

# NEWSLETTER

Issue 19

December 2021/January 2022

## Recent Events

We hope you all had a Merry Christmas and enjoyed spending time with your family and friends over the holiday period. With 2022 already well underway, it is looking like another busy year is in store for BBIFMAC.

December and January had BBIFMAC staff very busy collecting water samples in the peak of irrigation, and it only got busier with the recent rain, combined with navigating the difficulties of Covid-19.

BBIFMAC continue to be involved in ongoing projects with the Department of Environment and Science, Greening Australia, Central Queensland University, NQ Dry Tropics, and Sugar Research Australia.

Let's take a closer look into these projects and give an update on where we are at!

### **Great Barrier Reef Catchment Loads Monitoring** – Department of Environment and Science

The Great Barrier Reef Catchment Loads Monitoring program (GRBCLM) is funded by the Queensland Government, and is a sub-branch of the Paddock to Reef Project.

The GRBCLM project began in 2009, and enables the annual loads of key pollutants (sediment, nutrients, and pesticides) to be estimated for each of the 35 catchments draining into the Great Barrier Reef Lagoon from the Burnett Mary region to Cape York.

This year marks 10 years of BBIFMAC's involvement with the GRBCLM project, which includes monitoring 8 sites within the Burdekin region, from the Don and Bowen rivers in the south, to the Burdekin river, Haughton river, and Barratta Creek in the Burdekin region, and the Burdekin river at Sellheim (near Charters Towers).

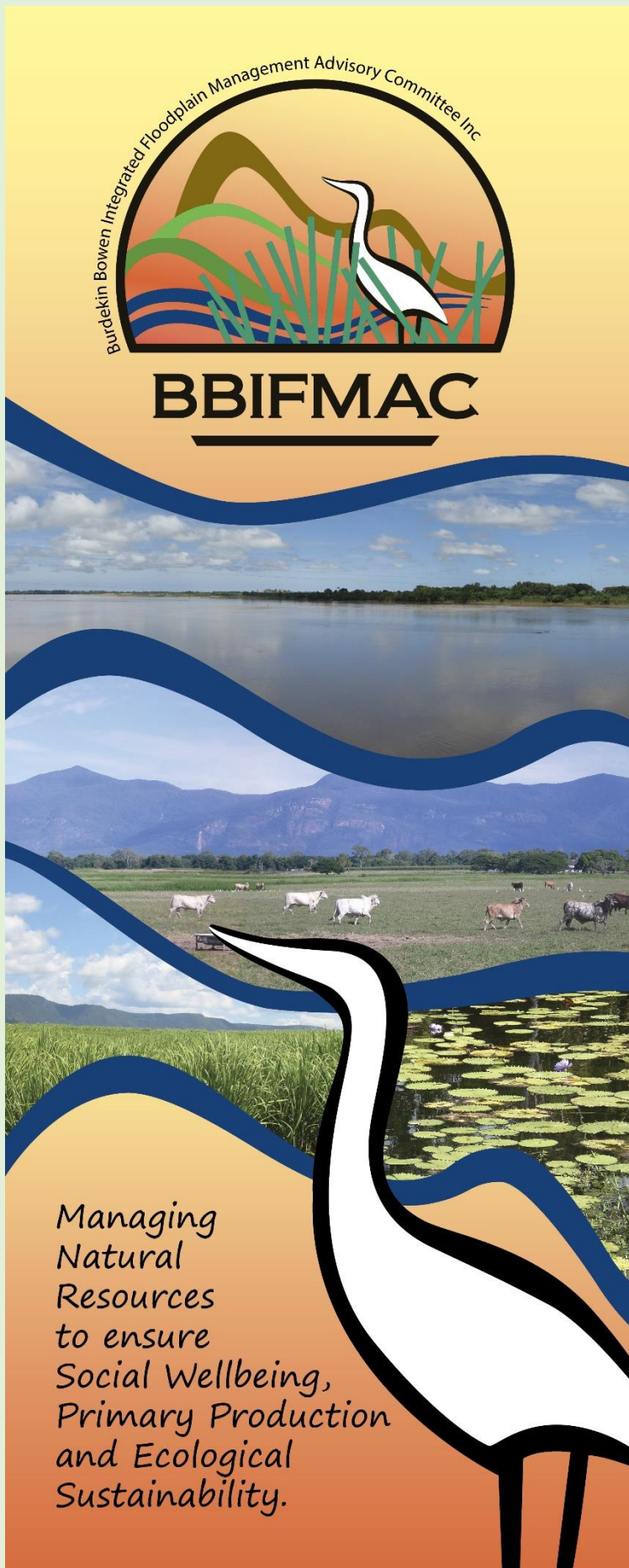
### **Fine Scale Water Quality Monitoring** – Department of Environment and Science

