Mary River Catchment Coordinating Committee

Annual Report 2012

Mary River Catchment Coordinating Committee

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Front cover: The Mary River at Conondale. Image courtesy of Todd Fauser

Contents

MRCCC Staff 2011-2012

Brad Wedlock	Operations Manager
Eva Ford	Catchment Officer Threatened Species
Dale Watson	Catchment Officer
Steve Burgess	Catchment Officer
Dr Tanzi Smith	Catchment Officer
Peter McAdam	Biodiversity Field Officer
Jenny Whyte	Waterwatch Coordinator
Leah Johnston	Book-keeper
Jaimi-Lee Thomas	Casual Administrative Assistant
Dale Ricketts	Casual Administration and Festival Assistant
Debbie Seal	Administration Manager
Kelvin Neilsen	Project and Office Support (Mutual Obligation)

MRCCC Delegates 2011 - 2012

Interest Sector	Name	Title
Beef/Grazing	Vacant	Nomination sought
Dairying	Rob Priebe	Deputy Chair
DERM/DNRM	Luke Diddams	Delegate
DEEDI/QDAFF	Graeme Elphinstone	Delegate
Education	Sue Gibson	Delegate
Environment	Emma-Kate Currie	Delegate
Fishing	Chris Mangold	Delegate
Forestry	Ernie Rider	Delegate
General Community Lower	Carol Bussey	Delegate
General Community Middle	Ray Zerner	Delegate
General Community Upper	Dave Sands	Delegate
General Community Western	Rosemary Burnett	Delegate
Horticulture	Vacant	Nomination sought
Irrigation -	Vacant	
Landcare, Lower Mary	Carol Neilson	Delegate
Landcare, Upper Mary	Phil Moran	Chair
Landholder	Elke Watson	Treasurer
Landholder	Helen Lofthouse	Delegate
Life Member	Margaret Thompson	Secretary
Life Member	Jim Buchanan	Delegate
Fraser Coast Council	Cr Debbie Hawes (pre April 2012) Cr James Hanson (post May 2012)	Delegate
Gympie Regional Council	Cr Julie Walker (pre April 2012) Cr Wayne Sachs (post April 2012)	Delegate
Sunshine Coast Council	Ben McMullen	Delegate
Seqwater	Tim Odgers	Delegate
Special Member	Nai Nai Bird	Delegate
Special Member	Glenda Pickersgill	Delegate
Special Member	Angus Hutton	Delegate
Sugar	Yolande Lambert	Delegate
Waterwatch	Ian Mackay	Delegate

Chair's Report 2011-2012

The past year was typically active and productive for the MRCCC. It gives me great pride to see the work carried out by our volunteers, landholders and staff across a number of projects throughout the catchment, and to receive positive feedback about the activities of our organisation, and our impact upon the health of the Mary. Attendances at MRCCC General Meetings have been excellent with some great Guest Speakers and informative Project Reports generally being the highlights. Over 80 people attended our 150th General Meeting in February this year, helping to celebrate 20 years since Gunther Kath first proposed the concept of a community organisation to care for the health of the Mary Catchment. In the past year, our community Delegates have collectively travelled over 13,000 kilometres to attend meetings, indicating the high level of interest. Thank you to all our Delegates who contribute their time and expertise.

Earlier this year local government elections were held, ushering in a new Mayor on the Sunshine Coast, and an entirely new group of Councillors on the Fraser Coast. Welcome James Hansen and Phil Truscott (Fraser Coast), and Wayne Sachs (Gympie). James is no stranger to the MRCCC having previously represented the Western Mary Catchment Community, and Wayne is a keen learner, who has already demonstrated his willingness for constructive dialogue on a number of issues. Thank you to retiring local government Delegates Debbie Hawes and Graham Engemen for their years of service on the MRCCC. I also thank retired Sunshine Coast Mayor Bob Abbott and former Maryborough Mayor and Fraser Coast Councillor Barb Hovard who both supported the MRCCC for many years. The MRCCC's partnership with local government is critical to the success of the work being undertaken throughout the catchment. Put simply, we need local government support to be effective and relevant. And on that note I must also thank the Gympie Council for continuing to provide office space for our staff in Tozer Park Rd. This arrangement has now been extended until September 2014.

The 2012 State Election resulted in a new State Government and a shake up in Ministerial Departments resulting in four new Ministers responsible for various aspects of natural resource management. The MRCCC has written to each of these Ministers, and to the MP's in the Mary Catchment with a list of priority issues we would like to see addressed. We have since met with the State Environment Minister, Andrew Powell, and the State Minister for Agriculture, Fisheries and Forestry, John McVeigh. A very productive discussion was had with both Ministers covering a wide range of issues related to the future of the threatened species recovery plan and other activities of the MRCCC.

Federal Minister for Wide Bay, Warren Truss and film maker Luke Barrowcliffe with the "Once an endangered species" Cod DVD at the MRCCC's 150th General Meeting

The MRCCC has also been involved in a dialogue with the new State Government in relation to the Mary Valley renewal process, and the sale and management of state owned land in the Mary Valley. Recent meetings I have attended with local MP David Gibson and representatives of state and local government plus a number of community members have been constructive.

Although the renewal process has been frustratingly protracted since plans to dam the Mary River were scrapped almost three years ago, it was very evident at a recent meeting at Imbil Hall that the community of the Mary Valley is highly motivated and optimistic for a better future.

The development of the Mary River Threatened Aquatic Species Recovery Plan is nearing completion. The MRCCC funded Tanzi Smith to work on this important plan over the last year in collaboration with the Federal Government and with considerable community input. Once the Plan is finalised, we will be seeking State and Federal Government endorsement.

The MRCCC also welcomes Peter McAdam to the staff to drive the BMRG funded Healthy Habitats/Land for Wildlife Program in the Gympie and Fraser Coast regions. Peter brings a wealth of knowledge and experience to the position, and is already much in demand from landholders interested in registering their property in the Land for Wildlife program. Hundreds of properties in the Mary Catchment are already registered in the Land for Wildlife program, either through the MRCCC or through Sunshine Coast Council. The contribution of landholders to the conservation and protection of wildlife habitat throughout the Mary Catchment is significant and deserving of support. I hope to see this excellent program continuing beyond June 2013.

Also significant is the work of our Waterwatch volunteers, some of whom have monitored their local waterway for over a decade. Since the year 2000, MRCCC Waterwatch volunteers have collected over 7200 water quality samples. The data gathered by volunteers can now be used to develop much more accurate guidelines for each of the sub-catchments in the Mary.

There are so many groups and individuals who partner with the MRCCC throughout each year in a range of activities aimed at improving catchment health and biodiversity. Whilst there is no doubt that our effectiveness is a result of the collaboration of all stakeholders, there are a few I would like to particularly thank. Peter and Bevly Hughes come to most MRCCC meetings, and to many of our field days and workshops. Peter's media reports and Bevly's images help to spread the word about our activities. Their support is greatly appreciated. Thank you also to Codline editor, Eve Witney who does a great job with limited recompense every year.

Thank you to those who donated to the Mary Catchment Public Fund, and to the Public Fund Trustees, who continue to plan for a Catchment Centre. Thank you also to HQPlantations, who have provided the use of their meeting room free of charge for MRCCC General Meetings this year. Thanks also to my fellow Executive members, Margaret Thompson, Rob Priebe, Elke Watson and Helen Lofthouse. Finally, thank you to our dedicated staff. I have enjoyed working with you all. *Phillip Moran*

Mary River Waterwatch and the March 2012 floods

Throughout 2011 and 2012 the ongoing efforts of the MRCCC's army of volunteer Waterwatchers continued to provide valuable long-term water quality data and regular observations of the health of our local waterways. This information helps us characterise the range of 'normal' ambient water quality values for different streams, helps detect trends of improving or deteriorating water quality, and helps monitor for acute events that require investigation and/or action.

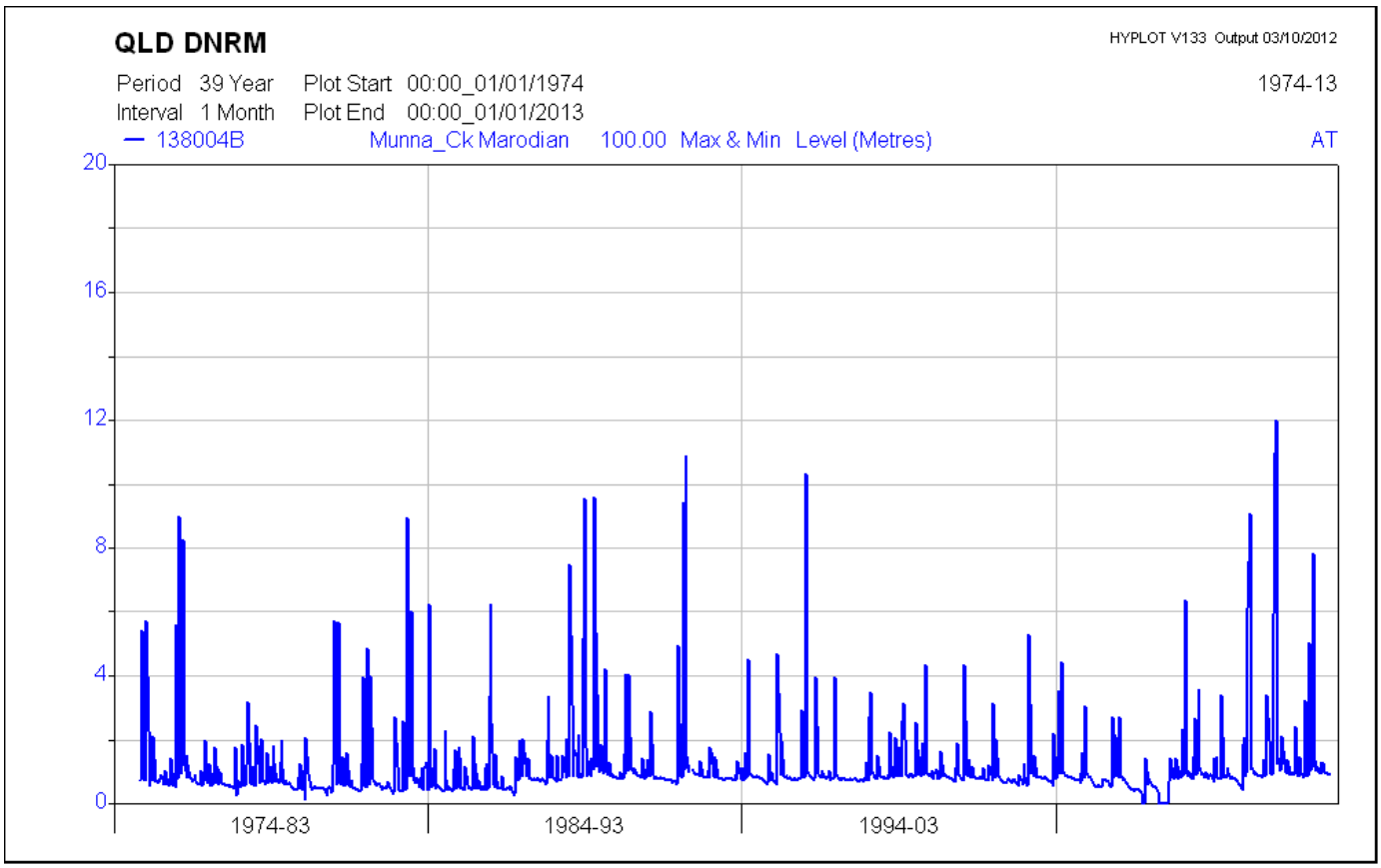
This year has seen our creeks flowing well again with a number of flood events in most sub-catchments throughout 2011 and 2012. Interestingly, while the Mary River received a series of smaller flood events - well below record flood levels - quite a few of the creeks reached record flood peaks during 2012 – particularly Tinana Creek (at the gauging stations at Goomboorian and Bauple), lower Deep Creek (anecdotal evidence), Gutchy Creek (anecdotal evidence at Gundiah), and Skyring and Middle Creeks at Federal (anecdotal). One impact of this has been the flushing out of aquatic plants, both weeds and native macrophytes, and delays in seeing healthy beds of plants re-established. This presents a real opportunity to control noxious aquatic weed species while population numbers are low.

