fisheries management plans for key fisheries in the region.

Proposal 21	Totals	%
Strongly Agree	40	33.3
Agree	52	43.3
Don't Know	14	11.7
Disagree	12	10.0
Strongly Disagree	2	1.7

APPENDIX B NAMES OF INDIVIDUALS AND ORGANISATIONS WHO FORWARDED SUBMISSIONS

Allen, Mr	Doyle, Steve	Kimberley Charter Boat Operators Association
Anderson, R W	Dunne, Mike	Koval, Eddie
Appelbee, Sue	Earl, Colin	Kretzmann, Charles
Atherton, Wayne	East Kimberley Regional RFAC	Lake, Peter
Ayat, Ajenlah	Evans, JM	Layton, John
Balinski, Harold	Feld, B K	Lewis, Colin
Bassett, Robert	Fell, Graeme	Lewis, Jo
Bassett, Steven	Gadsdon, Paul	Livingstone, Greg
Big Blue Dive	Goldband Nominees Pty Ltd	Lopaten, R P
Bird, Dennis	Goodes, Peter	Love, Kamahl
Blachford, Ian	Gooding, Kevin	Lyon, Kevin
Blackman, Derek	Gough, Chris	Marks, Murray
Blackwell, Stuart	Graham, Brentyn	Matthews, Lyndsay
Blatchford, Kevin	Gray, Robert	McAdele, David
Bowry, Steve	Guest, John	McArdle, Glenn
Bright, Francis	Gugisberg, Pete	McArdle, Jeremy
Brinkworth, D	Hallam, John	McArdle, Luke
Britton, K	Helsemans, Adrian	McCumstie, Peter
Broome Billfish Charters	Hennessy, Sara	McCumstie, Raymond
Broome Fishing Club	Hogan, John	McEwen, Andrew
Bury, Geoff	Hohn, Dean	McIntosh, Robbie
Buckenara, Winston	Hollands, Marjorie	Messervy, Bill
Care for Hedland Environmental Interest Group	Humphries, Gavin	Mitchell, Chris
Cannon Charters	Ion, E E	Molloy, Terry
Constantine, Sean	Jackson, B	Montebello Island Safaris
Coulson, Craig	Jackson, D	Muller, Nick
Crake, Mr and Mrs E	Jeff, D A	Neate, Wayne
Crane, Ed	Jones, Alan	Nevill, Bradley
Curnomett, Rod	Keevil, Darryle	Northern Wildcatch Seafood Australia
Day, Damen	Kelso, David	Nor-West Game Fishing Club
Dampier Archipelago Preservation Association	Keogh, Daron	Newton, Ross
Department of Indigenous Affairs	King Bay Game Fishing Club	Norwell, A G
Dobson, Bruce	King, Leesa	Norwell, J M
Donnelly, Laurie	King, Patric	Palmer, Peter
		Parnell, M

Parnell, Trevor
Pearl Producers
Association
Pearson, Simon
Peet, Phil
Pilbara Regional RFAC
Pope, Lawrence
Powell, Peter
Ralston, Jeff
Randall, Robin
Recfishwest
Reid, V
Richie, Alan
Robinson, K
Rosemary Island Game
Fishing Club
Rushford, Tracey
Ryan, Chris
Sampey, Ray
Scott, Gary
Scott, Sally
Shine Fisheries Pty Ltd
Silver, John
Smirke, Richard
Smith, Henry
Spencer, Ron
Spirritt, Paul
Stanley, John
Stanton, George
Syred, E R
Tasker, Kevin
Taylor, Darren
Thomas, Stephen
Thorpe, Robert
Tressider, Sharlene
Truarn, D
Truarn, E
Trudgian, Scott
Tuck, Gary
Vernon, Robert
Vomiero, Keith
Vomiero, Peter
Ward, Peter
Watts, John
Western Australian
Fishing Industry Council
West Kimberley Regional
RFAC
Wevers, Joe
Woodbrook, Kevin
Woodbrook, S A
Worley, Susan
York, Trevor

