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Standing Committee on the Environment and Energy
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SUBMISSION
Inquiry into the management and use of Commonwealth environmental water

Introduction

The Inland Rivers Network ("IRN") is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

IRN welcomes the opportunity to provide information to the House of Representatives Standing Committee Inquiry into the management and use of Commonwealth environmental water.

IRN member groups have been involved in the management and use of environmental water in NSW since the development of the Water Management Plan for the Macquarie Marshes in 1986.

The subsequent purchase of held environmental water in NSW through the Riverbank program and environmental allocation in the 2004 Macquarie-Cudgegong Water Sharing Plan (WSP) increased the volume of environmental water to be managed and used in the Macquarie River system long before any water was purchased by the Commonwealth.

A statutory committee was established in this WSP, the Environmental Flows Reference Group (EFRG), to advise the NSW Government on the management and

use of environmental water released from Burrendong Dam, above Dubbo on the Macquarie River.

The purpose of this committee was to improve community engagement and awareness of the complexities of the management of environmental water and to encourage the use of adaptive management principles.

The EFRG was the precursor to the establishment of Environmental Water Advisory Groups (EWAGs) that are now established across most major inland river systems in NSW.

IRN has represented environmental interests on the EFRG since its formation. Other stakeholders involved in the decision-making process of this group include irrigators, landholders, Aboriginal traditional owners and relevant state agencies.

The subsequent application of purchased Commonwealth held environmental water in the Macquarie has been an important component of its management under the long established system of information sharing and decision-making through the EFRG.

This submission will outline the decision-making processes undertaken by the EFRG to demonstrate to the Standing Committee that effective and innovative approaches are already in place to maximise the use of environmental water through community engagement and awareness.

Case Study of Macquarie-Cudgegong EFRG

1. maximising the use of environmental water for the protection and restoration of environmental assets

The Commonwealth Environmental Water Office (CEWO) holds a position on the EFRG along with NSW Government Agencies; Fisheries, Office of Environment and Heritage, Water NSW, Department of Industry Water and Local Land Services. This is alongside the community representatives outlined above.

Representatives from the Murray-Darling Basin Authority (MDBA) and the CEWO local engagement officer regularly attend EFRG meetings.

All held environmental water and environmental allocations under the WSP are considered as one bucket of water in the decision-making process of the EFRG.

This means that the use of Commonwealth held water is maximised because it is included in the larger available volume. The accounting and reporting of water use from the various environmental water accounts is broken down during water releases and carryover decisions.

The CEWO and OEH develop one and three year rolling watering plans to meet the objectives of the Long Term Watering Plan as required under the Basin Plan.

In making decisions for annual environmental water use the EFRG considers antecedent conditions, predicted conditions, available water determinations and scenarios for dry, median and wet climatic conditions.

The outcome of previous environmental watering is reviewed to understand what targets have been met and what environmental values need to be supported in the coming water year based on water availability.

The three year rolling plans consider carryover of some available water to ensure that core environmental values will be supported if very dry conditions occur during the planning period.

The Commonwealth held water is often carried over in the Macquarie to support fish populations and core wetland areas of the Macquarie Marshes in the event of very dry conditions and to provide connectivity flows through to the Barwon-Darling.

The decision-making on timing of environmental water releases, daily volumes of release and specific areas that water will be directed to includes a set of triggers for changes in management if climatic conditions change from those predicted.

All these decisions are recorded and reported.

While an environmental release is occurring, regular updates are provided to the EFRG and the community.

This thorough decision-making process ensures the maximised use of environmental water for the protection and restoration of environmental assets

2. considering innovative approaches for the use of environmental water

The EFRG uses an adaptive management approach to the use of environmental water. This allows for innovation and variation according to climatic conditions and the condition of the various environmental values being targetted.

Where the CEWH is entitled to access supplementary inflows during an environmental release from Burrendong Dam, this new water can either add to the volume of flows or cause the release to be reduced thus storing more water for future use.

The pulsing of environmental water through a varied hydrograph can achieve different environmental outcomes in different parts of the system.

Cuing environmental releases with opportunities to drown out weirs improves opportunities for fish migration, wetting different levels of riverbank improves vegetation growth and habitat values, pulsing water into different wetland areas improves resilience and supports a wide range of native species requirements.

A recent environmental release occurred specifically to connect with a flow in the Barwon-Darling River at an optimal time for Golden Perch breeding and passage. The

aim of the release was to encourage Golden Perch recruitment upstream into the Macquarie.

This release was marginally successful. It was hindered through the lack of protection of environmental flows in the unregulated section of the Macquarie below the Marshes. While there had been an agreement with the three license holders to let the flow pass, one pump was activated that extracted a large proportion of the environmental flow.

This incident emphasises the critical need for rules to protect environmental water flows in all WSPs.

Innovative use of environmental water is occurring across the Murray Darling Basin as knowledge of the river systems and environmental assets increases.

Improved management of all water releases from dams, whether for irrigation orders or for environmental flows will help to address river and wetland degradation.

3. monitoring and evaluating outcomes of the use of environmental water

Regular monitoring of environmental releases occurs in the Macquarie. Flyovers during the release identify the extent of water spread in the Marshes. Onground monitoring includes frog, fish, waterbird and vegetation surveys.

Satellite imagery is also used to compare flood extent.

The outcomes of the environmental flow release are compared against the targets set. All weather conditions are recorded and any impacts on the success of the release are identified.

This information is provided in reports for the NSW Government and CEWO that are all publicly available.

More funding towards regular monitoring programs will enhance the evaluation of the use of environmental water.

4. options for improving community engagement and awareness of the way in which environmental water is managed

IRN considers that the approach taken by the EFRG with the broad stakeholder representation is the most effective method of engaging the community in the management of environmental water.

Regular EFRG meeting summaries are provided for circulation to stakeholder groups, regular media releases are produced outlining the timing and purpose of environmental flow releases and annual evaluation reports are prepared for the NSW Government that are publicly available.

The CEWO also publishes annual reports and regular updates of activities. The employment of local engagement officers also provides a direct contact for regional

people to discuss issues and learn more about the complex aspects of delivering environmental water for the best outcomes.

Conclusion

The management of environmental water has occurred in the Macquarie River system for over 30 years. The advent of the Basin Plan and Commonwealth held environmental water has enhanced the outcomes of adaptively managed environmental flow releases in the Macquarie Valley.

The Macquarie Marshes are a highly significant wetland system that have suffered decline and degradation because of the level of extraction that was maximised during the 1990's.

The current volumes of allocated and held environmental water are barely enough to keep a core 10% of the Marshes in a healthy condition. There is no demonstrable case for the argument put in the Northern Basin amendment that the Macquarie system is over recovered.

This case study demonstrates the important role of environmental water and enhancement of its effectiveness through management guided by a well constituted broadly representative advisory body.

For further information on this submission please contact:

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