This year's expansion of the Waterwatch network into the Tinana and Coondoo Creek catchments is starting to give us a clearer understanding of how much the natural water quality characteristics of this system differ from the overall water quality guidelines for elsewhere in the Mary Catchment. Recent water quality monitoring of Skyring, Coles and Traveston Creeks by MRCCC staff has also shown interesting new information about the variation in water quality between the waterways in that middle part of the floodplain. Due to the recharge of the groundwater system over the last couple of good seasons, many parts of the Waterwatch network, (particularly those draining the ranges on the western edge of the catchment) are showing rising levels of salinity in areas where saline baseflow from groundwater makes its way into the surface water in the creeks.

School-based Waterwatch activities have continued across the Mary River Catchment during the year, particularly in partnership with Gympie Landcare. A special thank-you to Gympie Regional Council and Sunshine Coast Council who continue to support the Community Waterwatch program annually.

Munna Creek Waterwatch network

After a recording the highest flood peak on Munna Creek at the Marodian gauging station since 1974 (114,451 megalitres/day) during the January 2011 floods, Munna Creek kept flowing strongly all year with a few smaller floods in late Summer 2012.



Historic flow rates and flood heights in Munna Creek at Marodian -Gauging station data from 1974 to 2012

The flooding rains on the 8th March 2012 resulted in 37,839 megalitres/day flowing past the Marodian gauging station in the lower Munna Creek – almost the volume of Borumba Dam flowing down Munna Creek in one day. These consistent flows in the Munna Catchment during 2011 and 2012 are reflected in greatly improved assessments of physical chemical water quality throughout most of the system.

Wide Bay – Widgee Creeks Waterwatch network

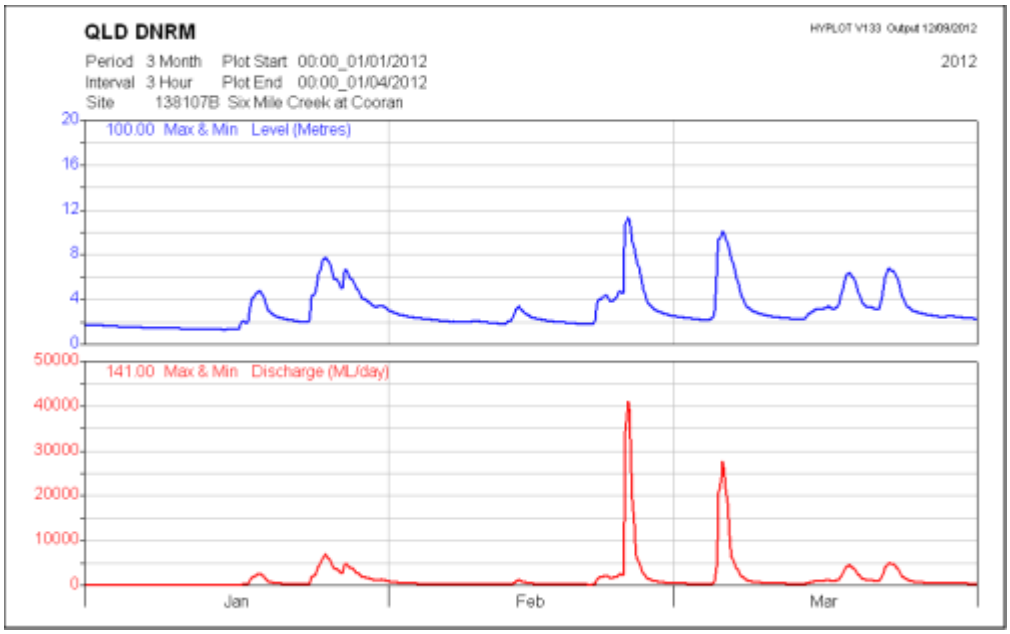
After recording the highest peak ever on Wide Bay Creek at both Kilkivan and Woolooga in January 2011 the creeks in the Wide Bay – Widgee Waterwatch network continued to flow strongly throughout 2011 and 2012.

The Wide Bay, Widgee and Glastonbury Creeks all recorded a series of smaller floods compared to the events of early 2011. In general, water quality results for this network have never been better, however electrical conductivity levels (salinity) have started to rise again as the steady baseflow of relatively saline groundwater is not being as diluted by surface water inflows as it was earlier in the year. Of note is Gap Creek which has started to climb back to the very high electrical conductivity levels previously recorded in the dry years of the 2000-2010 decade.

Gympie – Amamoor Waterwatch network

The Gympie – Amamoor Waterwatch network experienced a series of relatively localised flood events during 2011 and 2012. Of particular note was the series of floods that culminated in the violent flood of late February 2012 which caused significant damage in the lower Six Mile Creek catchment. In this instance, locals observed that the floodwater in Six Mile Creek caused the Mary River to back-up as far as 10km upstream from the junction of the Six Mile Creek. This flood in Six Mile Creek was marginally smaller than the highest flood peak recorded on Six Mile Creek at the Cooran gauging station. However, the flood peaks recorded in Pomona on Cooroora Creek may well be the highest ever recorded.

Deep Creek also received a major flood in early March, apparently one of the biggest floods ever recorded in this sub-catchment. Anecdotally this flood in Deep Creek was as big as the 1 in 100 year 1999 flood when the Mary River backed-up into the lower Deep Creek reaches. However, in the 2012 event the Mary River was not in a major flood, while Deep Creek was 'running a banker'.



Above: Six Mile Creek heights, January 2012 to April 2012
Below: Flood damage at Pomona Service Station on Cooroora Creek

During 2011 and early 2012 water quality records in this network had excellent compliance with water quality guidelines, although electrical conductivity has started to rise in the upper Amamoor and Deep Creek sub-catchments for the same reasons discussed in the Widgee Wide Bay network. During the last 12 months turbidity levels in the Mary River have remained above normal, due to the input of sediment from regular high flow events (the Mary River even experienced a bankfull flow in June, 2012)

Kenilworth District Waterwatch network

The Kenilworth Waterwatch network is expanding to include new sites in Cedar, Oakey, Belli and Yabba Creeks, with new volunteers being trained for these sites. MRCCC under-estimated the local response to a call for new volunteers and it is likely that the nominal boundaries between the areas covered by the Kenilworth and Upper Mary networks will change to allow more efficient transport arrangements between volunteers involved in each of these networks. It is heartening to get such an enthusiastic response.

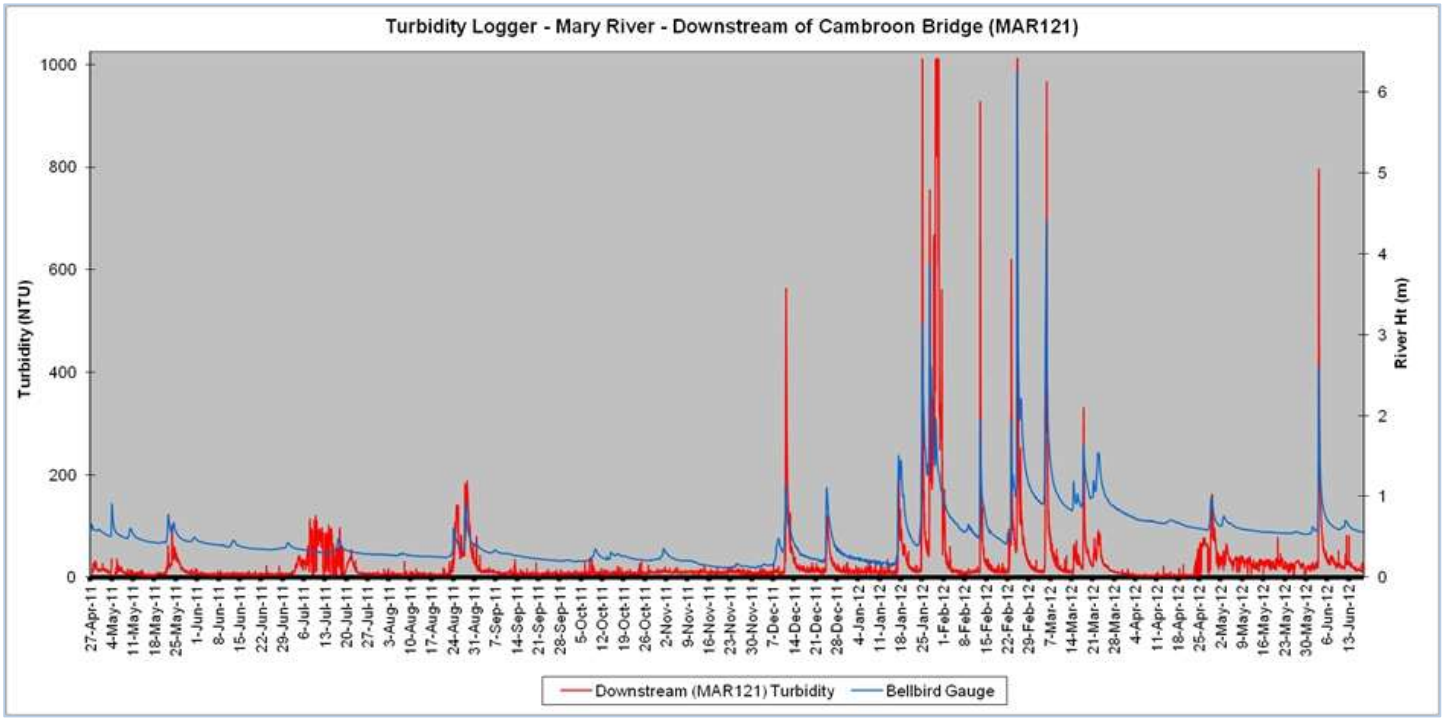
The Mary River at the Moy Pocket gauging station received a significant flood during February 2012 (26/2/12) that resulted in a 63,000 ML/day flood peak – the equivalent of 1½ Borumba Dams. Generally, the ambient water quality recorded in the creeks throughout the Kenilworth network over the last year has been very good, but there were still significant high turbidity events associated with high flows in the river carrying sediments from unstable river beds and banks in the local area and from sources in the catchment further upstream.

Upper Mary Waterwatch network

During 2012 the Upper Mary catchment caught the heavy rain that deluged Cooroy and Pomona in late February, as the Bellbird gauging station on the Mary River recorded a peak on the 26th February 2012 of approximately 30,000 meg/day. During early 2012 many Upper Mary Catchment locals and Waterwatch volunteers reported unusually 'dirty' water in the Mary River – sometimes not corresponding to a rain event.

