

FLOODING AND THE ENVIRONMENT



As well as causing damage to many homes, businesses and farming properties, recent flood torrents have also had an impact on the environment, demonstrating the importance of effective natural resource management in the Fitzroy Basin catchment.

The Fitzroy Basin Association Inc. (FBA) works with the community and land managers throughout Central Queensland to promote sustainable use of our natural resources.

▶ ECOLOGICAL FUNCTION OF FLOODS

Floods are naturally occurring events and provide a number of important and beneficial functions in the natural world.

Wetlands

The natural fluctuation of water levels in a wetland, as associated with floods, supports the biological diversity of our wetlands. During a flood, nutrients are released into the soil. Drought tolerant plants revive while germinating seeds of water-loving plants shoot and spread. In the time after flooding, small animals hatch, grow and reproduce. While the water remains, longer-lived species reproduce. Fish recolonise the flood plains.



Weeds

Flooding offers some control of invasive water weeds such as Hymenachne and Water Hyacinth with the removal of large beds/weed mats of the weed.



Fish stocks

Fish, and especially Barramundi, will be happy about the flooding in the Fitzroy River. Baby Barramundi will be using the water flows of the flood to find a home further along the river in freshwater creeks and coastal wetlands and lagoons. The fish will stay there for a few years before returning to the Fitzroy estuary in the next decent flow. Unfortunately, it could be around three years before fishers' benefit, as it takes that long for Barra to reach legal size.



Recreational fishing

The news for fishers isn't all bad - records show that catch rates for coastal fish stocks such as whiting, and even reef fish further offshore, increase significantly in years of above average wet season flows. Catch rates should be boosted later this year and are expected to remain elevated for two to three years after the flooding. FBA supports local group CapReef, who collect information on local recreational fishing catches to better understand the effects of the flooding on catches and Barramundi recruitment. You can help by reporting any baby Barramundi you catch to the CapReef hotline on 1800-077-001.

So water running out to the oceans is not 'wasted' - it plays an essential role. Dams and weirs can prevent these ecological functions.



▶ THE THREAT TO A NATIONAL ICON

The Fitzroy Basin is the largest catchment draining to the east coast of Australia.

In a time of flood, the sediment and nutrients carried along in the flood run-off 'plume' settle into the Great Barrier Reef Lagoon (the area between the coast and the Great Barrier Reef). This has a serious affect on the reef ecosystem.

The risks to the corals of the Great Barrier Reef are many. Coral reefs are built up through the secretions of small reef-building animals. The delicate balance of this ecosystem is upset by change in the waters in which they live.



▶ MANAGING RESOURCES ON THE LAND

Improved land management has a positive effect far beyond the boundary fence of a landholder's property.

Landholders in the central Queensland region are doing their part to protect the Great Barrier Reef by aiming for improved ground cover levels and managing stock access to stabilise sensitive riverbanks. This reduces erosion, which in turn decreases sediment and nutrient run-off entering waterways and improves water quality.

In 2006-07, FBA helped central Queensland landholders undertake more than 200 projects on their properties to:

- Manage stock access to rivers, creeks and wetlands
- Manage grazing to land types
- Develop property management plans
- Control weeds
- Manage salt affected areas
- Manage native vegetation
- Improve sustainability of farming systems.



Between 2004 and 2007, FBA field and technical staff collaborated with landholders on 706 properties, covering 2,914, 587ha land. This amounts to 19% of the Fitzroy Basin region.

FBA offers practical and financial support to help landholders improve their farming systems to increase the sustainability and productivity of their enterprises. The result is greater soil retention and a subsequent decrease in delivery of sediment to the Great Barrier Reef Lagoon.

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▶ GOOD MANAGEMENT REDUCES FLOOD IMPACT ON REEF

Good land management has helped prevent more than 75,000 tonnes of sediment being washed into the ocean by recent flooding.

CEO of the Fitzroy Basin Association Inc (FBA), Suzie Christensen, said flood water gushing through the Fitzroy River catchment highlighted the importance of sustainable land use by local landholders.

"Landholders are reducing annual average sediment loads delivered to waterways by about 75,000 tonnes, and we're on target to cumulatively reduce sediment entering waterways by 4.1 million tonnes over ten years," she said.

"The FBA worked with more than 200 landholders last year to improve land management to prevent sediment run-off into the Great Barrier Reef lagoon.

"The Fitzroy Basin is the largest river system draining to the east coast of Australia, with 20 850km of waterways all leading to the reef lagoon.

"The effect of this flood would have been worse if landholders weren't already taking steps to reduce impact on the land by retaining ground cover and using best practice farming techniques."

Ms Christensen got a bird's eye view of the large volumes of soil that had been removed by recent flooding on a flight over the region this week.

"Floods of this magnitude cause an exponential increase in erosion where poor land management practices have been implemented and the effects were clear to see," she said.

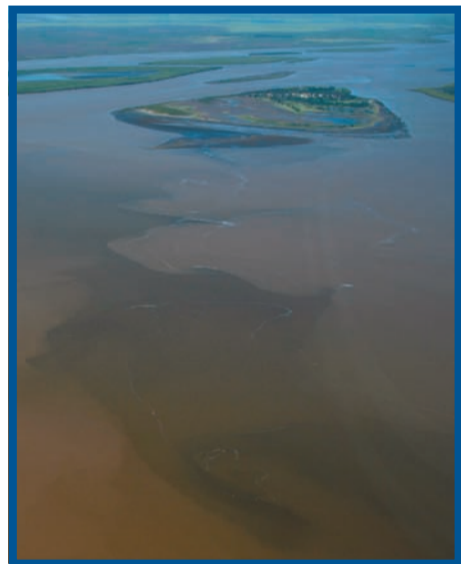
"In particular where land practices had allowed the ground to be disturbed such as some mining on floodplains and some areas cleared for cropping and grazing."

