

2.10. FISHERIES

The Mitchell River is rich in fisheries resource. Commercial and recreational targeted species found in this catchment include barramundi, salmon, grunter and crab. The Coleman River and North Mitchell River are also nursery grounds for commercially targeted prawn species, particularly the banana prawn.

The Mitchell River provides an important and varied food resource for indigenous people. It makes significant contribution to the development of the commercial fishing industry in Karumba. A growing number of recreational fishermen are now sharing in the fishery resources of the Mitchell River Watershed.

The banana prawn fisheries catches in the Mitchell River vary with the extent of the annual wet season and the discharge of the river provides. Both inshore and offshore mixed fin fisheries are growing commercial enterprises in the Gulf of Carpentaria. Barramundi remains the prime commercial target. The Mitchell River supports arguably the largest commercial barramundi catch in Queensland.

The genetic population of barramundi found in the Mitchell and Southern Gulf is distinct from other waters in the Gulf and elsewhere. The population is too poorly understood to reliably predict stock capabilities but some worrying trends in the fishery are apparent. Catch effort is increasing while catches remain the same or are declining. The size of the individual barramundi caught has been decreasing. There is concern that the age of the catch is now quite uniform and a specific group, or cohort, is being targeted almost exclusively.

There is limited knowledge of the total catch out of the Mitchell River system, with recreational and subsistence catches not recorded or counted. Commercial catches are reported on a grid basis. To give an indication on the size of fish caught and how this may change over time, the QFMA log book system now allows for improved recording.

The extremely limited ability we have to influence many aspects of the population biology of fisheries resources means that fisheries management must be directed toward harvest and habitat. The commercial fishing industry in the Gulf of Carpentaria has proven itself to be one of the most progressive in Queensland. The Queensland Commercial Fishermen's Organisation (QCFO) (Karumba Branch) has been instrumental in Queensland's most active fisheries management regimes. They initiated catch recording programs, have overseen a large reduction in the number of fishing licences, and introduced a range of regulatory measures such as limited fishing seasons. QCFO is a strong supporter of cooperative management and a negotiation approach to conflict resolution. The sustainability of the fishery at current harvest rates is still under question for the long term.

There is little recorded understanding of the ecology of the Mitchell's flood plains and wetland systems, or the links between upland and lowland aquatic systems. Important and critical habitats need to be specifically identified to ensure their sound and sustainable management. Undoubtedly, annual flood events and upstream inputs play a crucial role in the health of the Mitchell's fishery, but a detailed understanding of the landscape ecology and its influence on aquatic resources in the Mitchell is a long way off. Unfortunately, management needs are here with us today.

We need to address the information deficiencies for sound management of the Mitchell's fisheries. Necessary fisheries management information should include reports on sustainable fisheries harvest requirements. This would require studies on features of the various populations and their respective abilities to accommodate harvest levels.

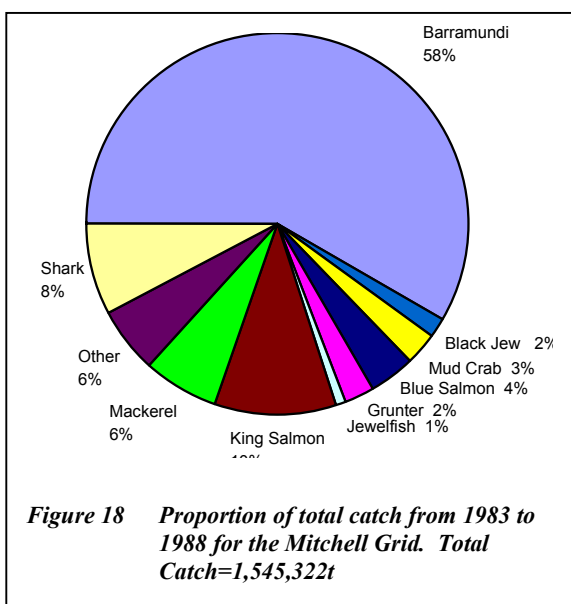


Figure 18 Proportion of total catch from 1983 to 1988 for the Mitchell Grid. Total Catch=1,545,322t

Tagging and other programs being run by the Kowanyama Land and Natural Resources Management Office are assisting this effort. There is considerable ecological knowledge held in by local people living in the catchment that is likely to have much to contribute. This needs to be somehow harnessed in a management planning process.

The landform process of erosion of the eastern uplands and deposition of the Mitchell lowlands

FISHERIES

alluvial fan leads to the transfer of nutrients, sediments, organisms and energy across the flood plain and wetland systems of the Mitchell River. This is of great relevance to fisheries management of the region.