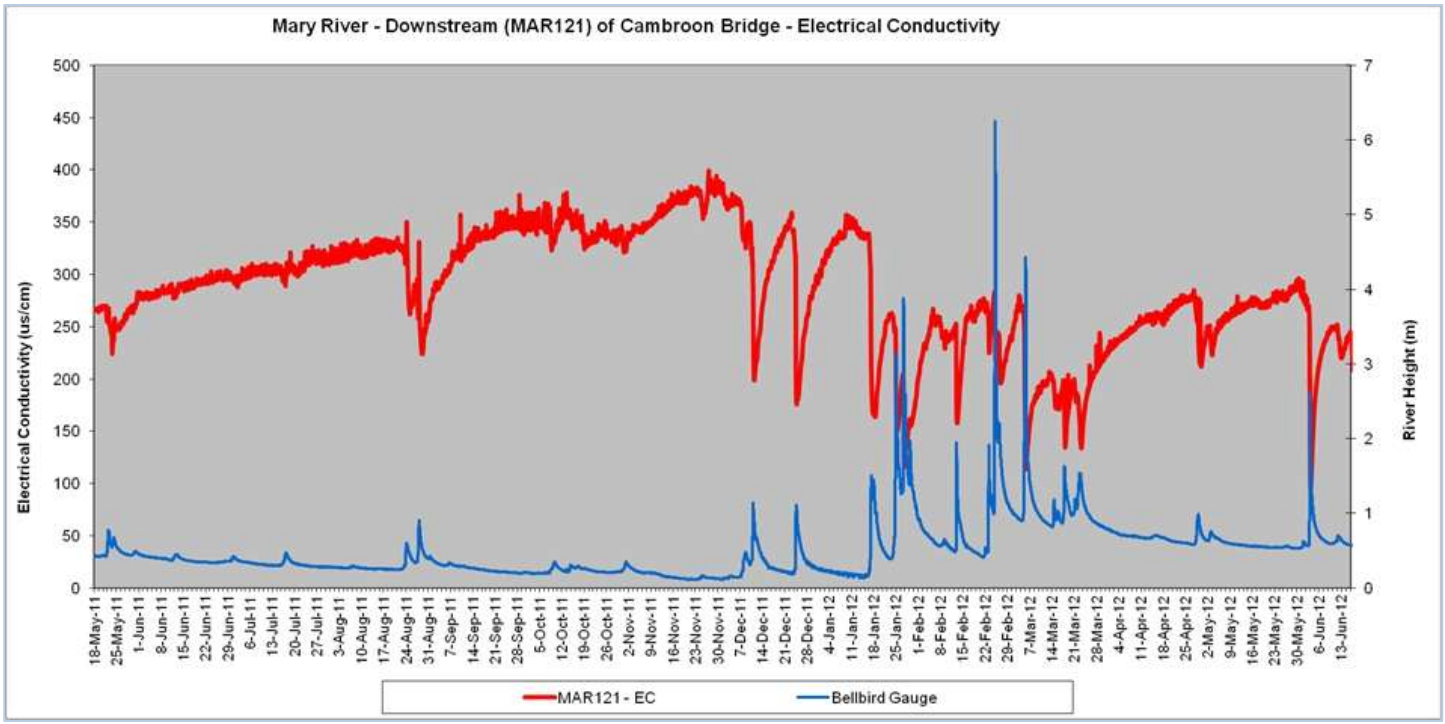
It is believed that a number of significant landslips in a few tributaries of the headwaters above Conondale are persistently contributing quite turbid water into the upper Mary River.

MRCCC staff continued using an automated data logger at the Cambroon bridge, after bridge construction was completed, in part to monitor sediment loads in this upper part of the catchment. The following graph shows the high turbidity events recorded at this site, illustrating the dirty water conditions commented on by locals.

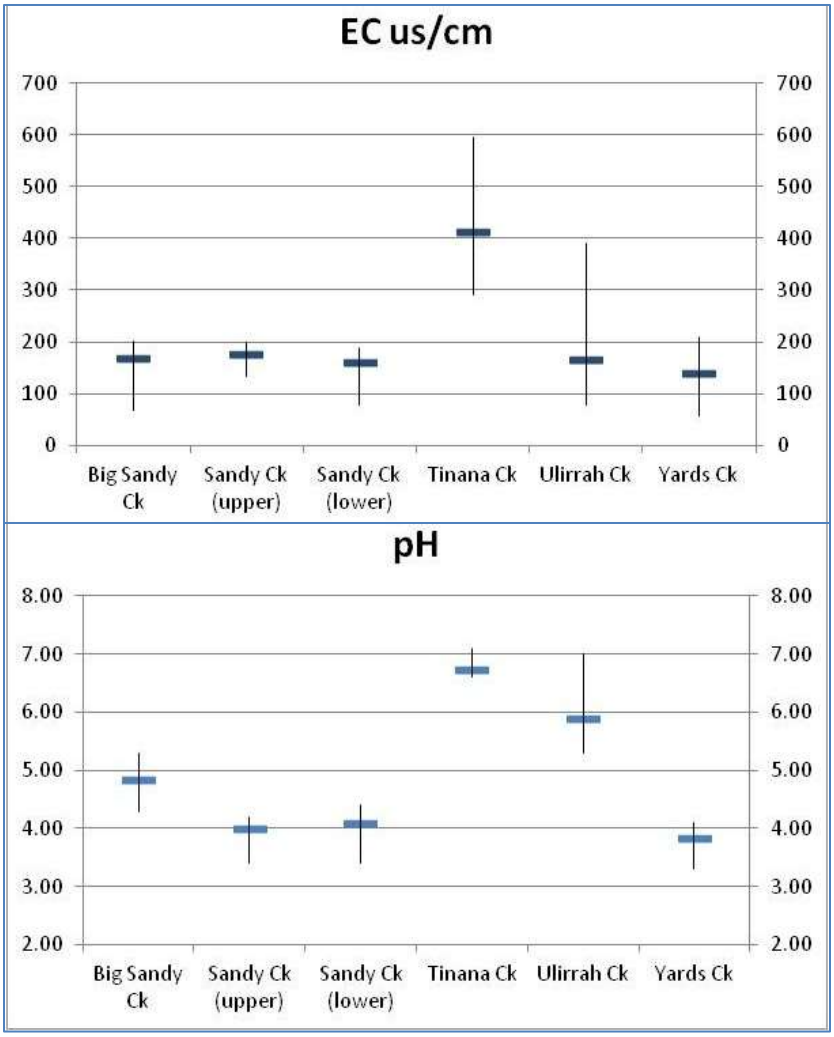


Continuous datalogging showing high turbidity events in the upper Mary River, late 2011/2012.

Data from this continuous monitoring equipment also nicely illustrates the way that freshwater surface flows are diluting a more saline groundwater baseflow in this part of the river, as occurs in many other parts of the catchment. This is shown in the graph below.



Continuous datalogging data showing the interaction between salinity and flows in the upper Mary River.



Preliminary data showing the range of salinity (EC) and pH levels at different parts of the Tinana/Coondoo Creek system 2011/12

Thanks to retiring volunteer Kath Nash for her long term commitment to the Waterwatch program in the upper Mary over the years. In 2012/2013 MRCCC is developing a partnership with Barung Landcare to monitor water quality on the Maleny plateau as part of the new Maleny precinct development.

Tinana Creek Waterwatch network

The Tinana Creek Waterwatch network was established in early 2012, targeting Tinana and Coondoo Creeks and their tributaries, such as Sandy Creek at Downsfield and Tagigan Creek at Goomboorian. HQPlantations now monitor 5 sites on tributaries of Tinana Creek within their plantation estate. Welcome to new volunteers Les and Inge Giegler, Jeff Clifton and HQPlantation staff who have helped form this new Waterwatch network. MRCCC has recently purchased new equipment to support this network and are looking for more volunteers in this area, as the ecological importance of the Tinana/Coondoo system for providing top quality habitat for major populations of the critically endangered Mary River Cod becomes more and more apparent.

In early March 2012 Tinana Creek recorded unprecedented flood heights at Goomboorian and Bauple after a huge amount of rainfall (upwards of 400mm in 1 day).

The most significant information that has come from this network to date is just how different the chemical water qualities of the various tributaries of this system are, both to each other, and to the general water quality guidelines adopted throughout the rest of the Mary River system. This is a very dynamic system which shows great variation in pH (acidity) between the different sites, and between different times at the same site.

Reef Rescue grazing projects (2010 to 2013) - Brad Wedlock & Graeme Elphinstone (QDAFF)

For the past 3 years, MRCCC in partnership with the BMRG, AgForce, QDAFF and the Gympie District Beef Liaison Group has been delivering Reef Rescue in the Mary River Catchment to the grazing community. Reef Rescue works with interested graziers to implement improved land management practices to reduce the amount of nutrients, chemicals, and sediments leaving their farms and impacting on Reef water quality. The Australian Government has invested in the Reef Rescue program to provide technical support and financial incentives to the grazing community to improve their grazing land management practices. Examples of eligible on-ground grazing projects include:

- Fencing to reduce bank erosion and manage cattle access to creeks and wetlands
- Fencing wetlands to clean the water and filter sediments and nutrients
- Provision of off-stream watering points e.g. tanks, troughs, as an alternate water supply to creekwater
- Provision of additional troughs in large paddocks to facilitate evenness of grazing and improved grazing land condition
- Sub-division fencing to separately manage different grazing land types and improve grazing land condition
- Fencing to restore groundcover and encourage the natural stabilization of gullies and salt scalds

Improved grazing land condition leads to improved pasture productivity, sustainability and profitability, whilst reducing the loss of valuable sediments and nutrients from our grazing lands. The Mary River Catchment is the southern-most of the Great Barrier Reef catchments, and the freehold land of the grazing sector constitutes approximately 70% of the Mary River Catchment.

Looking back from Mt Groggy towards upper Glastonbury

2012-2013 is the final year of the Reef Rescue program. Over the past 3 years participating graziers have faced enormous challenges with the continued wet weather and significant flood events generated by the La Nina weather pattern. These graziers pushed on with their on-ground projects and have completed them under extraordinary circumstances and on time. A special thank-you goes out to these graziers for continuing with their projects under trying conditions. The flooding resulting from the wet weather has caused considerable bank and gully erosion throughout the Mary River Catchment which certainly justifies the continuation of the Reef Rescue program beyond 2013. We also appreciate the input provided by the project assessment panel members, Rosemary Burnett, Wayne Carlson, Phil Moran and Cathy Mylrea

Grazing land management practice surveys

The Reef Rescue project team surveyed 10 graziers throughout the Mary River Catchment (from Conondale to Boompa) to capture their current grazing land management practices. This survey is part of a larger grazier survey that has been on-going in Queensland for the last 3 years, coordinated by AgForce, QDAFF and Regional Groups (BMRG). This is the first time that graziers of the Mary River Catchment were surveyed for their land management practices. The results will provide a small snapshot of the current adoption of best grazing land management practices. Feedback from the participating graziers was provided to improve the survey. .

Cattle trough installed on the high slopes above Glastonbury with Widgee Mountain in the background

Reef Rescue on-ground grazing projects for the Mary Catchment 2010 - 2013	
No. of expression of interests received for on-ground grazing projects	
2010-11	32
2011-12	29
2012-13	33
Total expression of interests	94
Total number of grazing enterprises with Reef Rescue projects approved	64
Total Reef Rescue funding for on-ground projects	$345, 098
Total In-kind contribution provided by graziers	$526,672
Total number of on-property consultations	102
Total number of paddock maps prepared	69
Total number of grazing land condition assessments	41
Total number of riparian zone condition assessments	32

Local Government distribution	% of Reef Rescue on-ground grazing projects
Fraser Coast Regional Council	20%
Gympie Regional Council	61%
Sunshine Coast Council	19%

Geographical distribution of Reef Rescue on-ground grazing projects (2010 to 2013)

Western Mary Catchments	Mary Valley	Gympie East	Glastonbury Widgee district	Upper Mary	Tiaro District
28%	23%	16%	13%	11%	8%

Biodiversity Fund

In May 2012 the Federal Government Environment Department approved a 6 year proposal that MRCCC submitted to their Biodiversity Fund – part of the Clean Energy Future. The proposal MRCCC prepared is titled *"Restoring riparian resilience – implementing the Mary River Threatened Aquatic Species Recovery Plan"*.

The Mary River Threatened Aquatic Species Recovery Plan has identified that riparian rehabilitation is one of the most strategic actions that can be undertaken to protect and restore high conservation values in the catchment. This project will establish strategic biodiverse plantings that restore high priority riparian zones and protect the threatened species habitat contained within the critically endangered sub-tropical lowland rainforest community. By controlling invasive species and restoring riparian zone connectivity and condition this project will enhance riverine ecosystem function, increase resilience and establish a high conservation value carbon sink at the landscape scale.

