



# National Irrigators' Council

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## ***Environmental Benefits and Monitoring of Environmental Water including Water Quality, Baseline Data and Efficient use of CEWH Water***

*Stakeholders must be engaged regarding the specific objectives Environmental  
Water Holders seek to achieve for each valley in which water is held*

### **Position Statement**

*Statement ratified 1 October 2014*

# National Irrigators' Council Position Statement Monitoring and Evaluation of Benefits of Environmental Water

## Introduction

The Basin Plan places a number of obligations on monitoring, evaluating and reporting on the use of Commonwealth environmental water. The Water Act requires an annual report on the management of environmental water be provided to the relevant Commonwealth and State Water Ministers. The report must include information on achievements against the objectives of the Basin Plan's Environmental Watering Plan.

## NIC Principles Relevant to this Policy Paper

- A healthy environment is paramount
- Irrigators must be fully and effectively engaged in the development of relevant policy
- Irrigators expect Government policy to deliver triple bottom line outcomes
  - Regulatory costs and burdens of reform should be equitably apportioned.

## Guiding Questions

1. What are the key objectives to be achieved through environmental watering?
2. How and where will they be measured? Against what baselines?
3. How will they be reported?
4. How will they guide future decision making?

## Key Messages

- Environmental Water Holders (State and Federal) need to work with local stakeholders to outline the specific objectives they want to achieve out of their environmental water portfolio for each valley in which water is held.
  - Local stakeholders must be engaged to ensure 'localism' can work;
  - Objectives must be based on clearly defined ecological and hydrological baselines;
  - Baselines must be evidence based and publicly available.
- Objectives need to be:
  - fit for purpose and recognise that a flow based solution has some limitations in achieving good environmental outcomes;
  - specific enough to be measurable; and
    - include indicators that demonstrate improvements over time rather than reporting conditions only at specific points in time.
      - For example The 'River Murray and fringing wetlands' is too broad to effectively monitor outcomes. The MDBA identified 18 hydrologic indicator sites<sup>[1]</sup> that would provide a more localised but representative monitoring area.
- Environmental watering must be measurable.
  - Site specific watering at locations such as Hattah Lakes or through the Koondrook-Perricoota cutting must be metered just the same way as consumptive diversions are metered.
  - Assumptions for water use in over-bank flows must be explained.
- Environmental water holders must report publicly against the objectives including:
  - Where objectives have been met and where they are not met and why;
  - Where watering occurred in isolation or in association with natural events or where outcomes were achieved only through natural events.
- All monitoring programs under the different jurisdictions must be cooperative and consistent.
  - Outcomes from one program must inform other programs;
  - State and federal agencies must share knowledge and avoid duplication.
- All reporting of environmental water should be viewed in the context of social, economic and environmental outcomes.
- Legacy costs must be properly determined.
  - Environmental programs for the "public good", including monitoring programs, must be funded by the 'public purse'.

## Background Information

At the end of September 2013 the Commonwealth Environmental Water Holder (CEWH) held 1887GL (60% of final target) of water for the environment.

Environmental water recovered prior to the 2009 Basin Plan Baseline Diversion, including that held by The Living Murray, Riverbank, Water for Rivers, and State recovery programs totals 873GL.

In June 2013 the CEWH released a *Monitoring, Evaluation, Reporting and Improvement Framework* (MERI Framework). This report articulated the approach to MERI for the use of Commonwealth environmental water and contained the following points:

- CEWH will undertake three types of monitoring; operational (to ensure water is delivered as planned and to help manage risks), intervention (the primary means for understanding the outcomes of water use) and program monitoring (on the achievement of the environmental objectives of the Basin Plan to be coordinated closely with program monitoring undertaken by the MDBA).
- Evaluation will focus on demonstrating the outcomes of the use of e-water, contributions to Basin Plan objectives, supporting adaptive management and improvement in the management of e-water and to identify information gaps to help build new knowledge.
- A commitment to reporting beyond statutory obligations.
- Improvement in use of e-water will be based on evaluation of environmental outcomes. Improvement will be through the refinement of future watering actions, annual and longer term portfolio management plans and the Basin Plan.

Intervention monitoring will occur where there is a need to understand short-term (1 year) ecological response to Commonwealth environmental water for selected watering actions. This approach has been undertaken in 2011-12, 2012-13 and 2013-14 in the following catchments: Murrumbidgee; Edward-Wakool; Lower Murray; and Goulburn. Results from short-term monitoring and evaluation work is available on the CEWH website.

The CEWH is establishing a Long-Term Intervention Monitoring (LTIM) project commencing in 2014-15 to measure ecological responses to e- watering actions at seven selected areas representative of environmental watering across the Murray-Darling Basin. The seven areas are the Gwydir Wetlands (wetlands and floodplains), the Lower Lachlan river system (in-stream and on fringing wetlands), the Murrumbidgee River (in-stream, on fringing wetlands and floodplains), Edward-Wakool river system (in-stream and on fringing wetlands), Goulburn-Broken river system (in-stream and on fringing wetlands), Murray River (in-stream and on fringing wetlands) and Toorale Station (in-stream and floodplains, as well as an indicator of upstream unregulated rivers). At the end of November 2013 the CEWH called for tenders for monitoring these sites which is yet to be finalised.