The installation of fine scale water quality monitoring sites has been ongoing since the end of 2020 in both the Lower Burdekin and Lower Herbert regions. The project is led by the Queensland Government's Water Quality Investigations team, and delivered in partnership with BBIFMAC.



## BBIFMAC

*Managing  
Natural  
Resources  
to ensure  
Social Wellbeing,  
Primary Production  
and Ecological  
Sustainability.*



The micro sites are recording nitrate-nitrogen (in mg/L) and stream level (in metres) which is uploaded to the CSIRO 1622™ portal. This information is available for public viewing.

To access the data, visit: <https://wq.1622.farm/>

A meeting with stakeholders in the Burdekin is planned for early 2022 to discuss the improvements made to the app and the water quality results to date.



BBIFMAC staff collected manual samples to compare with the in-situ sensors at many of the Fine Scale sites during the recent rainfall. This image is of the Cassidy Creek site.

### Constructed Wetlands Baseline Monitoring

- Greening Australia

In the latter part of 2021, BBIFMAC began undertaking baseline monitoring at three drainage systems in the region to assist Greening Australia with determining site suitability for transition to Constructed Wetland Treatment Systems. An additional three sites have been added to the list of prospective locations and monitoring is underway.



Arwen taking a velocity reading at one of the drainage systems during the recent high rainfall period.

### Peanut Crop Trial

- Central Queensland University, CRCNA

A new project led by Central Queensland University (CQU), with funding from the CRC for Northern Australia (CRCNA) is the Grain and Graze: Dual purpose peanuts for Northern Australia. This project will assess new peanut varieties as dual purpose crops for kernel yield in combination with different fodder production options in five locations across Northern Australia. Locally, BBIFMAC are assisting with a small plot trial of three varieties in Home Hill.



Emergence of the peanut crop in Home Hill.

### Reducing Burdekin Sediment

- NQ Dry Tropics

The fourth and final year of the NQ Dry Tropics 'Reducing Burdekin Sediment' project will soon be completed. BBIFMAC was contracted by NQ Dry Tropics to support local cane growers through on-farm paddock scale water quality monitoring, and provide individualised water quality enhancement plans to complement the efforts that farmers are already undertaking to reduce sediment, nutrient, and pesticide concentrations in irrigation tail water.

The local wetlands and waterways of focus were Kalamia and Liliesmere creeks, Plantation Creek, MacDonald and Maryplain creeks, Saltwater creek, and the Lower Burdekin River.

### Burdekin Irrigation Project

-Sugar Research Australia

The Burdekin Irrigation Project (BIP) is led by Sugar Research Australia (SRA), and aims to transition growers to scalable, sustainable, and technologically assisted practices in irrigation management, using a whole-of-systems approach that includes water quality validation.

The project is being delivered by a consortium of cross-disciplinary stakeholders, which enables integration of existing relationships with growers, lessons learnt and practical outcomes across numerous water quality improvement projects.

BBIFMAC have been engaged as an independent organisation to undertake the water quality monitoring for the project. There are currently four sites with which BBIFMAC are involved.



Flumes and water depth loggers have been installed at each of the four sites to determine the proportion of water lost to runoff in irrigations.

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