During the early phase of the project from 2012 to 2104 'demonstration reaches' will be identified and specific rehabilitation actions performed in conjunction with local partner groups. These demonstration reaches will involve the community and will be used for learning purposes, community awareness and to refine and develop rehabilitation technologies. Project sites targeted for rehabilitation will contain threatened aquatic species habitat.

Living with Threatened Species Project

Eva Ford

Sunshine Coast Council funded projects – Extension in the hinterland

Fence on the Mary River – one of many activities being carried out to protect and enhance riparian zones. Photo by Marie Farr

We are well into the three-year Sunshine Coast Council Community Partnership program which supports many of our activities in the upper Mary River catchment. The Mary Catchment is 37 % of the Sunshine Coast Council region and is a large part of the Sunshine Coast Hinterland. Here, over the range, agriculture takes place amongst the many landholders who have chosen the peace of country life. What is special about this area is its naturalness and the bounty of wildlife that still coexists with human activities. Most of the tributaries of the upper Mary are in a very healthy condition with riparian vegetation having been allowed to remain or regrow following past disturbances. This vegetation is essential to the provision of functional ecological systems both in-stream and within adjacent areas, also providing vital connectivity up and down the waterways.

Sunshine Coast Council has long recognised the importance of our waterways and have supported programs over many years to protect and improve these sensitive areas. The Community Partnership program that MRCCC has with Council has several parts; Waterwatch, Biodiversity monitoring, the annual Noosa Festival of Water, production of the Codline newsletter and the provision of support and extension to landholders in the upper catchment.

Working amongst the farmers and residents of this beautiful part of the world has taken a different turn for MRCCC with the introduction of the Community Partnership program two years ago. It provides an opportunity to work even more closely with landholders who are passionate about looking after, not just their piece of land, but also the land around them and downstream areas that can be affected by their land management practices. Another Council program funded through the Environment Levy; the Landholder Environment Grant program, provides an opportunity for all rural landholders to act upon the long-term goals they have for their land and to obtain support to carry out environmental improvements. There are many landholders in this area that are very well informed about the environment and who understand the short and long-term benefits of protecting waterways and living sustainably on their properties.

Across the whole catchment MRCCC targets significant waterways for protection and rehabilitation where the likelihood of success and return from inputs is greatest. In the upper catchment we work with some landholders who have been improving their properties for over ten years and others that are new to the area or to environmental rehabilitation. This year we have worked with over 60 landholders in the upper catchment through the Community Partnership program, helping them with obtaining information, property planning, expressions of interest and applications to the Landholder Environment Grant program. Once successful we provide support to implement and finalise the project with Council. These landholders are champions at taking action; putting way more of their own resources of time, money and equipment into their land for the benefit of all.

The funding programs provide opportunities to link in with other projects such as Reef Rescue, Healthy Habitats and the more recent MRCCC Biodiversity Fund 'Restoring riparian resilience: Mary River threatened aquatic species recovery plan' program to expand the scope and impact of landholder projects. We have also been working with other groups such as Council's conservation staff, Barung Landcare and the Department of Environment and Resource Management to align with and complement their activities.

Summary of Sunshine Coast Council Landholder Environment Grants assisted by MRCCC 2011 - 2012	
Landholder Environment Grant Expressions of Interest submitted	33
Landholder Environment Grant Expressions of Interest approved	33
Landholder Environment Grant applications submitted	30
Landholder Environment Grant applications approved	28
Total funding amount	$100,208
Total in-kind contribution	$154,470
Activities undertaken: Riparian fencing, off-stream watering systems, environmental weed control, natural regeneration encouragement, revegetation, education and capacity building, fauna surveys, Waterwatch.	

Top: Melomys sp. on Traveston Creek and Below: Jono Hooper gets up close and personal with amphibian friend.

Sunshine Coast Council funded projects – Biodiversity monitoring

The Sunshine Coast Council has long supported MRCCC's biodiversity surveying and monitoring program which began 10 years ago in the Mary Catchment. Targeting our precious threatened species, the program endeavours to increase our knowledge of the distributions, population levels and habitat requirements of species while also determining what might be 'normal' fluctuations in presence and abundance of species. A dual role for the Biodiversity monitoring program is that knowledge about the target species; Giant barred frog, Mary River cod, Mary River turtle (all endangered) and Queensland lungfish (vulnerable), and the subsequent protection and rehabilitation activities that occur to assist them, has immeasurable benefits for other species both fauna and flora.

For example, if a frog survey is conducted on a landholder's property and Giant barred frogs are located, we work with that landholder to protect the creek side through fencing if they have stock, control of weeds that threaten the survival and diversity of the riparian vegetation, encourage natural regeneration and plant native trees if necessary. In time these activities provide more diverse habitats, provide flowers and fruits for insects and birds, hollows for arboreal mammals, birds and microbats, leaf litter to support the very basis of food chains in the water and on the banks and filtering of nutrients to reduce the threat of aquatic weed blooms that threaten aquatic life. Also of immense importance and pertinent to the recent flood events we have experienced, is the protection that riparian vegetation affords to creek and river banks and the slowing of water flows to reduce damage to land and property.

During the past year MRCCC has conducted 63 fauna surveys and continued with the long-term (now seven years) monitoring of four stream transects in the section of the Mary River Catchment within the Sunshine Coast region. We are also collecting incidental records from the community which, along with MRCCC survey data, is entered into the Queensland Government's WildNet database. Here it can be accessed by all for planning and research purposes. For example the data has been used intensively in the development of the Mary River Threatened Species Recovery Plan and by undergraduate student, Jono Hooper from the University of Sunshine Coast, who has been analysing the frog data to determine the effects of rainfall, location and season on species richness and abundance. This may lead to further work that may provide insights into the habitat preferences on a small scale and help to prioritise sites for protection and improvement.

Right: Three Stony Creek Frogs on Skyring Creek

Summary of fauna surveys and monitoring in the Mary River catchment during 2011-12	
Number of fauna surveys	37
Number of fauna monitoring visits	27
Number of frog records collected	485
Number of other fauna records collected	270
Number of threatened species records collected	67

Sunshine Coast Council funded projects – Road Reserve Rehabilitation

For the second year running the Pest Management section of the Sunshine Coast Council has supported MRCCC to improve the condition of several significant road reserves and remnant areas in the Council area of the Mary Catchment. We are caring for six sites on Belli, Cedar and Kidaman Creeks and on the Mary River itself. The main activity at these sites is environmental weed control to protect the existing vegetation and to encourage natural regeneration. Occasional tree planting is also carried out where regeneration is limited. Council also have many other sites where they target environmental weeds such as Cat's claw and Madeira vine (now both Weeds of National Significance) and it is a credit to Council that they recognise the important function of road reserves both as habitat and as corridor linkages. In some areas the road reserves provide the only complex habitat. Together we seek to maintain these areas for wildlife, for the environmental services they provide and for the aesthetic pleasure of passersby, as the hinterland is truly a beautiful and rich area.

Madeira and Cat's Claw at the Pickering Bridge remnant

Maleny Precinct

Recently the MRCCC was invited to be part of Barung Landcare's Community Engagement project funded under the Federal Caring for our Country Community Action Grants for 2012-2013, with contributions from the Maleny District Green Hills Fund and Sunshine Coast Regional Council. Our role has been to help develop and implement a program of environmental monitoring at the Maleny Community Precinct with the dual purpose of providing educational opportunities to increase understanding and engagement of the community in environmental rehabilitation. The site is a Sunshine Coast Council initiative which will transform 126 hectares of ex-dairy country into a multi-purpose community facility.
(see http://www.sunshinecoast.qld.gov.au/sitePage.cfm?code=maleny-cp for details about the project).

From the perspective of MRCCC and Barung Landcare, the site offers opportunities for the rehabilitation of waterways that flow through it and Obi Obi Creek which borders to the south. Barung and Green Hills have already made progress in this area through weed control and revegetation within the riparian zones. Our monitoring and education plan has been accepted by Barung. During the next 12 months we will be carrying out surveys (frogs, fish, macroinvertebrates), water quality monitoring, stream condition monitoring, providing workshops for the community and opportunities to volunteer and take on future work.

The Maleny Precinct

This project is very exciting for many reasons. It provides an opportunity to work in a part of the catchment that has not received as much attention from MRCCC as other areas, it will increase knowledge of the area and its waterways, it will help to involve the Maleny community in a site that they can feel ownership of and it will help to create a demonstration site where lessons can be learnt for future developments and land management options. We appreciate the opportunity that Barung Landcare has provided to MRCCC and the vision of Council to progress this project.

Gympie Regional Council Road Reserve management

Recently MRCCC requested a community meeting with delegates from Gympie Regional Council to discuss the management of road reserves within the Gympie Region. Representatives from Gympie and District Landcare, Cooloola Coastcare, the Department of Natural Resources and Mines, MRCCC and the Council came together in September for what was a wonderful opportunity to air concerns, provide advice and solutions, increase awareness of the skills and expertise within and outside of the group and for Council to inform the group about their environmental programs and activities. Items that came up for discussion included the development and implementation of Council's Roadside Vegetation Conservation Plan and the Environment Strategy. One action currently being addressed by Council is a trial Vegetation Assessment to be used prior to work in natural areas. Input from the group was provided to this process to increase Council's effectiveness in protecting sensitive areas and corridors. Council is to be commended for this work and for pursuing the actions of the Strategy. The meeting highlighted the resources that are available to Council from members of the community and a willingness to continue the sharing of ideas and information between Council, groups and individuals.

Typical roadside vegetation in the Gympie region

Healthy Habitats –Peter McAdam

The MRCCC is delivering the BMRG funded *Healthy Habitats* program in the Mary Catchment. This program employs a field officer whose primary responsibility is to:

- support the Gympie and Fraser Coast's *Land for Wildlife* network,
- run a series of workshops and field days, media promotions and case studies, and
- contract Landholders to undertake project works.

Peter McAdam preparing to release Madeira vine bio-control agents

Since January 2012 seventeen new Land for Wildlife (L4W) members have signed up, and many return visits to current members were made. L4W members have had to be very patient and understanding, waiting for their visits, landholder reports, certificates etc, and we look forward to a presentation at our end of year "break-up". *Land for Wildlife* is a very important program for MRCCC, providing many landholders who are not necessarily primary producers with management advice and opportunities to enhance riparian and terrestrial vegetation and habitat values. The connection between L4W and Landcare is very strong in this catchment.

The *Healthy Habitats/L4W* workshop series has been very well attended and well received too, with local and visiting presenters all knowledgeable and enthusiastic about their topics. Many of the topics focused on fauna and flora listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (the EPBC Act), plus the newly listed Subtropical Lowland Rainforest ecological community. Workshops were designed to interest a range of landholders, with diverse topics as follows:

Conserving dry rainforest in the western Mary catchment with Ernie Rider.	Focusing on the new EPBC listing of lowland rainforests, identification of the Qld Regional Ecosytems, threats and management
A duty of care: collecting local seed, propagation and revegetation in "of concern" and "threatened" ecosystem with Ernie Rider and Sally Mackay	Importance of local provenance, microhabitat selection and sequencing of reveg works: retain first, regenerate second, then revegetate.
Rare and Threatened Species of the Mary River, with Eva Ford and Tanzi Smith	What are the species, what were or are the threats, management planning – focusing on Mary River Turtle and Cod, Queensland Lungfish, Giant Barred Frogs, Freshwater Mullet and their habitat requirements.
Biological controls for weed vines – managing a key threat to threatened regional ecosystems – two locations, Widgee and Tinana Creek, with Dr Bill Palmer and Gillian Crossley.	Current biocontrols, monitoring release sites, improving chances of success – *Plectonycha correntina*, Tingids and the Jewel beetle.
Managing stock: fencing remnants and riparian zones, watering points on the Mary River with Glenda Pickersgill, Graeme Elphinstone and Brad Wedlock	Practical alignments for economy and management, cell grazing, fence types, dealing with crossings, shelter, access. Mainly focusing on cattle grazing
Management planning for biodiversity and bush land at the MRCCC Catchment Resource Centre with Shane Litherland	Mapping, layout, priority setting tools, budgeting, dealing with uncertainty. A follow up is planned for early 2013.
Conserving lowland rainforest in the lower Tinana Ck catchment. Canoe trip, with Marc Russell, Marilyn Connell and others.	Focusing on identification of the RE's, threats and management

Peter McAdam talks about the benefits of fencing stock out of riparian areas

Paddling Tinana Creek on National Wattle Day

Healthy Habitat projects have focused on three main target areas – The Western Mary, with its bio-diverse and threatened dry Rainforest especially, the Lower Tinana Creek, with its amazingly diverse riparian strip through the irrigated canelands, and the upper Mary, where there are two major corridor projects linking the river with the adjacent upland forests. One goes right across the Mary Valley from Conondale National Park across to the Walli section, linking with locals, Landcare Groups, Council, QPWS and others. The other corridor at Moy Pocket links the Kenilworth Bluff with the river. Case studies highlighting the activities of these landholders and groups will be developed in coming months.