The interbasin transfer of irrigation water from Tinaroo Dam (Barron River) poses a potential threat to the fisheries resources of the Mitchell Catchment. This due to the potential introduction of pest plants such as Salvinia, Water Hyacinth and Cabomba, and pest fish such as Tilapia that are present in Tinaroo Dam.

Goal:

The continuation of a productive fisheries industry maintained through educated management decisions and a healthy catchment

Objectives:

- A greater knowledge and understanding of both commercial and recreational targeted fish species behaviour and requirements
- An understanding of the important role that breeding habitats play in fishery resources
- Sufficient fish stocks to sustain a growing commercial and non-commercial fishing industry
- Identify potential hazards to fisheries resources in the Mitchell catchment

Strategies:

Education

FI1 Promote education on aquatic and marine ecosystems and species breeding requirements

Information and Communication

FI2 Improve our knowledge base of the fishery's capabilities and potentials

FI3 Collate and utilise information on indigenous traditional use and knowledge of fisheries

Improving Resource Management

FI4 Develop and implement a standard riparian zone protection and management plan

Adopting a Cooperative Approach

FI5 Encourage links between recreational fishing and scientific research

Outcomes:

Achievement of these strategies will result in the following outcomes:

- A well managed riparian zone and breeding habitats
- Management decisions based on knowledge of fishery requirements
- A fishery resource which realises the demands of commercial and non-commercial users

Strategy FI1

Promote education on aquatic and marine ecosystems and species breeding requirements

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Assess and promote the use of current educational information	MRWVG, Loc. schools, QCFO, DPI, QFMO		★	NC1 FI3
Work closely with industry bodies to compile extension material of new realisations and information	QCFO, Gulf MAC, QFMA, Universities		★	
Include relevant articles from fisheries publications in MRWVG Newsletter	ANSA, RLPB, Other publications, MRWVG		★	
Utilise the promotional tool, "The River" and update it for extension use	KALNRMO		★★	

Strategy FI2

Improve our knowledge base of the fishery's capabilities and potential

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Encourage monitoring of ecosystems especially where fish from stocking programs are released	QFMA, GBRA, DPI, Recreational fishers		★★	
Investigate additional funding avenues for continued fisheries monitoring	MRWVG, QFMA, QCFO, DPI		★★	
Be involved in the development and implementation of management plans	MRWVG, Local fishers, Aboriginal groups, Lgov, DPI		★★	FI3 FI4
Investigate the potential of utilisation of recreational and commercial non-target species	MRWVG, QFMA, DPI		★★★	

Strategy FI3

Collate and utilise information on indigenous traditional use and knowledge of fisheries

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Collate all existing information regarding traditional uses and requirements of the Mitchell River and marine fisheries resource	MRWVG, KALNRMO, Aboriginal communities, DPI		★	CH1 FI1
Compile the information into an accessible form such as a booklet	MRWVG, KALNRMO, Aboriginal communities		★★	
Incorporate the information into the development and updating of fisheries management plans	QFMA, QCFO, DPI		★	FI2

Strategy FI4

Develop and implement a standard riparian zone protection and management plan

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Formulate 'minimum standard' guidelines for the management of riparian zones which are suitable for the whole catchment	MRWVG, Lgov, EPA	A set of simple guidelines	★	
Identify areas of significant conservation value to protect	EPA, Lgov, MRWVG, Aboriginal groups, rangers,	Inventory of areas	★★	NC2 NC3 AG5
Investigate and promote incentives to increase the retention of significant habitat areas	EPA, Lgov, MRWVG, Bushcare		★★	NC4 AG5
Facilitate joint management programs for riparian zones	Lgov, Landholders, Aboriginal groups, MRWVG,		★★	FI2

Priorities Achieved By:

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years

Strategy FI5

Encourage links between recreational fishing and scientific research

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Hold workshops with recreational fishers and the scientific field to promote how they can assist eachother	ANSA, DPI, DNR, CSIRO Aboriginal groups, Recreational fishers		★★	
Encourage scientists to utilise recreational fishers in their field research	CSIRO, DNR, DPI, EPA	Fisheries researchers will consult recreational fishers in fieldwork	★★	FI2
Ensure the recreational fishers are informed of latest scientific advances and discoveries	MRWVG, QFMA, DPI	Articles in MRG newsletter & industry publications, leaflets	★★	FI1

Priorities Achieved By:

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years