

# NORTH COAST BIOREGION

## REGIONAL MANAGEMENT OVERVIEW

In recent years the Pilbara and Kimberley regions have experienced significant growth in recreational fishing activity, with a booming fishing-based tour and ecotourism industry based around the region's reputation as remote and pristine.

Recreational fishing participation for marine waters between Onslow and the WA/NT border is estimated at about 8% of the State's recreational anglers, or some 48,000 anglers per year (Baharthah and Sumner 2003). Recreational fishing shows distinct seasonal peaks, with the highest number of visitors during the winter months.

A survey conducted between December 1999 and November 2000 (Williamson et al., in prep.) has confirmed that the Pilbara region is a major focus of recreational fishing, with 190,000 fisher days being recorded over the survey period in an area stretching from Onslow to Broome.

Charter activity is also significant, with 97 fishing tour licences and 13 ecotour licences valid for the north coast bioregion in 2003.

Creek systems, mangroves and rivers, and ocean beaches provide shore and small boat fishing for a variety of species including barramundi (*Lates calcarifer*), tropical emperors (Lethrinidae), sea perches such as mangrove jack (*Lutjanus argentimaculatus*), trevallies (Carangidae), sooty grunter (*Hephaestus jenkinsi*), threadfin (Polynemidae), mud crabs (*Scylla serrata*), and cods (Serranidae).

Offshore islands, coral reef systems and continental shelf waters provide species of major recreational interest including many members of the demersal sea perch family (Lutjanidae) such as scarlet sea perch (*Lutjanus malabaricus*) and red emperor (*Lutjanus sebae*), cods, coral and coronation trout (*Plectropomus* and *Variola* spp.), sharks, trevally, tuskfish, tunas, mackerels and billfish.

Fishing charters and fishing tournaments are also areas of growth in the region, and have seen surges in popularity over the past five years or so. The Dampier Classic and Broome Sailfish tournaments are both State and national attractions, and Western Australia is gaining an international reputation for the quality of its offshore pelagic sport and game fishing.

The popularity of barramundi fishing and competition for available fish by different user groups places significant pressure on barramundi stocks. To protect the future quality of the barramundi fishery and resolve resource-sharing issues in the fishery, new management arrangements were implemented in 2002.

The new management arrangements included reducing the recreational fishing possession limit for barramundi from five to two. In addition, separate rules were developed for three special barramundi conservation areas. These are:

- Ord River – this includes the Dunham River, which flows into the Ord River. In this area the possession limit remains at one, the maximum size 80 cm.
- Fitzroy River – all waters upstream of 17°27' S latitude (lower reaches of King Sound). A maximum size of 80 cm and a possession limit of two apply in this area.
- Broome area – all waters from Cunningham Point (east of Cape Leveque) to 19° S latitude (northern end of Eighty Mile Beach). In this area there is a daily bag limit of one and a possession limit of two.

To improve the quality of recreational fishing in the region and resolve resource-sharing conflict, commercial barramundi fishing was closed or restricted in the Ord and Fitzroy Rivers, around the townsite of Derby, and in key recreational fishing areas around Broome.

A spatial closure to commercial mud crabbing was also implemented around the town of Derby to resolve resource-sharing conflicts associated with an escalation in commercial activity.

To further manage for increases in recreational fishing pressure and protect recreational fishing quality, a review of recreational fishing in the Pilbara/Kimberley region will be undertaken in 2003/04.

## REGIONAL COMPLIANCE AND COMMUNITY EDUCATION OVERVIEW

Recreational fishing compliance and education in the north coast and northern inland bioregions is carried out by Fisheries Officers stationed in Karratha and Broome, with the assistance of VFLOs from both centres. Please note that, as compliance activities in the inland areas relate almost exclusively to barramundi fishing, they have been included in this report on the coastal bioregion, which covers the more significant estuarine breeding component of the barramundi stock.

Officers from Broome conduct regular patrols to the Fitzroy River catchment area, Derby region and Kununurra and Wyndham on the Ord River, while Karratha-based officers conduct regular patrols of the Dampier Archipelago, Port Hedland and Eighty Mile Beach areas. Monthly patrols are undertaken to inspect fishers in the Onslow district.

Compliance patrols focus on checking netting practices, inspecting gear, and checking catch for compliance with bag, size and possession limits.

### Activities during 2001/02

A total of 3,728 hours of field activity were undertaken by Fisheries Officers during 2001/02 in relation to coastal boating and land-based recreational fishing activities, particularly netting, with a total of 3,539 field contacts and 2,253 office contacts recorded in the 12-month period.

In general, compliance levels were high, although several offences were detected relating to netting and catches in excess of bag limits. As a result of compliance activities, four infringement notices and eight infringement warnings were issued during the year for a variety of recreational offences, while a further 11 incidents resulted in prosecution.