Lower Tinana Creek has been a targeted investment area for a few years, with additional project funds provided through QANTAS and Fauna and Flora International. This money has been wisely invested with committed landholders working on Weeds of National Significance, like the infamous Cat's Claw Creeper (CCC). MRCCC will be working closely with an indigenous work crew, providing mentoring in natural resource management works.

Overall, campaigning against CCC and other weeds has been the major focus of much of our work in each target area. It is one of the greatest threats to some of our rarest habitat, especially lowland rainforest and riparian vegetation.

We have CCC projects with cane farmers at Tinana protecting riparian remnants and rainforest. In the western Mary several large landholders are working on weeds with chemical, manual and biological controls at Amamoor, Widgee, Lower Wonga and at the Palms. Schools have been involved, as have shops and businesses, caterers, landholders, Landcare groups and international visitors.

Lower Mary farmer, Jeff Puller in vine scrub on his Tinana Creek property

Two of the largest landholders in the catchment, HQPlantations (formerly Forestry Plantations Queensland), and the Parks Service (QPWS) have been successful in applying for funds to support their environmental works, again with a strong focus on Weeds of National Significance (WoNS), like CCC, Madeira vine, Lantana and Dutchman's pipe. Barung Landcare has taken on a major project aiming to link up landholders in the upper Mary catchment. This project will also share data between agencies, provide education and training opportunities, and give landholders a "leg–up" with the works.

Although the Healthy Habitats project only runs part-time in the Mary catchment, it has been highly successful, contracting the whole of the original available project budget from BMRG, and helping to attract additional funds to the catchment to take on further on-ground, educational and capacity building works.

As well as being a fun day, the Wattle Day Flotilla was a great opportunity for networking, with representatives of many Landcare and environment groups attending and gaining a better appreciation of the values of and threats to our ecosystems.

Jeff Puller, Magnolia Farms on Tinana Creek is proud to help conserve rainforest on his farm. A sawmill located on the property early last century left few remnants of local rainforest untouched. Protecting these isolated remnants has a private cost and a very public benefit. The Puller Family is trialling a major feral pig project across a number of properties at present, as well as bio-control trials and weed contractors, all designed to protect high value riparian forests. *Fauna and Flora International* visitors were very impressed with what they saw – the values, the threats and the progress made.

It has been a great pleasure to work with the stalwart team in the MRCCC office and the members of the Executive, without whose voluntary efforts we would be so much poorer. Rather than single out the many landholders, partners, staff and volunteers, please accept our heartfelt thanks for your support.

Gympie Regional Council bushland property assessments

MRCCC and Tiaro Plants were engaged by Gympie Regional Council to assess the condition of a suite of Council owned or controlled bushland sites in January 2012. Between January and May 2012, 40 bushland properties were assessed for their ecological resilience. This consisted of 21 coastal bushland properties in Cooloola Cove, Tin Can Bay and Rainbow Beach, with the remaining 19 bushland properties scattered throughout the Gympie Region in the Mary River Catchment from the Mary Valley to Scotchy Pocket near Gunalda. Council will use the information gathered in the surveys to develop management plans for these bushland properties where required.

Waterway Monitoring Program of Skyring and Coles Creek

The waterway monitoring activities for Skyring and Coles Creeks are now in their third year. The monitoring program is providing information to the Queensland Department of Transport and Main Roads on changes and trends in the stream health of Skyring and Coles Creeks, with a specific focus on the stream realignments being constructed as part of Section B of the Bruce Highway upgrade (Cooroy to Curra).

During the 2011/2012 summer, several large flood events occurred in the Skyring and Coles Creek sub-catchments. Stream heights on Skyring Creek during the late February flood were the highest recorded in living memory. The series of summer floods resulted in higher than average stream flows throughout the 2011/2012 summer period.

Ambient stream temperature, electrical conductivity, pH, dissolved oxygen, turbidity and Chlorophyll *a* (nutrient surrogate) have been monitored monthly at sites along Skyring and Coles Creeks. The data collected has provided a good data set for the state of the water quality in these catchments for the past three years.

Cross sectional surveys of the channel habitat have been undertaken on Skyring and Coles Creeks at sites surrounding the stream re-alignments. No significant changes have been recorded at the Coles Creek sites, however on Skyring Creek significant deposition of bed material was recorded at sites both upstream and downstream of the stream realignment works.

Results from macroinvertebrate sampling sites on Skyring and Coles Creeks have shown no significant changes over time when compared with the QLD Water Quality Objectives for SIGNAL scores.

The Shannon-Wiener species index has been used to analyse the fish species survey data from Skyring and Coles Creeks. Results indicated a significant increase in fish diversity between June 2010 and February 2011 at the sites upstream and downstream of the Coles Creek realignment. At the upstream Skyring Creek site a significant decrease was observed between July 2011 and March 2012. The analysis has not revealed any adverse impacts on fish diversity at these sites as a result of stream realignment construction.

Freshwater catfish (Tandanus tandanus) from Skyring Creek

Four frog and microbat monitoring sites have been surveyed for three years, with each site visited three times a year (between September and April). Species richness of frogs generally remains highest on Skyring Creek at the site downstream of the realignment. The presence of three Giant barred frogs (*Mixophyes iteratus*) immediately downstream of this site in late 2011 was unusual as only one had been detected in the area previously. Microbat species records in 2012 were relatively low compared to previous monitoring periods.

Turbidity Monitoring Programs

Skyring and Coles Creek:

An investigation of the entire turbidity data sets for Skyring and Coles Creek (2009 to 2012) using cross-correlation analyses for sites upstream (control) and downstream (impact) of areas of construction has been undertaken. The analysis suggests that the stream realignment works were a comparatively minor contributor to increased stream turbidity, compared with areas where construction work occurred in close proximity and parallel to Coles and Skyring Creeks.

Mary River:

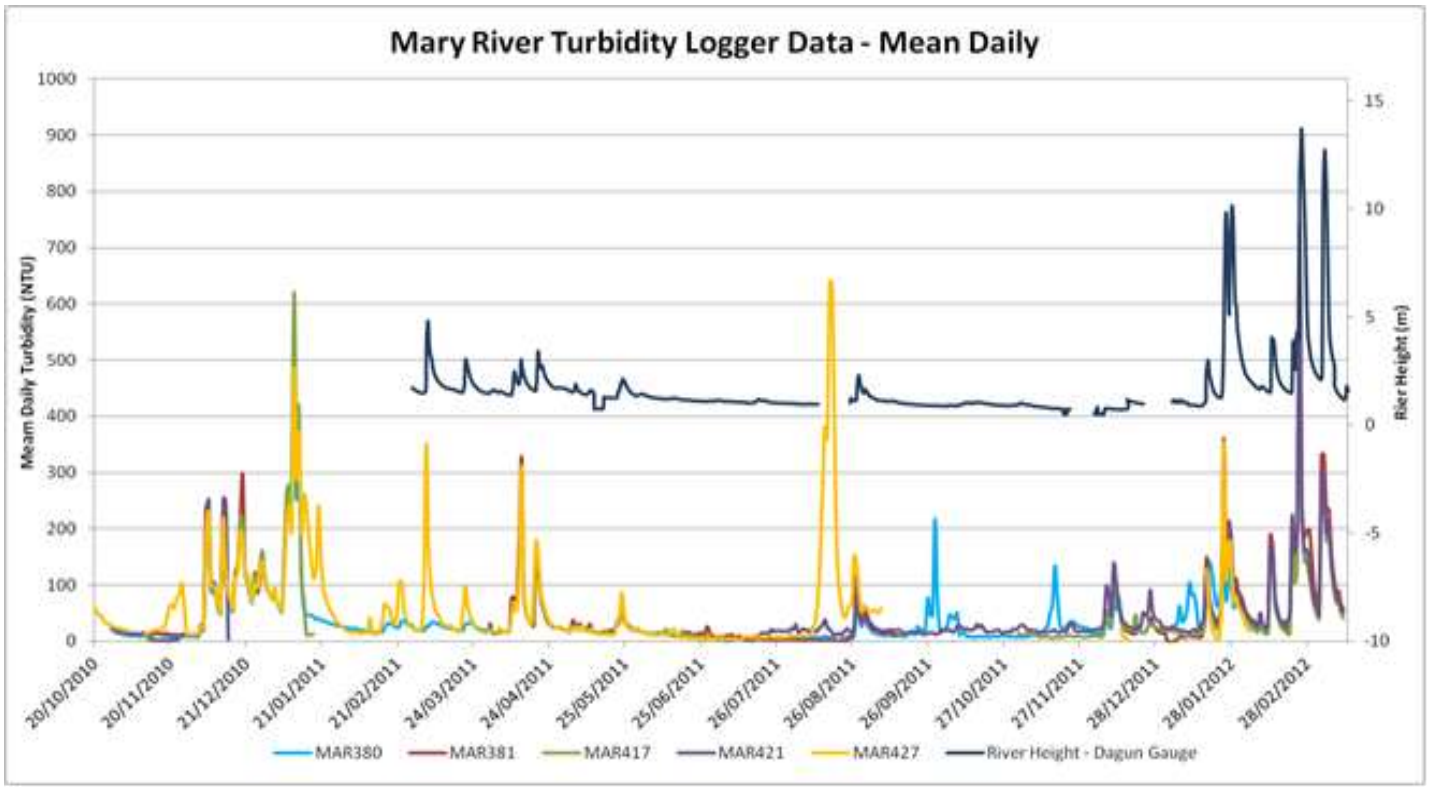
Analysis of the Mary River turbidity logging program data produced a relatively clear picture of the changes and trends in turbidity levels of the Mary River upstream and downstream of the Skyring, Coles and Traveston Creeks catchment confluences during construction of the Cooroy to Curra Bruce Highway upgrade. In the Mary River, during periods of common data records, analysis of the daily average turbidity levels has shown that:

- The influence of Reach 1 (the Skyring Creek catchment) on daily average turbidity levels in the Mary River was an 11% (highly significant) increase
- The influence of Reach 2 (between Skyring & Coles Creek confluences, includes influence of Kandanga Creek catchment) on daily average turbidity levels in the Mary River was a 13% (highly significant) decrease
- The influence of Reach 3 (the Coles Creek catchment) on daily average turbidity levels in the Mary River was a 12% (highly significant) increase from December 2011 to March12
- The influence of Reach 4 (between Coles & Traveston Creek confluences, including influence of Traveston Creek catchment) on daily average turbidity levels in the Mary River was a 5% (not statistically significant) decrease.

The analysis revealed that the Skyring and Coles Creek catchments have significantly increased the turbidity levels of the Mary River during the monitoring period (October 2010 to March 2012). As no data from these sites exists before the beginning of the construction of Section B of the Bruce Highway upgrade (Cooroy to Curra), prior to October 2009, it is not known if these increases in turbidity levels are related to the highway construction or to other sources within the catchment. It is hoped that continued monitoring of turbidity levels at these sites will help to further understand the changes and trends in turbidity levels.

