18 April 2017

National Water Reform Inquiry
Productivity Commission
GPO Box 1428
Canberra City ACT 2601

We thank you for the opportunity to respond to the public inquiry into National Water Reform and welcome your Issues Paper released in March 2017.

NRM Regions Australia – National Water Reform submission

Summary

Integrated land and water planning and management at the regional or catchment scale, with stakeholder knowledge and engagement, is essential to achieving NWI outcomes. Appropriate governance and coordination at this scale is essential.

NRM regions play a significant and increasing role in elements of the NWI. Importantly the future national water reform priorities described in the Preliminary framework aligns closely with roles, responsibilities, and expertise of Regional NRM organisations across Australia. All Regional NRM organisations deliver actions to improve the health of waterways and most include water in their regional planning.

Areas where Regional NRM organisations can play an important role to achieve the outcomes of the NWI through their technical expertise and community networks and partnerships include: managing the potential effects of climate change and extreme events; supporting the participation of Traditional Owners in water management decisions; and environmental management, including that associated with managing environmental water, and integrating with other NRM programs to improve outcomes.

The latest State of the Environment drew attention to "risks have arisen as resources allocated to ongoing broad-scale monitoring, analysis and reporting have diminished". This is consistent with the unfinished business described in the Issues Paper related to the NWC priorities (p.7) where an appropriate monitoring effort is noted as being critical to underpin the ecological outcomes of water reform. Regional NRM organisations play a role in monitoring and reporting and are working to improve capacity nationally.

The Initiative falls short of its objective of improving environmental outcomes by not acknowledging the value of integrated land and water management programs, and the role of Regional NRM organisations, in both managing environmental flows (where appropriate) and

environmental outcomes, and addressing land management impacts on water quality and aquatic/riparian associated biodiversity. The link between land management and water outcomes needs to be made explicit at the national level, and managed at the catchment scale.

Regional Natural Resource Management

NRM Regions Australia is the national representative body for Australia's 56 Regional Natural Resource Management (NRM) organisations. Our members and the strategic plans they prepare cover all of Australia. We are key partners in the implementation of the Australian Government's National Landcare Programme and its predecessor programs (Caring for Our Country, Natural Heritage Trust and the National Salinity and Water Quality Program).

NRM is the integrated management of our natural resources, that is, our land, water and biodiversity assets. Our premise is that effective management of these resources requires a landscape or catchment approach that coordinates a range of land, water and biodiversity programs in conjunction with local communities and local, State/Territory and the Australian Governments. Water management benefits from this approach. Water quality is a critical factor in the environmental health of our waterways. While the quantity of water available to rivers for environmental flows is clearly important, environmental flows on their own are not sufficient to achieve the environmental outcomes we seek.

National Water Reform Inquiry

We note from the terms of reference regarding the scope of the Inquiry, there is the opportunity for the Commission to consider "the scope for improving the NWI, addressing current and future challenges". It is this aspect that our submission will focus on.

In understanding the scope of the Inquiry, it is defined that the Commission should assess:

- progress in jurisdictional adoption of NWI principles
- the outcomes to date of the NWI and related water reform efforts, taking account of other drivers of reform
- progress against the recommendations in the National Water Commission's National Reform Assessment 2014, and
- the extent to which the NWI reforms are adequate to support government responses to emerging or changing water management challenges, including in the urban sector.

It also states that the Commission should also consider:

- the potential and realised benefits of NWI implementation

- the scope for improving the NWI, addressing current and future challenges
- broader water policy issues and the role of the NWI in improving outcomes, in particular:
  - the interaction of water policy with other policy areas such as energy, agriculture, planning, urban supply
  - whole-of-cycle water management
  - provision to regional, rural and remote communities, and
  - the economically efficient provision of water infrastructure.

