

# **Burnett-Baffle WQIP** **Reasonable Assurance Statement**

## **Background**

This Reasonable Assurance Statement (RAS) addresses issues that will provide a degree of confidence that, if the WQIP is implemented, the targets will be achieved and protection of the receiving waters from the pollutants of concern covered by the WQIP will be provided. The RAS addresses the uncertainty associated with:

- Setting the water quality targets
- Adoption of the management actions proposed
- Effectiveness of the proposed management actions in reducing pollutant loads

## **Statement**

The ability to meet targets associated with a Water Quality Improvement Plan (WQIP) relies on all stakeholders completing management actions in a coordinated and timely manner with appropriate resourcing and a responsive monitoring and evaluation strategy. The setting of resource condition targets (water quality targets), identification of proposed management actions to achieve the targets and implementation of these management actions rely on an adaptive management philosophy.

The Burnett Baffle WQIP covers mainly rural catchments with existing and expanding coastal urban centers. The WQIP developed through consultation with stakeholders (partners) contains a set of actions to be implemented over the next 5 years with 5 and 50 year RCTs to both maintain and protect the water quality of the catchment waterways and receiving waters.

### ***1. Water quality targets for the Burnett Baffle WQIP were developed using the best available science***

The challenge of maintaining or improving water quality and protecting ecosystem health of the receiving waters covered by the Burnett-Baffle WQIP can be met by achieving reductions in current modelled loads of pollutants so that water quality objectives can be met. The WQIP uses the approach of setting water quality targets (usually a reduction in current modelled annual load to achieve a sustainable load to meet water quality objectives) as a benchmark for identifying the required actions. Determining relevant water quality objectives for receiving waters (including estuaries) that protect the environmental values and uses, which the community have attributed to our waterways, was an important step in setting the water quality targets.

Due to the difficulties in measuring (monitoring) current loads, the current (nutrient and sediment) loads and predicted reductions in loads required to meet WQOs are modelled values (average loads over 30 years). This accounts for seasonal and annual variation in flow and therefore transported pollutants, but the implications of this are that the reduction in loads needs to be modelled not monitored to predict improvements from implementation of the identified actions. The targets were also developed recognising the adaptive management principle where additional information is likely to be available in the near future to enable better predictions of both current and load reductions required to meet WQOs.

### ***2. Robust decision support tools are urgently required to assess the effectiveness of management action targets in achieving the reductions in loads that are defined in the water quality targets for the Burnett-Baffle WQIP***

Decision support tools (numerical models), supported by locally specific, scientific understanding are urgently required to enable the effectiveness of adopting management practices on reduction of catchment-derived (diffuse source) sediment and nutrient loads into

receiving waters. Additional tools/models are required to show the link between catchment loads and associated ecosystem health of the receiving waters.

Decision support tools required for the review of the WQIP include:

- paddock scale models to determine effectiveness of management practices in reducing runoff of pollutants (loads sediment and nutrient) from different land uses and horticultural crops,
- improved catchment models (including updated current condition such as groundcover, trapping of dams etc and a range of scenarios to determine their effectiveness in reducing catchment loads), and
- receiving water quality model which predicts conditions in the receiving waters links from end of catchment loads.

### **3. *The Burnett-Baffle WQIP contains no-regrets actions to achieve water quality targets***

The WQIP has a range of targets for the reduction of sediment principally from grazing areas, nutrients (nitrate) principally from intensive agricultural areas (cane and coastal horticulture), and pesticides; and targets specifically for urban areas, enhancing community capacity to implement the WQIP and maintenance or improvement of ecosystem health. The management actions will be considered during community consultation for incorporation into the revised regional NRM plan and associated regional plan (to be statutory). The resource condition targets have been developed to ensure the WQOs for receiving waters are met if the actions are fully implemented.

### **4. *The Burnett Baffle WQIP recognises and explicitly outlines information gaps in setting and achieving targets.***

In setting the water quality targets for the WQIP, best available science has been used and assumptions required in the target setting process have been outlined. This will enable the targets to be further refined or updated when additional relevant information is available. As the WQIP primarily is concerned with the adoption of management practices in the rural industries (grazing/cane/horticulture), it relies on voluntary adoption of these processes facilitated by education, awareness of issues and financial incentives to make it more attractive to adopt practices or complete activities (planning, training, etc). Although there are several impediments or barriers to the adoption of these practices, it is uncertain how the proposed state government move towards regulation of farming practices will affect the uptake of these practices.

It also seems that better use of current regulation could achieve some water quality improvements to compliment those from voluntary practice change. New urban developments and point sources discharging pollution to waterways can be managed by the *Environmental Protection Act 1994* and associated *Environmental Protection Water Policy 1997*. The *Vegetation Management Act 1999* and the *Water Act 2000* can also be used for the protection of riparian vegetation and the bed and banks of river systems.

### **5. *A Monitoring and Modelling Strategy (which aligns with the cross-regional monitoring and modelling activities relevant to Reef Rescue/Reef Plan) will underpin the implementation of the Burnett Baffle WQIP***

Tracking the adoption of management practices or actions within the WQIP will monitor the implementation of the proposed interventions. There is a risk that management actions will not be achieved without adequate funding, however, the Reef Rescue program will provide funding to achieve some of the actions, capitalising on the strong partnerships and pilot incentive programs carried out by BMRG and stakeholders (partners) throughout the last year or so. The WQIP targets will be incorporated (after consultation) into the soon-to-be-revised Burnett Mary Regional NRM Plan and then into the Wide Bay-Burnett Regional Plan and as such, will be contained in an evolving document where further actions will be proposed when additional information becomes available to inform this process.

The proposed monitoring and modelling strategy for the Burnett-Baffle WQIP will:

- Provide an update to our current understanding of a complex and dynamic environment and help to address uncertainty
- Improve the process for refining or proposing additional management actions
- Better assess the effectiveness of different management strategies by integrating monitoring, modelling and evaluation of management actions;
- Capture and integrate adaptive learning into management decision-making and prioritise identified knowledge gaps and
- Demonstrate (via reporting) to stakeholders and the community that progress is being made during implementation in terms of achieving management actions and water quality targets.