Mary Valley Link Road:

Data from the turbidity loggers on Coles Creek between February and May 2012 recorded an increase in turbidity levels between the sites upstream and downstream of the Mary Valley Link Road, caused by several discrete high turbidity events. Analysis of turbidity logger data from the Mary River and lower reach of Coles Creek between November 2011 and May 2012 suggest that a local influence originating from the Mary River within the vicinity of the Mary Valley Link Road (and not from the Coles Creek catchment) resulted in a 40 percent overall increase in turbidity levels. It is not known if these increases in turbidity levels are related to road construction or to other sources upstream of that reach.



Mary Valley Link Road and Traveston Connection Road Aquatic Health Monitoring Program

This program is now in its second year of measuring aquatic health parameters on the Mary River, Coles Creek and Traveston Creek in the vicinity of the Mary Valley Link and Traveston Connection Roads. The program focuses on crucial habitat monitoring for the EPBC listed species (Australian Lungfish, Mary River Turtle and Mary River Cod).

Macrophyte (aquatic plant) monitoring for Australian Lungfish habitat has shown that the large floods in early 2011 and early 2012 caused the removal of many macrophyte beds in the Mary River, and removal of all macrophyte beds within the vicinity of the Mary Valley Link Road. Monitoring for re-colonization of these macrophyte beds is being undertaken.

Monitoring of sand banks on the Mary River downstream of the Mary Valley Link Road Bridge during October and November 2011 recorded five Mary River turtle nests, which potentially contributed 60 hatchlings. A wildlife digital camera recorded a female Mary River turtle on one of the sand nesting banks downstream of the Mary Valley Link Road Bridge in November 2011. Analysis of wildlife camera data of turtles on midstream basking rocks downstream of the Mary Valley Link Road has shown that between July and October 2011, as daily and monthly temperatures rise, the basking patterns increase. However a significant reduction in basking was recorded in November 2011, the cause of which is unknown.

Cross sectional surveys have been used on the Mary River and Coles Creek to monitor changes to the pool habitats, which are potentially utilised by Mary River Cod. On the Mary River significant changes to river bed and bar characteristics were recorded due to the large floods of early 2012. These changes, in the form of deposition and scour of bed material, have impacted on some habitat values for the Mary River Cod. The changes were found both upstream and downstream, and so are independent of the location of the Mary Valley Link Road bridge. On Coles Creek there was no significant change to channel shape at the cross section sites, despite the large flood events.

Infra-red image of a Mary River Turtle on nesting bank downstream of the Mary Valley Link Road in November 2011

Monitoring of macroinvertebrate communities is undertaken at sites on the Mary River and Coles Creek upstream and downstream of the Mary Valley Link Road crossings to investigate changes to waterway health. The majority of the macroinvertebrate data scores meet guideline values. The lack of significant change in SIGNAL and PET scores between the sampling rounds suggests that there are no detectable effects on the macroinvertebrate community to date in relation to construction of this road. It suggests that macroinvertebrate communities are unchanged, and continue to perform their essential roles in the aquatic ecosystem, such as food sources for Mary River cod and Mary River turtle.

Turtles basking on a midstream rock in the Mary River downstream of the Mary Valley Link Road

Frog monitoring transects were surveyed three times during the 2011 to 2012 season. The weather during this season was characterised by the driest November on record and severe flooding to waterways in the area in February and March 2012. The most common frog species across all sites were the Eastern sedgefrog, *Litoria fallax* and Stony-creek frog, *Litoria wilcoxii.* A comparison of the 2011-2012 season data with that collected during 2010 to 2011 showed that species richness of frogs remained similar for most sites. However, notable change was observed at the site upstream of the Traveston Connection Road (on Traveston Creek) where species richness increased from two to five. Some changes, both increases and decreases, to species richness of microbats were observed at three out of six sites.

The MRCCC Splatter Gun – Helping to Battle Lantana:

The splatter gun technique continues to be used by landholders of the Mary River Catchment in the ongoing battle to control lantana control. The MRCCC has two splatter guns, which have now been shared amongst 50 landholders.

Lantana is a Class 3 declared plant under the Land Protection Act 2002, and often viewed as one of Australia's worst weeds. Lantana can have harmful impacts on both production land and environmentally valuable land. The splatter gun technique for lantana control is a low volume, large droplet and high concentration application of herbicide to lantana foliage. The gas powered splatter gun is easily portable and useful in difficult to access areas, areas of environmental values and also in pasture management areas. The splatter gun technique is also beneficial as it limits off target damage to pastures and native plants thanks to increased accuracy and decreased spray drift.

A recent survey of the MRCCC splatter gun users revealed the following major points:

- The splatter gun works best on large bushes
- The splatter gun is very cost effective (especially in clumped areas of lantana)
- An average of 85% of lantana treated using the splatter gun was killed
- An average of 11% of lantana treated with the splatter gun showed signs of regrowth
- After borrowing the MRCCC's splatter gun several landholders have now purchased their own
- 100% of splatter gun users said they would like to use the splatter gun again.

The MRCCC will continue to lend the splatter guns to landholders in the Mary River catchment.

Gympie District FarmFLOW project

In December 2011, MRCCC sought an extension and variation of the Federal Government FarmReady funding contract (Dept of Agriculture, Fisheries and Forestry) to expand the incentive program. This was to include the grazing and dairy industries, while still supporting the Macadamia industry to establish sweet smother grass on the orchard floor for erosion control and green-bean growers to adopt zero-till practices. The FarmReady incentive funding focused on building on-farm resilience and adaptation to climate change impacts, such as reducing runoff and erosion during high rainfall events.

MRCCC again drew on our partnership with QDAFF (Graeme Elphinstone), Gympie District Beef Liaison Group and the Gympie branch of the Queensland Dairyfarmers Organisation to deliver this project. The FarmReady project was finalised in May 2012.

Former FarmFlow Project Officer Adam Logan moved to Victoria and is now working on a new project!!

FarmReady on-ground project incentives	
Green-bean growers adopting zero-till equipment	4
Macadamia growers establishing sweet smother grass	3
Graziers adopting best land management practices	7
Graziers adopting best riparian zone management	4
Macadamia canopy management demonstration site	1
Landholder in-kind contribution to FarmReady projects	$108,998

The Mary River Threatened Species Recovery Plan
Dr Tanzi Smith

The development of the Mary River Threatened Species Recovery Plan continues into its second year. This plan is being developed in collaboration with the Australian Government Department of Sustainability, Environment, Populations and Communities (SEWPaC) and will become a recovery plan under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).* Ultimately, once endorsed, the plan will provide guidance to the Australian Government Environment Minister and her/his staff regarding decisions under the EPBC Act related to the Mary River.

Tanzi's mobile office at MRCCC

The plan identifies threats to five priority species in the Mary River and actions needed to address these threats. The species are the Mary River turtle, the Mary River cod, the Australian Lungfish, the Giant Barred Frog and the Freshwater Mullet. Many actions needed to assist in the recovery of these five species will have wide reaching benefits for other species and the overall health of the river. We have taken a holistic approach by placing a lot of emphasis on the role of people in the recovery process and treating the development of this plan as another opportunity to work toward a sustainable and productive catchment.

After fulfilling our initial commitment to the Australian Government's Environment department to complete a draft framework for the plan and undertake community consultation, the MRCCC funded the ongoing development of the plan. This has involved working with the SEWPaC staff, the Recovery Team and the Technical Advisory Group, the BMRG Indigenous Engagement Officer and organising and undertaking further stakeholder consultation.

Progressing the plan has involved several steps;

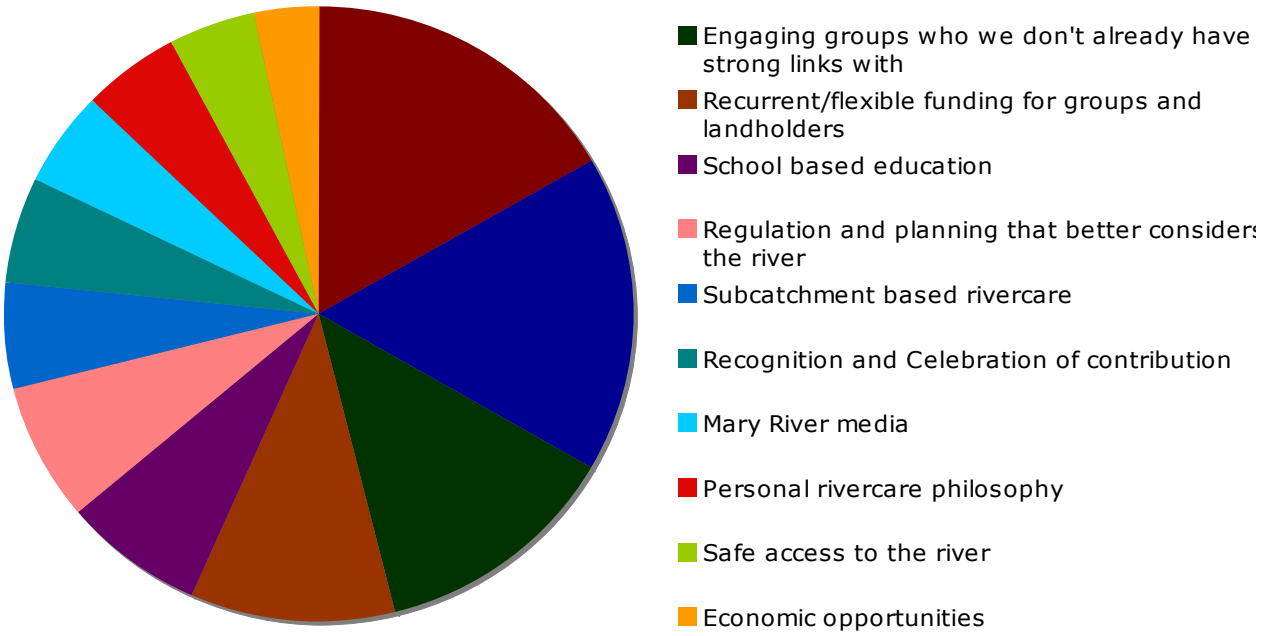
- Prioritising the threats to the five species
- Developing the objectives of the plan,
- Deciding on actions needed to fulfil the objectives
- Establishing performance criteria by which the progress of the plan will be assessed.

The Monitoring, Evaluation, Reporting and Improvement components of the plan are currently under development by SEWPaC in consultation with the MRCCC, the Recovery Team and Technical Advisory Group.

As mentioned in the 2011 Annual Report, the stakeholder engagement process adopted in the plan aims to help overcome the gap between knowing what needs to be done and actually doing it, and to pave the way for implementation of the actions recommended by the plan.

Participants at the Caring for Mary Forums generated a range of creative and innovative ideas

Summary of responses to the question:
"What do we need more of to Care for the Mary



Indigenous consultation for the Recovery Plan included a tour of the Catchment

The Caring for Mary forum series in June 2012 contributed to achieving this goal by providing the opportunity for participants to reflect on why they care about the Mary River and tributaries and to identify additional support, activities or information they need to be involved in Rivercare activities. Over one hundred people attended these forums held in four locations along the river. Feedback and ideas generated at these forums have been included in the objectives and actions in the draft plan. There are a range of creative and innovative ideas, some of which are already being undertaken. A summary of the outcomes of these forums is available at: http://www.slideshare.net/mrccctanzi/overview-of-the-caring-for-mary-forums

Indigenous engagement with the recovery plan is an ongoing process and is the area in which the most progress is still needed. We have held meetings with several groups and individual representatives and have included a specific objective relating to indigenous leadership and participation in the recovery process. The actions needed to achieve this objective have been identified during the consultation process.