APPENDIX C CURRENT BAG AND SIZE LIMITS

PRIZE FISH				
Mixed daily bag limit – 8 per angler				
Prize fish are highly sought after for their catching or eating qualities and some are vulnerable to overfishing.				
Species	Scientific Name	Minimum Size	Legal	Bag Limit
Billfish – sailfish, swordfish, and marlins combined	Families Istiophoridae and Xiphiidae	N/A		4
Cobia	<i>Rachycentron canadus</i>	N/A		4
Cods – combined (inc. breaksea and harlequin).	Family Serranidae	Fish over 1200mm or 30kg are protected. Breaksea – 300mm		4
Coral trout	<i>Plectropomus</i> spp	500mm		4
Dhufish	<i>Glaucosoma hebraicum</i>	500mm		4
Mackerel, shark	<i>Grammatorcynus bicarinatus</i>	500mm		4
Mackerel, Spanish broad-barred	<i>Scomberomorus semifasciatus</i>	750mm		4
Mackerel, Spanish narrow-barred	<i>Scomberomorus commerson</i>	900mm		4
Mackerel, spotted	<i>Scomberomorus</i> spp	500mm		4
Mackerel, school	<i>Scomberomorus</i> spp	500mm		4
Mackerel, wahoo	<i>Acanthocybium solandri</i>	900mm		4
Mahi mahi (dolphinfish)	<i>Coryphaena hippurus</i>			4
Mulloway and Northern mulloway	<i>Argyrosomus hololepidotus</i> and <i>Protonibea diacanthus</i>	500mm		4
Queenfish	<i>Scomberoides commersonianus</i>			4
Salmon, Australian	<i>Arripus truttaceus</i>	300mm		4
Samson fish	<i>Seriola hippos</i>	600mm		4
Sharks (all species except protected species)		N/A		4
Trout, brown & rainbow* - combined	<i>Salmo trutta</i> and <i>Oncorhynchus mykiss</i>	300mm		4
Tuna, southern bluefin	<i>Thunnus maccoyii</i>			4
Yellowtail kingfish	<i>Seriola lalandi</i>	600mm		4

* Licence required

REEF FISH					
Mixed daily bag limit – 8 per angler					
Reef fish are usually resident species and are highly vulnerable to overfishing.					
Species	Scientific Name	Minimum Size	Legal	Bag	Limit
				(Combined)	
Emperor, blue-lined	<i>Lethrinus laticaudis</i>	320mm			8
Emperor, red	<i>Lutjanus sebae</i>	410mm			
Emperor, spangled	<i>Lethrinus nebulosus</i>	410mm			
Groper, baldchin & tuskfish (excluding western blue groper)	<i>Choerodon rubescens, cyanodus and shoenleinii</i>	400mm			
Queen snapper (blue morwong)	<i>Nemadactylus valenciennesi</i>	410mm			
Snapper, pink	<i>Pagrus auratus</i>	410mm Wilson Inlet - 280mm			
Snapper, north-west (all other species)	<i>Lethrinus spp</i>	280mm			

KEY ANGLING & SPORT FISH					
Daily bag limit – 8 per angler					
An important protection category – cobbler and tailor stocks have declined in recent years, with fish often caught before spawning.					
Species	Scientific Name	Minimum Size	Legal	Bag	Limit
Bonito	<i>Sarda orientalis, Cybiosarda elegans</i>				8
Cobbler	<i>Cnidoglanis macrocephalus</i>	430mm			8
Tailor	<i>Pomatomus saltatrix</i>	300mm			8
Mangrove jack	<i>Lutjanus argentimaculatus</i>	300mm			8
Fingermark bream	<i>Lutjanus russelli</i>				8
Giant threadfin salmon	<i>Polydactylus macrochir</i>				8

TABLE FISH**Daily bag limit – 20 per angler**

This group contains many of WA's most popular angling species and bag limits are crucial for maintaining future stocks.

