

River Restoration Projects : The Gregory River

Helping to manage our waterways for the whole community

Gregory River Catchment Background

The Gregory River is a relatively small catchment (246sqkm) in the north of the Mackay Whitsunday region with headwaters in Conway-Dryander Range at an elevation of 500m. The river flows west to Edgcombe Bay forming part of the Great Barrier Reef Lagoon. Stream flow is variable throughout the year with summer dominant rainfall averaging 1145mm. During low flows the water level can recede restricting the river to a series of unconnected pools.



In the upper reaches Gregory River is an aggrading stream with low sinuosity (a relatively straight stream with depth of stream bed material building). Downstream, sand and gravel extraction within the bed and banks has lowered the bed level and eliminated many natural meanders. This has resulted in increased flood velocities during the past several decades. Since European settlement, clearing of land for agriculture and quarrying of the river bed has been responsible for accelerating the stream straightening process in the alluvial reaches of the river.¹

Thirty per cent of the catchment is uncleared and protected by Dryander National Park with the remaining 70% under cane, grazing, forestry and horticulture production. More recently some production land has been replaced with peri-urban development. Despite the diverse land use the Gregory River has retained moderate ecological value. However there is significant scope for improvement of instream habitat and riparian vegetation.

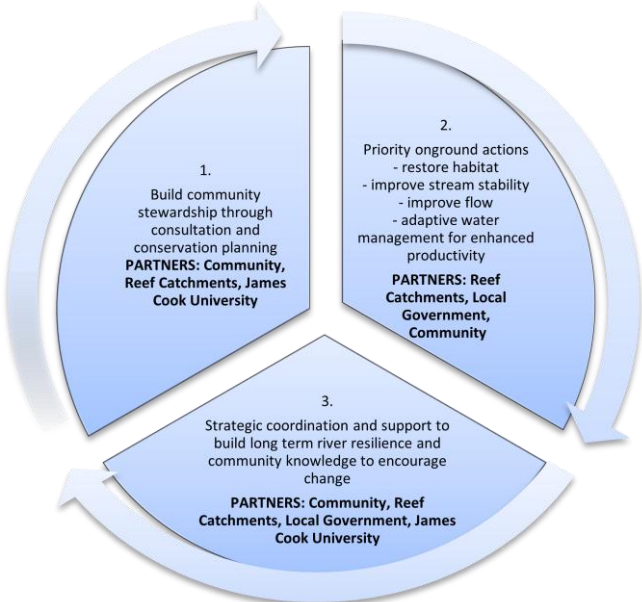
Clearing of riparian and surrounding vegetation for agriculture has resulted in fragmentation of riparian vegetation and a decrease in habitat integrity. Residual impacts of both quarrying and clearing for agriculture persist as current issues. Key impacts resulting from these land uses are the loss of habitat connectivity as well as loss of integrity between highland and lowland habitats. Bank instability due to channel modifications is also a significant issue.

The Aim of River Projects

To work with individuals, land managers, local government and industry groups to encourage shared responsibility, stewardship and wise use of water to increase resilience of river systems. Through these partnerships river restoration projects focus on improving water flows for fish, restoring river and estuarine habitats. Projects also aim to enrich stream productivity, encouraging community participation and facilitate adaptive water management plans that are designed to lesson impacts of climate change. River project activities enable groups to recognise that human behaviours threaten their local catchment and then offer strategic support, coordination and resources so that they may increase river resilience and be the agents of change.

If these issues remain unaddressed, natural regeneration is likely to be hampered by bank instability and weed invasion and result in a further loss of both ecological and economic value².