MRCCC's successful Biodiversity Fund project will greatly assist in developing demonstration reaches and improving habitat quality, extent and connectivity within the catchment – both recovery plan actions. In addition to this major project, the MRCCC is also undertaking four small projects that contribute to the objectives in the recovery plan associated with raising community awareness and appreciation of the river.

The "Inspiring community connections to Mary River stories" project involves creation of a small booklet about the priority species and river ecology. This project is funded by a $5000 Be Natural Landcare Australia Grant and is based on a collaboration between graphic designer Glenbo Craig and the MRCCC.

- It is often said that capturing the stories of the past is a way to better understand where we are and gain insight into the future. The "Looking Forward, Looking Back" project, funded by a ~$16,000 Federal Government Your Community Heritage grant involves working with local film maker, Luke Barrowcliffe from Goorie Vision to create a short documentary based on the oral histories of old timers from throughout the catchment.
- As we approach the 20th anniversary of the first Mary River Congress, the third project "Mary River Restoration stories" provides an opportunity to involve the catchment community in a review and re-envisioning of riparian restoration in the catchment. This project is funded by a ~$19,000 Community Action Grant from the Caring for Country program of the Federal Government.
- Finally, the Clarence and Lucy Show engages the community and particularly school children through song and video. The project is based on a song "Clarence and Lucy and the Creek company" which was composed by Peter Oliver and performed by Rob Longstaff. Shawn Jarvey has been developing this project and sought funding from the Meyer Foundation. Unfortunately this funding application was unsuccessful, but the project will continue on a smaller scale. It will culminate in an awards ceremony at the Mary River Festival on 10 November. To find out more go to http://www.youtube.com/user/clarenceandlucyshow

Discussions are also underway with the Barambah Environmental Education Centre and Tiaro and District Landcare about the opportunities that currently exist to incorporate the Mary River and recovery plan related concepts in the primary school curriculum and school camps.

It has been exciting to be involved with the development of the recovery plan. The MRCCC thanks all those people who have given their time and expertise to contribute ideas, make suggestions and learn from each other. We also thank people for their patience in waiting for the draft to be finalised and reassure everyone that their contributions have made a difference, creating a much richer and more useful document. If the enthusiasm shown at the Caring for Mary meetings is anything to go by, the catchment community is in a strong position to shift into the implementation phase with confidence and commitment.

Some key milestones in the project since 2011 AGM are:

November 2011	Notified of successful Landcare Australia "Be Natural" Grant for "Inspiring community connections to Mary River stories"
December 2012	First draft of the "front end" of the plan completed and sent to the Federal Government
February 2012	Presented a paper on the recovery plan at the Australian Stream Management Conference in Canberra
3 May 2012	Third Recovery team meeting
25-26 May 2012	Indigenous working group and bus tour, consultation with other indigenous representatives
21 June 2012	Technical Advisory Group meeting
June 2012	Notified of successful "Your Community Heritage" grant for "Looking forward, Looking back" project
June 2012	Four Caring for Mary forums held in Maryborough, Gympie, Kenilworth, Maleny
July 2012	Notified of successful "Community Action Grant" for "Mary River Restoration Stories"
July 2012	Finalised draft action list and second draft of the "front end" of the plan circulated for feedback
August 2012	Presentation to Mary Valley Renewal Forum
October 2012	Completion of "Something about Mary" booklet

Mary River Cod forum

On 21st February 2012, Fisheries Queensland and the MRCCC hosted a forum to evaluate the ongoing role of fish stocking for the management of the Mary River Cod. Peter Kind from Fisheries Queensland and Deb Seal from MRCCC put in a significant amount of work to prepare the event which was held in the old Council Chambers in Tewantin. The forum was attended by 31 delegates, chaired by Phil Moran and facilitated by Graeme Elphinstone.

The forum provided a much needed opportunity for interested parties, including hatchery operators, fisheries scientists from the Qld and NSW governments, researchers, Australian Government Environment Department and MRCCC staff to review the role that fish stocking plays in conservation of the Mary River cod.

Above: At the Cod Forum – Bob Simpson, Raul Weychardt (SCRC) and the Codfather, Vince Collis

A 115cm Mary River cod in the Mary River system
Photo courtesy John Cutmore

Key outcomes from the forum were as follows:

- Tinana and Coondoo Creek populations are genetically distinct from the population in the main trunk of the Mary and are of high conservation value. Urgent research is required to determine sustainable levels at which brood stock can be taken from this population.
- Significant knowledge gaps regarding the species were identified. They relate to the reproductive biology of the cod, the level of natural breeding and survival of young, genetic structure of the populations and areas of habitat critical for cod.
- Stocking in the Mary River catchment has not occurred since 2008. It should not occur again until 2013, and only if the research undertaken in the intervening period supports further stocking. Apart from the genetic implications of stocking programs, another complicating factor is that, while stocking continues, inability to distinguish between stocked and wild cod makes it very difficult to tell whether the cod are successfully breeding in the wild. This has a significant bearing on the conservation status of the species.
- Stocking outside of the Mary River catchment should continue.
- It was proposed that DEEDI/QDAFF develop a Mary River cod stocking policy that minimises the risks that stocking can pose to the genetics, and therefore fitness, of the cod population

These outcomes of the cod forum continue to be refined and will be incorporated in the Mary River Threatened Aquatic Species recovery plan.

National Riverprize

After considering throwing our hat in the ring a few times in recent years, a call from the Executive Director of the International River Foundation encouraged us to bite the bullet and have a shot at the National Riverprize for 2012. Developing the application prompted us to review our overall activities and led to the creation of the map of activities and an attempt to quantify MRCCC's impact over the last 20 years.

Outputs of MRCCC activities	Quantity
Kilometres of Riparian Fencing	400 km
Landholders involved in practice change	600 landholders
Riparian Rehabilitation	2,700 ha
Threatened Species habitat protection	3,100 ha
Weed control	2,900 ha
Improved sediment and nutrient management	11,000 ha

We also interviewed several landholders who have been involved with the MRCCC over the decades and asked them about the changes they have observed. We were delighted to make it through to Stage 2 of the Riverprize application process along with five other applicants. Although we did not make it to the final stage, we are encouraged to apply in future years.

Compared to the other finalists, the MRCCC is quite a small organisation. Last year's National Riverprize winner was the Sunshine Coast Council's Rivers Initiative of which the MRCCC is a partner organisation.

The Sunshine Coast Rivers Initiative is a program of management actions and incentives which encompasses the six river catchments in the Sunshine Coast Council area and embodies over 30 community groups and government agencies. A working group has met in the last couple of months to develop guidelines so that the Sunshine Coast Rivers Initiative can build a strong way forward. The Riverprize of $195,000 will be used to fund innovative and catalytic waterway management and improvement projects across the Sunshine Coast.

Mary Valley Lands Strategy

Throughout 2011 and 2012, the MRCCC has continued to assist the State Government in a consultative role with plans for the management and sale of the Mary Valley Lands portfolio, (properties originally purchased for the failed Traveston Crossing Dam project). The MRCCC was represented on the Coordinator General's consultative committee for the Mary Valley Lands Strategy which was adopted by the Bligh Government in September 2011. Following the change of Government in early 2012, the MRCCC is now represented on the economic advisory group chaired by Gympie MLA David Gibson to assist with implementing the Mary Valley Economic Development Strategy, released in July 2012.

The MRCCC has also remained engaged with the community-based Mary Valley Renewal Team which is focussed on encouraging community-based projects to rebuild the social, economic and environmental capital of the area of the Mary Valley impacted by the failed project. The MRCCC was an important partner in the community representations to the incoming government which aimed at ensuring that the ongoing process of dealing with the Mary Valley Lands portfolio became a priority activity for the new state Government.

Summary report of the Cabomba biocontrol research project

CSIRO Ecosystem Sciences, Tim A Heard, Shon Schooler, Willie Cabrera-Walsh and Mic Julien

A biological control research program was instigated by the CSIRO in 2003 targeting one of Australia's worst aquatic weeds, *Cabomba caroliniana*. Funding support was provided by the Australian government, and the research commenced in collaboration with the Mary River Catchment Coordinating Committee, Noosa and District Landcare Group, Alan Fletcher Research Station, the then Noosa Council and the Lake Macdonald Catchment Care Group (LMCCG). A public meeting was held in Cooroy with assistance from the Noosa Council to raise awareness and to raise funds from other Councils and interested stakeholders. This effort was administered by the LMCCG, and helped provide the impetus to commence the project. Further assistance was subsequently received from the Burnett Mary Regional Group.

The project aimed to discover and test biological control agents from the native range in South America for possible release in the introduced range of this weed. Northern and central Argentina, southern Paraguay and Uruguay, and Brazil were surveyed from 2003 to 2009. After six years of sampling, we have identified most potential biological control agents in the native range of *C. caroliniana*.

Hydrotimetes natans *adult weevil on a cabomba stem. Note pupal case to the right of the weevil. Photo: CSIRO.*

Several potential biological control agents have been identified with one, the aquatic weevil, *Hydrotimetes natans,* looking very promising. However more work is needed to develop rearing techniques and prove that it is sufficiently specific.

The aquatic weevil, *Hydrotimetes natans*, was tested in the native range and in quarantine. This weevil feeds on plant tips as an adult, and the larvae mine the plant stems. Development from egg to adult requires about 40 days in the laboratory.

At high densities, adults can cause extensive tip damage and the larvae can induce stem decay. In the field, adults are present year-round. They survive for approximately one year in the laboratory. From December to February, adults are often observed alone or mating on the flowers, but they remain underwater most of the time.

To determine host-range of the weevil in the field, samples of submerged plants occurring near cabomba were collected and larvae extracted. Thus far, larvae of the weevil have only been found from cabomba samples. Host-range tests have been conducted in shadehouses to confirm the field observations, but rearing *H. natans* in the laboratory in containers small enough to closely observe its development and behaviour has not yet been possible. In 2006, colonies were raised outdoors in Buenos Aires, in 1000 L glass tanks where stems with larvae, pupae and adults were observed. In these tanks, cabomba was grown alongside test plant species. During the 11 month trial period, no weevils of any stage and no damage was observed on plants other than cabomba. Host-specificity testing on this promising agent was conducted in quarantine in Brisbane. However, this was delayed due to difficulties in obtaining export permits from Argentina and difficulties in rearing the weevil in quarantine. Currently there is no funding for this project and so the work is not progressing. We intend to apply for funding in the next round of the Federal Government's Caring for Country program.

In addition to the weevil, two other potentially specialist phytophagous insects were discovered. They are the moth species, *Paracles* sp. and *Paraponyx diminutalis*. However, following testing, it was concluded that these agents are not sufficiently specific to be considered safe to release in Australia.

For more information, see the following book chapter: *Cabomba caroliniana* Gray – cabomba, by Schooler S., Cabrera-Walsh W and Julien M. 2012. In Biological control of weeds in Australia (Eds. M Julien, R McFadyen and J Cullen), pp.108-117. CSIRO Publishing, Melbourne.

Education and awareness

Throughout every year MRCCC staff devote a great deal of time to education and awareness activities with varying groups of landholders, community groups, school students and individuals. As well as providing an information service at the Resource Centre in Gympie, the MRCCC also auspices the Lake Macdonald Catchment Care group, Valley Bees and Cooloola Nature, each of which is involved in aspects of community education.

Noosa Festival of Water

The Festival is the largest activity on the MRCCC's educational calendar each year. Held at the Noosa Botanic Gardens and Lake Macdonald Amphitheater, this year's Festival took place on Sunday 24th June 2012 attracting an estimated 2000 people.

The Lake Macdonald Catchment Care group stages the Noosa Festival of Water each year to raise awareness and improve understanding of biodiversity and ecological issues in the Lake Macdonald subcatchment and the Noosa and Great Sandy Biospheres. Activities, presentations and displays organised for the Festival are mostly associated with environmental care, sustainability and ecological issues.

