

## Submission to Productivity Commission – The National Water Initiative, and need for further reform

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Arguably, the major area where national Water Initiative (NWI) reforms are stalled and more progress is required, is in the move towards integrated water resource planning and management. Only in the context of an integrated water resource planning framework can sensible and balanced decisions be made about other significant issues such as water trading, rural and urban water service delivery, interception.

The need to further promote and support integrated water resource planning and management aligns with element four of the eight key elements of the National Water Initiative (NWI). It also reinforces Australia's recent commitment to the international Sustainable Development Goals, specifically goal 6, which has as one of its targets (6.5): *by 2030 implement integrated water resource management at all levels...*

The NWI supported '...water planning that provide for secure ecological outcomes...' (see Issues paper, p12) However, it has not yet achieved this. Previous approaches by the National Water Commission (NWC) have focussed only on water quantity (flow) as a potential stressor on water resources. Without simultaneous consideration of other stressors, secure ecological outcomes cannot be achieved. Integrated water resource planning and management would consider all stressors on the water resource. There has been recognition by NWC and others of the need to move towards a true integrated water resource planning and management framework by better integration of water quality and quantity. Thus, in the NWI 2011 triennial assessment it was recommended that:

*Water quality objectives should be more fully implemented into the reform agenda, with better connections between water quality and quantity in planning, management and regulation to achieve improved environmental outcomes...*

There was a similar recommendation in the 2014 triennial assessment (which reflected the lack of progress since 2011):

*Water quality should be incorporated into water planning to achieve more resilient environmental and economic outcomes*

This deficiency was also recognised in the strategic direction paper<sup>1</sup> prepared by the Standing Council on Environment and Water (SCEW) for COAG (Sn. 4) which identified the need for:

*better integration between water quality and quantity in planning, management and regulation frameworks to achieve improved environmental, economic and social outcomes.*

This include several specific recommended actions. Despite this support, there has been little progress in this area. (The Murray Darling Basin Plan incorporates both measures around water

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<sup>1</sup> 'Next Steps in Water Reform: Preparation for the Future' SCEW, 2013.

quantity ('Sustainable Diversion Limit') as well as a 'water quality management plan. Unfortunately, these were poorly integrated).

Practical implications of this deficiency in current water resource planning is reflected in the recent northern basin review for the Murray Darling Basin Plan (<https://www.mdba.gov.au/publications/mdba-reports/northern-basin-review-report>). The proposal put forward by the MDBA recognised that management of flow alone was insufficient to secure desired environmental outcomes; i.e., there was need for a range of 'complementary measures' which fell outside the Basin Plan. However, the lack of detailed planning and evaluation of these matter was obvious, with proposals for forward for a number of ill-defined ad hoc complementary measures. This reinforces the need for an overarching integrated water resource plan which objectively evaluates the full range of stressors and develops a robust set of management arrangements to address them.

Similarly, when considering flow alone, 'interception activities' are seen as having a negative impact on environmental outcomes. However, if management of water resources is considered in an integrated, more holistic, fashion, consideration needs to be given to the ecological benefits of interception on water quality and habitat. Thus, if interception was considered from this integrated point of view, it could well be seen as providing benefit overall.

The time is long overdue to actively pursue the development of an integrated water resource planning and management framework, with the inclusion of water quality in line with SCEW and NWI recommendations. Such an overarching framework would provide a 'blueprint' for disparate agencies to undertake more specific planning and management in a complementary fashion.

#### Alignment with the 'National Water Quality Management Strategy'

In addition to revision of the nationally agreed National Water Initiative, contemporaneously, the National Water Quality Management Strategy (NWQMS) is undergoing review and it would be sensible and efficient to ensure the reviews are supportive.

Although they have been developed largely independently, there is a high degree of overlap both in intent and the underlying framework. For example, the proposed policy goal for water reform (Issues paper, p 8): *water use in Australia is efficient and sustainable*, conceptually is not markedly dissimilar to the current policy goal of the NWQMS: *To achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development*. It would not be a significant task to combine these two policy objectives to form a comprehensive policy goal for water resources applicable more broadly. Moreover, both rely on a conceptually similar systematic approach to planning to deliver 'environmental and economic outcomes' (NWI) or various water-related 'environmental values' (NWQMS)<sup>2</sup>.

This integration of water quantity and quality for a particular water resource at the planning level, although challenging, is not difficult conceptually. It relies on, in the first instance,