Gregory River Project Partnerships



Connecting local communities with their creeks

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Investment and Progress : January 2010 to now 2011

| Activity | Partnerships | Timing |
|---|--|--------------------------------|
| Introducing Reef Catchment to the Gregory River community : one on one consultations and development of Gregory River Restoration Project | All of the Gregory River community (Residents, Primary Producers, Qld National Parks, Boral Quarries, Local Government, Landcare, Whitsunday River Improvement Trust), Reef Catchments | January 2010 – May 2010 |
| Gregory River community shed meeting at Mark Blair's | 20 Gregory River land managers, DPI Fisheries and DERM hydrologists, Reef Catchments | June 2010 |
| Gregory River Fish Project, Proserpine Show, Proserpine and Cannonvale State School, Proserpine High School, Future Leaders Ecochallenge | Whitsunday Catchment Landcare, GBRMPA Reef Guardian Program | April – June 2010 |
| Bathymetric Waterhole Surveying at 7 sites with drawdown and refugia analysis | Gregory River land managers, DERM hydrologists | July 2010 |
| Construction of fishway at Patullo Road causeway to remove barrier to fish migration | Reef Catchments, DPI Fisheries | August 2010 |
| Gregory River Community River Processes Workshop, Proserpine RSL, Proserpine | 20 Gregory River land managers, Reef Catchments, Australian River Institute/Griffith University | October 2010 |
| River Processes and Essentials of River Rehabilitation Workshop, Mackay | 75 member of regional river management community, Reef Catchments, Australian Rivers Institute/Griffith University | October 2010 |
| Consultation with Whitsunday River Improvement Trust and land managers toward river stabilisation partnership (ELJ Knowledge Transfer) | Whitsunday River Improvement Trust, Gregory River land managers, Australian Rivers Institute, Reef Catchments | October – December 2010 |
| Waterhole monitoring program consultations | Gregory River land managers at strategic waterhole sites, Reef Catchments | December 2010 – February 2011 |
| Design of "Collaborating Across Boundaries" Beyond reserves: Advancing conservation on private lands conservation planning framework conservation planning model | James Cook University, Reef Catchments | September 2010 – February 2011 |
| "Collaborating Across Boundaries" land manager interviews | James Cook University, 21 Gregory River land managers | April – June 2011 |
| Weed control project scoping | Whitsunday Regional Council, Gregory River land managers, Reef Catchments | April 2011 – ongoing |
| Strategic streambank stabilisation and revegetation | Gregory River land managers, Conservation Volunteers Australia, Whitsunday Catchment Landcare, Reef Catchments | April 2011 |
| Riparian and land type fencing (total 15.3 km on Gregory River and tributaries) | Gregory River Land Managers, Reef Rescue, Reef Catchments | December 2010 – August 2011 |
| Installation waterhole gauging boards at 5 strategic sites for pilot Waterhole Monitoring Program | Gregory Land managers, DERM hydrologists, Reef Catchments | July 2011 |
| Presentation of "Collaboration Across Boundaries" conservation planning model at 11 th International Conference on the Ecology and Management of Alien Plant Invasion. Bridging the Gap Between Scientific Knowledge and Management Practice, University of West Hungary, Szombathely, Hungary | James Cook University | August 2011 |
| Presentation of "Collaboration Across Boundaries" conservation planning model and Marxan to Reef Catchments management and project staff | James Cook University, Reef Catchments | August 2011 |
| Secure Caring for Our Country 2011-12 funding for Gregory River Feral Pig Control Program | Reef Catchments, Whitsunday Catchment Landcare, Whitsunday Regional Council | September 2011 |
| Roll-out of Waterhole Monitoring Program | 5 Gregory River land managers, Reef Catchments | October 2011 |
| Secure Caring for Our Country 2011-12 funding to assist in regional priority catchment rehabilitation | Reef Catchments, Whitsunday Catchment Landcare, | November 2011 |
| Removal of barrier to fish migration – Collinvale Road causeway upgrade | Whitsunday Regional Council (DPI Fisheries) | December 2011 |
| Gregory River community shed meeting – update from community on their river projects, update from Reef Catchments, presentation "Collaborating Across Boundaries" results. | Gregory River land managers, Reef Catchments | December 2011 |

1. Gregory River Management Action Plan: Upper Reach, Whitsunday River Improvement Trust, 2000
2. Gregory River Management Action Plan: Upper Reach, Whitsunday River Improvement Trust, 2000