Ms Christensen said the flood water plume into the Great Barrier Reef Lagoon would have consequences for the reef ecosystem.

"The flood waters are flushing sediment, fertilisers, pesticides, herbicides and other run-off several kilometres out onto the reef.

"The delicate balance of the reef ecosystem is upset by changes in water quality, and the thick cloud of sediment will also block sunlight and prevent coral from photosynthesizing."

Ms Christensen said the flood event showed how vital it was to plan for the sustainable use of our natural resources.



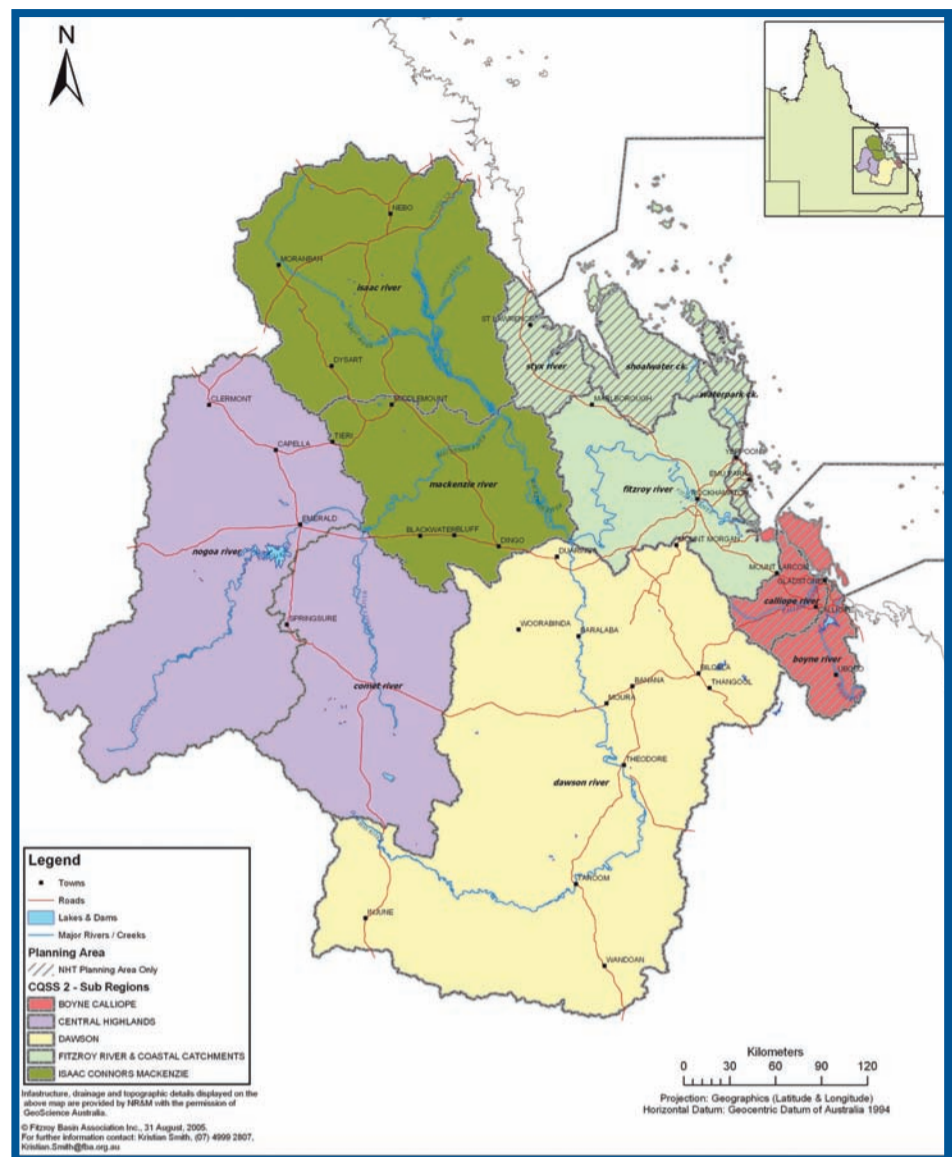
View looking upstream of the plume of recent floodwater at the mouth of the Fitzroy River



Flooding across a floodplain and Lucaena pad-dock in the upper Fitzroy region

"We've seen the benefit of forward-planning and preparation by the councils and emergency services in limiting the impact of flooding on our local communities," she said.

"The same kind of benefits can be realised for the environment. Good planning and management in farming and mining operations can minimise the environmental impact."



Where the water comes from: The Fitzroy Basin has more than 20 850km of waterways, and drains the Dawson, Comet, Nogoia, Isaac-Connors and Mackenzie catchments.

▶ FBA: WORKING TO PROMOTE A MORE SUSTAINABLE CQ

The FBA is a community based group working across central Queensland (CQ) to provide leadership in natural resource management, support research and development, and coordinate the delivery of on-ground activities that result in a healthy natural environment.

The FBA works in collaboration with five sub-regional groups based within the Fitzroy Basin, which are:

- Fitzroy River and Coastal Catchments (FRCC)
- Boyne Calliope
- Three Rivers
- Dawson Catchment Coordinating Association (DCCA)
- Central Highlands Regional Resource Use Planning Cooperative (CHRRUP)

Australian and State Government funding enables FBA to assist sub-regional groups to implement a diverse range of projects.

Field staff from FBA and sub-regional groups provide on-ground assistance for people involved in projects. This grassroots approach produces real, lasting results.



Inundated cropping lands at the junction of the Dawson, Mackenzie and Fitzroy Rivers

To get involved contact the FBA by
phoning 49992800
or visit the website at www.fba.org.au