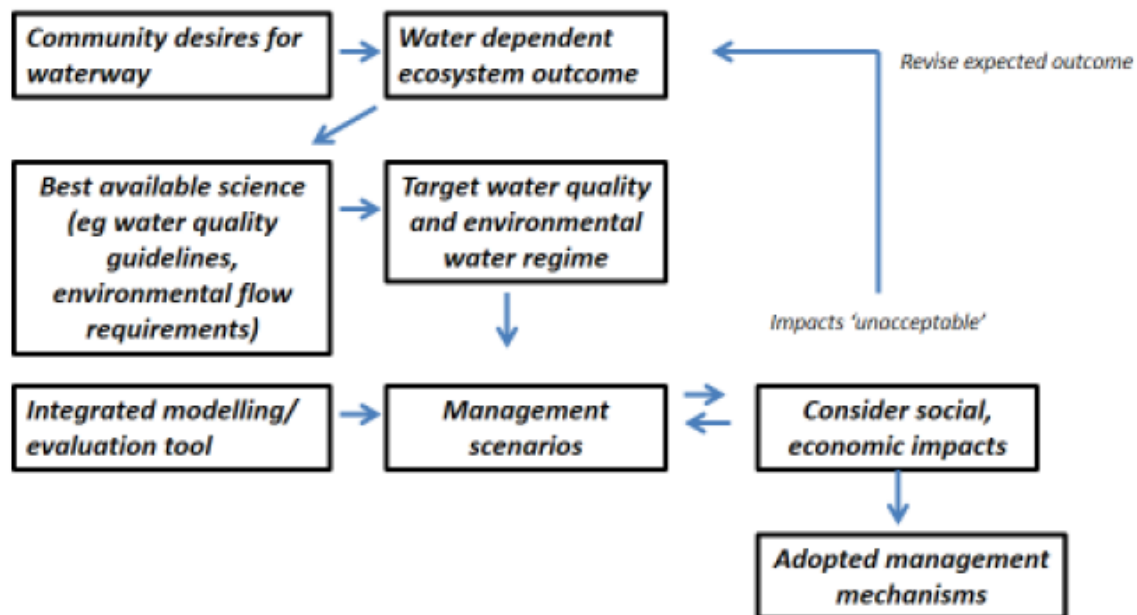
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<sup>2</sup> See, for example, 'Australian environmental water management: framework criteria', NWC, 2012; and 'National Water Quality Management Strategy: Implementation Guidelines', 1998.

identification of a number of explicit management objectives and measurable outcomes. E.g, it might relate to the protection of a particular ecological asset, as well as perhaps using the water for irrigation. In both these examples, both quantity and quality of water might prevent the achievement of the outcomes. Using ‘best available science’ the flow regime and the water quality necessary to achieve the outcome can be established.<sup>3</sup> Evaluation of possible management arrangements on both water quantity and quality need to be evaluated, and the least-cost measures implemented. This will generally require the use of modelling tools which are now becoming commonplace.

This is illustrated diagrammatically below.

## Integrated water resource planning



Although not always unrecognised, the original intent of the NWQMS was to provide for integrated water resource planning and management. It encompasses the protection of a wide range of values, environmental as well as other ‘public benefit’ outcomes (e.g. drinking water supply, recreation, cultural and spiritual). Although its primary focus was on water quality management one of the core documents, ‘The Australian and New Zealand Guidelines for Fresh and Marine Water Quality’ provides limited guidance on flow management (see Sn. 8.2.3.7).

### Recommendation

<sup>3</sup> For water quality, there is a well-established process to do this. See ‘The Australian and New Zealand Guidelines for Fresh and Marine Water Quality’

Progress revision of the NWI ‘Policy Guidelines for Water Planning and Management’<sup>4</sup> (endorsed by COAG in 2012) to reflect an integrated approach to water planning, by inclusion of other stressors such as water quality.

This is similar to the recommended action to explore whether: *the preparation of a module to the NWI Policy Guidelines for Water Planning and Management is required to assist in the integration of water quality and water quantity planning and management.* (Sn. 4.2, ‘Next Steps in National Water Reform: Preparation for the Future’).

### **Other issues**

There are a number of other issues some of which may fall outside the terms of reference for the review, but can have a dramatic impact on the uptake and implementation of water reform.

1. The current paradigm is that water for environmental purposes is ‘held’ as an entitlement similar to other entitlements. This has resulted in the need for a bureaucracy (‘environmental water holder’) and somewhat convoluted decision making processes (subject to political pressure) on how best to use this environmental water. It would be preferable, and more consistent with objective planning if licences gained for environmental purposes were surrendered and converted into appropriate conditions in the water resource plan (‘planned environmental water’).
2. The description of water resource planning in the glossary fails to recognise the requirement in the Murray Darling Basin for the water resource plan to incorporate a ‘water quality management plan’, providing limited alignment between water quantity and quality planning.
3. The current modelled baseline for ‘natural’ flows is misleading. Fundamentally, it is based on the removal of infrastructure; it does not model flow under the natural vegetated condition of the catchment. This approach has contributed to the view that ‘interception’ by revegetating a catchment is problematic. Natural flow should also account for the natural level of vegetation cover (prior to significant human disturbance).
4. It is perhaps ironic that the only jurisdiction not to fully separate the roles of regulator and operator is the Commonwealth. Thus, the MDBA, as well as its regulatory role, also ‘operates’ the infrastructure primarily on the River Murray. These roles should be fully separated.
5. The NWQMS has also explored in depth Indigenous cultural and spiritual needs in water (quality) planning. ( see <http://webarchive.nla.gov.au/gov/20150623155513/http://www.environment.gov.au/resource/indigenous-cultural-spiritual-values-water-quality-planning> ) This analysis is likely to be more broadly useful.

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<sup>4</sup> <http://webarchive.nla.gov.au/gov/20160105002803/http://www.coag.gov.au/node/461>