The CEWH has stated a commitment to making localism work and where possible, information collected by community groups and landholders will be included in the formal monitoring and evaluation process.

The MDBA document titled *Murray-Darling Basin Water reforms: Framework for evaluating progress* released in 2014, establishes the purpose of the Basin Plan evaluation framework:

This Basin Plan evaluation framework outlines how the Murray–Darling Basin Authority will work with partner governments and the community to evaluate:

- the implementation of the Plan—how well it has been put in place by all those with obligations outlined in the legislation – and how it is working administratively
- the effectiveness of this significant water reform package—whether the intended environmental, social and economic objectives and outcomes are being achieved.

The framework outlines the scope of the work, the questions that will be addressed, the evaluation methods, indicators that will be used to measure progress, the types of data that will be drawn upon and the roles and reporting by the people involved.

## Requirements and Legislative obligations

The Water Act requires an annual report on the management of e-water be provided to the relevant Commonwealth and State Water Ministers (section 114(1)). The report must include information on achievements against the objectives of the Basin Plan's Environmental Watering Plan (section 114(2a)).

The Water Act also requires the CEWH to provide water information relating to the held entitlements and trade to the Bureau of Meteorology (Water Act s126).

The Basin Plan places a number of obligations on monitoring, evaluating and reporting on the use of Commonwealth environmental water to:

- provide the MDBA with a statement of reasons for any environmental watering that is not in accordance with the Basin annual environmental watering priorities. (Basin Plan s8.44)
- apply the principles for monitoring and evaluating the effectiveness of the Basin Plan, as outlined in section 13.04 of the Basin Plan
- report annually to the MDBA on:
  - the extent to which local knowledge and solutions inform the implementation of the Basin Plan (Basin Plan Schedule 12, item 6)
  - the identification of environmental water and the monitoring of its use (Basin Plan Schedule 12, item 9)
  - the implementation of the environmental management framework (which includes the Basin-wide environmental watering strategy, the development of Basin annual environmental watering priorities, and the *Principles to be applied to environmental watering*) (Basin Plan Schedule 12, item 10)
  - the implementation of the water quality and salinity management plan, including the extent to which regard is had to the targets in Chapter 9 when making flow management decisions (Basin Plan Schedule 12, item 14)
- report every five years to the MDBA on the achievement of environmental outcomes at a Basin scale, by reference to the targets to measure progress towards the environmental objectives in Schedule 7 (Basin Plan Schedule 12, item 7).

## NIC's Position

Environmental Water Holders (State and Federal) will need to outline the specific objectives and desired achievements from their environmental water portfolio for each valley in which water is held and how they intend to work together to achieve objectives and avoid duplication.

The monitoring and evaluation work undertaken by the key agencies should simply explain:

- Where we are – clearly explaining the baseline from which to measure change;
- Where we want to be – explaining the outcomes the Basin Plan is seeking to achieve; and
- How we get there – including the steps for monitoring and evaluation along the way.

To ensure that the 'localism' model is working, local stakeholders must be involved in the identification and development of these objectives.

These objectives must be based on clearly defined ecological and hydrological baselines. These baselines must be based on the best available evidence reflecting current environmental conditions and the evidence made publicly available. The monitoring and evaluation program should focus on the hydrologic indicator sites on which the Basin Plan was based to enable it to identify whether or not the original objectives were modelled and based on are met.

The objectives need to be specific enough to be measurable to enable water holders to identify whether or not they have met their intended objectives. For example, the "River Murray and fringing wetlands" is too broad to effectively monitor or identify outcomes. The MDBA identified 18 sites where "a water regime that delivers their environmental water requirements is likely to also meet the environmental water requirements of many other key environmental assets"<sup>1</sup> that would provide a more localised but representative monitoring area.

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<sup>1</sup> Guide to the Proposed Basin Plan, Technical Background, Volume 2, Part 1, MDBA, 2010, p92

Environmental watering must be measurable. Site specific watering at locations such as Hattah Lakes or through the Koondrook-Perricoota cutting must be metered in the same way consumptive diversions are metered. At the same time, environmental water holders must explain how they will measure and report against water use during over-bank flow events.

Environmental water holders must report publicly against the objectives they have developed for each valley. This reporting must include where the objectives have not been met and why. Reporting should also attempt to distinguish where the outcomes achieved were in isolation, in conjunction with natural events or solely through natural events.

All monitoring programs under the different jurisdictions must be cohesive, cooperative and coordinated. Outcomes from one program must inform other programs, whether they are state or federal Agencies programs. Agencies must share knowledge to ensure compatible methodologies, avoid duplication of effort, wastage of money and confusion for local communities. Watering programs must also maintain the ability to adapt based on this shared knowledge to improve outcomes.

All reporting of environmental water should be viewed in the context of social, economic and environmental outcomes.

Legacy costs must be appropriately determined and borne by the nation as a whole. Environmental programs for the “public good”, including monitoring programs, must be funded by the “public purse” and not just those inside the Murray Darling Basin.