During 2001/02, close liaison was maintained with the WA Police Service, and on several occasions Police Officers accompanied Fisheries Officers on patrols.

The VFLO programs in Broome, Derby and Karratha provide assistance in educating recreational fishers about rules, fish care and handling, and in 2001/02 they contacted 50 individuals.

Three separate Regional Recreational Fishing Advisory Committees operate in the Kimberley and Pilbara, with meetings generally held once a quarter. Issues affecting recreational fishers in each area are addressed locally with recommendations from these regional meetings being progressed to the parent committee in Perth. Executive support is provided for these committees by the Department of Fisheries.

#### NORTHERN RECREATIONAL COMPLIANCE TABLE I

Summary of compliance and educative contacts and infringement types in recreational fisheries within the north coast and northern inland bioregions during the 2001/02 financial year.

CONTACT WITH THE RECREATIONAL FISHING COMMUNITY	NUMBER
Hours delivered in bioregion	3,728
Fisher field contacts by Fisheries Officers	3,539
District Office contacts by Fisheries Officers	2,253
Fisher field contacts by VFLOs	50
Fishwatch reports *	44
OFFENCES DETECTED	
Infringement warnings	8
Infringement notices	4
Prosecutions	11

\* This represents the total number of Fishwatch reports, both commercial and recreational, since the service provider reporting mechanism cannot differentiate between sectors.

#### Initiatives in 2002/03

Increased emphasis is being placed on ensuring recreational compliance, and patrols are being conducted in popular fishing destinations throughout the region. The appointment in 2002 of a regional coordinator for the VFLO program and the location of an extra Fisheries Officer in the Region in early 2003, together with the publication of a new fish identification brochure and installation of new signage regarding the barramundi rules, have improved community awareness. Major events to be attended by VFLOs include the North West Expo over two days in Broome, and the Derby King Tide Day in May 2003.

## REGIONAL RESEARCH OVERVIEW

Scientific information to support recreationally fished stock management in the north coast bioregion has come largely from previous Department of Fisheries studies focused on commercial fisheries. This research has provided good biological data on the major Lethrinid species (nor-west snappers), the red emperor and some related Lutjanid species, the cods and coral trout, in the North West Shelf sector. A three-year research project on mackerel species has now been completed and provides detailed biological and fishery data on these important recreational species.

A major project which began in July 2000 collected baseline data on the inshore finfish species targeted by recreational anglers across the north coast bioregion. In addition, a collaborative project is being undertaken with Murdoch University to provide biological data on the species subject to shore-based fishing by both recreational and commercial fishers.

A 12-month creel survey of recreational boat-based and shore-based fishing in the Pilbara region of Western Australia was conducted between December 1999 and November 2000 (Williamson et al., in prep.). The survey area incorporated the region from Onslow up to and including Broome.

The total recreational catch of all scalefish species for the region in 1999/2000 was estimated at 300 t, excluding charter vessel catches. This equated to approximately 12% of the commercial demersal scalefish catch (2,311 t) and commercial mackerel catch (130 t) for this region during the same period. The preliminary estimates do not include the recreational catches obtained at Thevenard Island and Barrow Island; these will be included in the research report which is being completed.

Important recreational species, in order of weight caught were trevally species (*Gnathanodon speciosus*, *Caranx ignobilis* and *Caranx sexfasciatus*) (17,100 fish or 50 t); mackerel (*Scomberomorus* spp.) (narrow barred Spanish mackerel 4,300 fish or 30 t, other mackerel 10,300 fish or 14 t); blue-lined emperor or grass emperor (*Lethrinus laticaudis*) (18,400 fish or 22 t); tuskfish (*Choerodon* spp.) (blackspot tuskfish 7,700 fish or 20 t, other tuskfish 700 fish or 1 t); threadfin salmon species (*Eleutheronema tetradactylum*, *Polydactylus macrochir* and *Polydactylus plebius*) (15,200 fish kept or 18 t); spangled emperor (*Lethrinus nebulosus*) (8,700 fish or 12 t); estuary cod (*Epinephelus coioides*) (5,300 fish or 12 t); stripey seaperch or Spanish flag (*Lutjanus carponotatus*) (20,800 fish or 11 t); coral trout (*Plectropomus leopardus*), coronation trout (*Variola louti*) and bar-cheeked coral trout (*Plectropomus maculatus*) (3,300 fish or 8 t); sweetlip emperor (*Lethrinus miniatus*) (4,700 fish or 7 t); red emperor (*Lutjanus sebae*) (1,700 fish or 6 t); blue swimmer crab (*Portunus pelagicus*) (72,000 crabs or 22 t); green mud crabs (*Scylla serrata*) (19,000 crabs or 17 t) and brown mud crabs (*Scylla olivacea*) (7,000 crabs or 4 t).

These data, integrated with the long-run commercial CAES databases and the current fishery-independent projects, will provide the basis for ongoing management of the most important recreational stocks in this region.