The Festival also showcases Lake Macdonald and the Noosa Botanic Gardens as a high quality recreational destination with a wide range of facilities suitable for all age groups.

Top left: At the Noosa Festival of Water, Mia Bickley gets to know Dingo Didge and Below: Kris Martin teaches weaving with weed vine Cat's Claw creeper

The 2012 Festival was sponsored by the Sunshine Coast Council, Noosa Biosphere Limited, the Great Sandy Biosphere/BMRG, TravelSmart Sunshine Coast and RockCote. In-kind contributions provided by MRCCC, Noosa Landcare, Sunshine Coast Council and a whole host of community organisations towards coordination and staging the Festival are significant, far outweighing the funding provided from sponsorships and grants.

The MRCCC's Giant Barred "Ford" jumping for joy over MRCCC Admin and Festival Assistant, Dale Ricketts at Lake Macdonald
Photo courtesy of the Noosa News

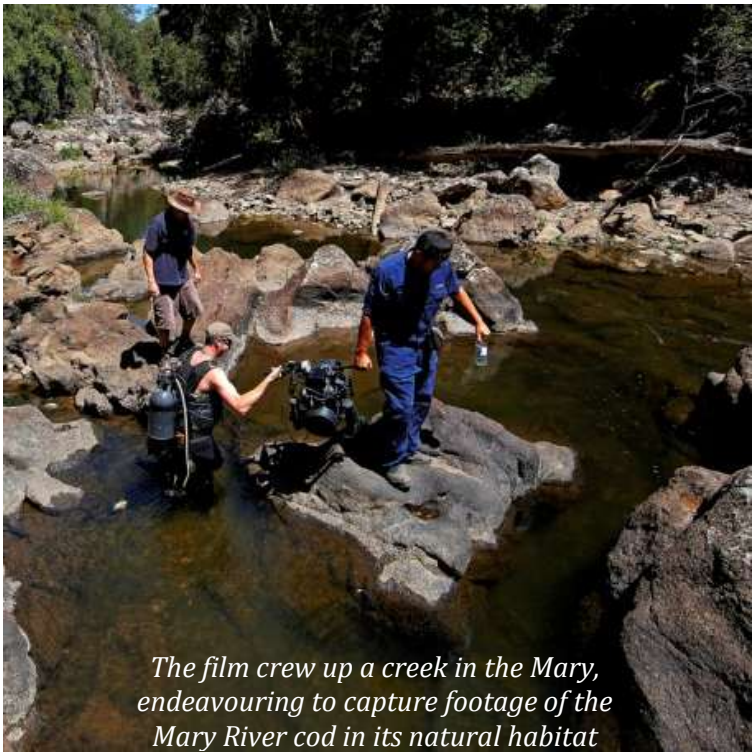
We were pleased to welcome Sunshine Coast Councillor Tony Wellington to open the 2012 Festival, and a number of new exhibitors including the Dinner Garden demonstration with permaculture advocate, Tim Lang, volunteers from Save the Fraser Island Dingo complete with Dingoes Didge and Carla, and the Weaving Workshops, which demonstrated that weed vine, Cat's Claw Creeper could be used to weave functional and attractive items. Activities on the lake this year were as popular as ever with the inclusion of free trials from Noosa Stand Up Paddle Boarding, and the Noosa Yacht Club, who offered free sailing tuition in 12 foot dragon boats. Also, Recreation Queensland provided free canoe tuition, giving people an opportunity to explore Lake Macdonald.

Following on from the success of the 2012 event, the Festival Organising group is starting to plan for the ninth annual Festival on Sunday 30th June 2013. The successes and lessons learned from this and previous years' Festivals will be taken into consideration during planning and preparation to ensure the Festival continues to grow and evolve, and continues to meet its aims and objectives

Once an Endangered Species – Cod DVD

The MRCCC submitted an application to the Sunshine Coast Council Environment Grants Program on behalf of the Noosa and District Community Hatchery for funds to produce a DVD which detailed the life cycle and breeding program for the Mary River cod. Goorie Vision film maker Luke Barrowcliffe directed and produced the short film, which included what is believed to be the first underwater footage ever captured of a Mary River cod in the wild.

Although the project was delayed for 12 months because climate conditions affected the breeding program, the DVD was finally launched by Federal Member for Wide Bay, Warren Truss at the MRCCC's 150th General Meeting in February 2012. Since then, 1000 copies of the DVD have been produced with a copy sent to all schools and libraries in the catchment. The DVD was also provided to Fishing Clubs and individuals throughout south east Queensland.



The film crew up a creek in the Mary, endeavouring to capture footage of the Mary River cod in its natural habitat

Whistling Kite. Image courtesy Tara Nielsen

Cooloola Festival of Birds

Cooloola Nature successfully applied for a grant from the Gambling Community Benefit Fund to host the Cooloola Festival of Birds at Tin Can Bay Foreshore on the 11th/12th February 2012. Cooloola Nature's Kelvin and Amelia Nielsen worked hard to develop a comprehensive program of speakers, cultural performers, activities and guided bird walks. The Festival aimed to highlight the influence that birds have had on our culture, beliefs and daily lives since earliest times through dance, song, art and storytelling whilst promoting the diversity of birds and their habitats. The Festival also highlighted the importance and vulnerability of Cooloola Coast shorebird habitats in the face of growing development.

Cooloola Nature plan to host the Festival of Birds bi-annually with the next event scheduled for 2014. In the meantime, the Nielsen's are continuing to develop the Birding Cooloola website which will include information on the Festival, and on birds and their habitats in the Cooloola region. Visit the website at www.birdingcooloola.org.au for more information and to view some of the Nielsen family's stunning avian photography,

Cod*Line* newsletter

Only one issue of Cod*Line* was produced in the last year with support from Sunshine Coast Council, Barung Landcare and the MRCCC. It was a bumper issue with more pages, more articles and a larger number of hard copies and email copies distributed throughout the Mary Catchment and beyond. As well as mailing Cod*Line* to around 1500 recipients, copies are also distributed to Produce stores, community groups and fishing tackle suppliers, where they tend to disappear from the counters very quickly. Cod*Line* can also be viewed on the MRCCC's website. The MRCCC appreciates the great work of Cod*Line* editor, Eve Witney. We are always receiving positive feedback about the newsletter, which includes articles from the MRCCC, landcare and local government, as well as feature articles written by landholders, some of whom are continuing the legacy established by their forefathers in caring for their land. Sponsorship and grants, and the in-kind contributions of the MRCCC and Barung Landcare help to maintain the integrity and quality of the publication, although reducing the number of issues produced each year. The MRCCC is currently considering the regular distribution of an e-newsletter to keep catchment residents and stakeholders updated with the latest information on everything NRM. Meanwhile, other avenues to support Cod*Line* are being investigated.

Valley Bees

Established in 2011 to address a community concern in relation to the scarcity of bees in the local environment, Valley Bees has since continued to go from strength to strength, attracting large numbers to their meetings, workshops and field days. A community-centered group which supports and coordinates the protection and management of bees to benefit the environment and horticultural industries in all their diverse roles, Valley Bees has a particular emphasis on the people who wish to maintain bees as part of their environment. There are over 1500 bees native to Australia. The better-known are the stingless social bees but there are also many solitary native bees contributing to the health of our environment which need more attention, including the blue banded, carpenter, reed, resin and green metallic bee.

The bee wall at Gympie Landcare, designed to attract stingless and native solitary bees

The honey bee *(Apis mellifera)* was introduced from 1824 onwards to provide honey and pollination. Honey bees have since become endemic through feral swarms moving into the environment.

Some of the threats to the sustainable maintenance of bees include the damage caused by introduced pests and diseases and the reduction of habitat, resource loss and introduced flora. Valley Bees advocates the need for balance between all bees in the environment, as all are needed to pollinate the extensive diversity in native flora, and native and introduced food plants.

The considerable interest in Valley Bees throughout the region is now generating "hive" groups including Range Bees at Maleny, auspiced by Barung Landcare. Information on every aspect of bee biology, bee keeping and their glorious end product, honey, is available on the MRCCC's website at www.mrccc.org.au/links.html

Glenda Pickersgill gets to know Jerry Coleby-Williams at a Valley Bees workshop at Gympie Landcare with MRCCC's self-professed "King of Loud Shirts" Steve Burgess in the background.

Policy and project submissions

Policy or submission	Date
Mary River Threatened Aquatic Species Recovery Plan development with SEWPaC	On-going
Great Sandy Biosphere	Nov 2011
Submissions for Wide Bay Burnett NRM Plan	Dec 2011
Submission to Biodiversity Fund for the Mary River Threatened Species Recovery Plan actions	Jan 2012
Submission to DERM on Colton coal mine EIS	Jan 2012
Submission to Federal Government Environment Dept on the Caring for our Country review	May 2012
Burnett-Mary Bioregional Assessment of Water Asset Vulnerability to Coal and Coal Seam Gas extraction	July 2012
Regional Development Australia Southern Queensland Food Futures Symposium	August 2012
Submission to QDAFF on the Cat's Claw Creeper and Madeira Vine Strategic Plans	Sept 2012

Representations

Mary Valley Renewal Team	On-going
Coordinator General's Stakeholder Reference Group for the Mary Valley Lands	Oct / Dec 2011
Colton coal mine deputation - DERM	Jan 2012
6th Australian Stream Management Conference – paper on the development of the Mary River Threatened Aquatic Species Recovery Plan	Jan 2012
Wide Bay Burnett NRM Plan workshops	May 2012
SEQwater catchment management planning	May 2012
Coordinator General's Mary Valley Economic Plan Reference Group	Aug 2012
Representation to Qld Minister for the Environment and Heritage Protection	Sept 2012
Representation to Qld Minister for Agriculture, Fisheries and Forestry	Oct 2012

Waterwatch volunteers 2011 - 2012

Gordon Agnew		Tracy Jamieson
Keith and Christine Bagnall		Errol Janke
Susan and John Bailey		Rob and Kathy Kerle
Mick Bambling		Ross Kinbacher
Anette Bambling		Will Kingham
Matt Baxter		Mary-Ann Law
Malcolm Beresford		Max Landsberg
Mark Bews		Iain Lewis
David and Rosemary Burnett		Shane Litherland
Qld Parks & Wildlife, Kenilworth		Ian Mackay
Jason Buckley, Nick's Readymix		Lorne and Ross Maitland
Jeff Clifton		Brett and Tammy Marsh
Nina Cox		Kye McDonald
Gillian and Yvonne Crossley		Peter Milton
Kathleen and Steve Dennis		Widgee State School, Robert Lonergan
Graeme Draper		Kath Nash
Noo Dye		Bec Owen
Bob Fredman		Cath and Colin Robinson
Les and Inge Geigler		Kev and Helen Rogers
Janet and David Golding		Brian Thomas
Narelle Hall and Stephen Horseman		Neville and Joy Turner
Gordon Halliday		Graeme White
Leslie and Craig Hanson		Scott and Lyn Woolbank
Bob and Lorraine Hood		Des King and Colleen Ryan
Cam and Lisa Hughes		Bart Schneeman (HQPlantations)
Kent Hutton		Elke Watson
Spencer and Lesley Innes		Don White (HQPlantations)

The MRCCC gratefully acknowledges the support of
Sunshine Coast Council,
Gympie Regional Council,
Fraser Coast Regional Council,
the Department of Transport and Main Roads,
the Burnett Mary Regional Group,
the Department of Agriculture, Fisheries and Forestry,
the Department of Sustainability, Environment, Water, Populations and Communities
the Department of Employment, Economic Development and Innovation,
the Australian Government Caring for our Country Program,
the Gambling Community Benefit Fund,
and landholders throughout the Mary Catchment.

DONATIONS TO THE MARY CATCHMENT PUBLIC FUND ARE TAX DEDUCTIBLE

MARY RIVER

CATCHMENT

COORDINATING COMMITTEE