Species	Scientific Name	Minimum Size	Legal Bag Limit
Bream, black, Northwest black and yellowfin	<i>Acanthopagrus</i> spp	250mm	20
Flathead and flounder – combined	Family <i>Platycephalidae</i> and <i>Pseudorhombus</i> spp	Flathead – 300mm Flounder – 250mm	20
Leatherjackets	Family Monacanthidae	250mm	20
Pike and snook - combined	<i>Sphyraena</i> spp and <i>Dinolestes</i> spp	300mm	20
Skipjack trevally	<i>Pseudocaranx</i> spp	250mm	20
Snapper, red	<i>Centroberyx</i> spp	230mm	20
Tarwhine	<i>Rhabdosargus sarba</i>	230mm	20
Threadfin,			
Whiting, King George	<i>Sillaginodes punctata</i>	280mm	20

BREAD AND BUTTER FISH**Daily bag limit – 40 per angler (No size limits apply)**

'Bread and butter' species are all fish not listed in other categories with the exception of baitfish of the sardine and anchovy families (*Clupeidae* and *Engraulididae* – mulies, whitebait, scaly mackerel, anchovies), redfin perch, goldfish, carp and tilapia.

Species	Scientific Name	Bag Limit
Australian herring	<i>Arripis georgianus</i>	40
Garfish	Family Hemirhamphidae	40
Mackerel, blue (common)	<i>Scomber australisicus</i>	40
Mullet, sea and yellow-eye	Family Mugilidae	40
Whiting, sand, school and yellowfin	<i>Sillago</i> spp	40
All other unlisted species		40 each

SPECIAL BAG LIMITS

Species	Scientific Name	Minimum Legal Size	Bag Limit
Barramundi (only one rod or handline to be used at any one time) – special rules apply in the lower Ord River, Fitzroy River and Broome areas	<i>Lates calcarifer</i>	550mm	Possession limit 2
Groper, western blue	<i>Achoerodus gouldi</i>	500mm	1

CRUSTACEANS AND SHELLFISH

Species are often sedentary or resident in nature, but may have pelagic or migratory phases in their life cycle with larvae or eggs widely distributed by ocean currents. Specific regulations apply to each species, based on biological characteristics. Low catch limits apply to shellfish due to high risk of localised depletion.

Species	Scientific Name	Minimum Legal Size	Legal Bag Limit	Boat Limit [#]
CRUSTACEANS				
Cherabin	<i>Macrobrachium spp</i>		9 litres	N/A
Crab, blue swimmer (manna)	<i>Portunus pelagicus</i>	127mm	24	40
Crab, mud – all species	<i>Scylla spp</i>	Green – 150mm Brown – 120mm	10	N/A
Marron*	<i>Cherax tenuimanus</i>	*	*	*
Prawns	Family Peneaidae	N/A	9 litres	N/A
Rock lobster* - all species combined	<i>Panulirus</i> and <i>Jasus spp</i>	*	8	16
Rock lobster* - Dampier Archipelago	<i>Panulirus spp</i>	*	4	8
MOLLUSCS & OTHER REEF ANIMALS				
Abalone, Roe's*	<i>Haliotis roei</i>	60mm	20	N/A
Abalone, greenlip and brownlip* - combined	<i>H. laevigata</i> and <i>H. conicopora</i>	140mm	5	10
Mussels	Family Myrtilidae	N/A	9 litres	N/A
Sea urchins	Class Echinoidea	N/A	40	N/A
Squid, cuttlefish and octopus – all species combined	Class Cephalopoda	N/A	15	30
All other species of edible molluscs		N/A	2 litres	N/A

* Licence required

Only applies when two or more fishers aboard.

N/A – Not applicable

APPENDIX D REFERENCES

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