Regional NRM organisations are responsible for developing regional NRM plans in conjunction with local communities, and in alignment with State and Commonwealth Government priorities. Many of these NRM Plans consider the issues listed above within the scope of this Inquiry, however it is often difficult to determine which Strategy/Plan should have primacy (if this is required to assist ultimate decision-making). The reforms driven through the NWI have often suffered from this confusion within regions and local communities. A similar confusion exists in the use of the word 'balance' which is subject to a plethora of different definitions, and implies that there is only one 'balance' in water management that everyone is striving for, when in fact this point of balance is subject to priorities set by different levels of Government and is always dynamic due to different drivers of change (from Government policy, local priorities, climate changes, natural disasters, commodity prices etc.).

The aims of the NWI — which built on the Council of Australian Government's (COAG's) 1994 Water Reform Framework — are to establish greater certainty for investment and the environment through; (i) clearly specified water access entitlements (perpetual water rights), (ii) addressing over-allocated water systems and improving the economic efficiency, and (iii) environmental sustainability of water management for both rural and urban water systems. Regional NRM organisations currently play an important role in two of the three aims of the NWI, namely (ii) and (iii), such as in their input into the Murray Darling Basin Plan and in recent times, through the newly formed Tri-State Murray NRM Alliance made up of the 7 Regional NRM organisations operating along the Murray River corridor in Victoria, NSW and SA.

This important role of the Regional NRM organisations is further reinforced by our input into the key elements of the NWI (as defined on p.7 of the Issues Paper) where Regional NRM organisations are playing an increasingly stronger role, as highlighted by the red text below:

1. Water Access Entitlements and Planning Framework
2. Water Markets and Trading
3. Best Practice Water Pricing
4. Integrated Management of Water for Environmental and Other Public Benefit Outcomes
5. Water Resource Accounting
6. Urban Water Reform (noting some Regional NRMs are starting to influence in this area)
7. Knowledge and Capacity Building
8. Community Partnerships and Adjustment.

Most importantly, the identification of future national water reform priorities (as described in the Preliminary framework, Table 1) aligns closely with a number of the roles and responsibilities, and expertise, of Regional NRM organisations across Australia. Those areas most aligned are highlighted below in red:

Water resource management

Property rights for water are clear and secure

Clear and secure property rights are important to provide entitlement holders with certainty to encourage long term investment. They are crucial to the establishment and functioning of water markets and an important component of sustainable environmental management. Property rights should:

- include all available water sources (as far as practicable)
- be legally recognised
- be explicit — outlining the maximum extraction volume allowed to be taken and the relationship between allowable extraction and water availability in any season
- be separate from land title and tradeable.

Processes for determining allocation and sharing of water are transparent, inclusive, and cost-effective

Water planning processes are important, including because they identify the share of water for consumptive and environmental purposes. Water planning processes should:

- be timely, transparent and open
- be based on best available information
- involve communities and stakeholders
- be adaptive
- manage uncertainty.

Water is able to be traded to its highest value use

Water trading enables water to move to its highest value use within a water system, providing the driver for greater productivity. For individual entitlements holders, it provides a business tool to enable them to respond to changing climatic conditions/circumstances. In order to achieve this:

- trade should be enabled for all water systems where this offers net benefits
- any restrictions on trade need to be appropriate and efficient
- costs and delays of trading should be minimised
- water market participants should have access to timely and accurate information
- trade should be underpinned by adequate measurement, monitoring and water accounting systems.

Environmental management is efficient and effective

Sustainable management of water environments is a critical component of water resource management, underpinning the integrity of property rights and the functioning of water markets. Sustainable management of water environments may entail:

- providing a share of water for the environment and dealing with over-allocated systems where agreed
- ensuring there are appropriate institutional and regulatory arrangements for efficient environmental water use
- integrating catchment management and other complementary resource management activities.

Water services

Rural and urban water services are provided efficiently

Efficient delivery of infrastructure services has a direct effect on the availability and cost of water. It is important that appropriate incentives are in place to ensure that those entities delivering water provide a reliable service, meet relevant standards and plan for the future. Among other things, it is important that:

- the security, quality and cost of water services are balanced in accordance with consumer preferences
- institutional and regulatory arrangements are adaptive and create clear roles and responsibilities for policy makers, regulators and services providers
- prices are cost reflective and there are limited cross subsidies in pricing regimes

- public health and environmental impacts are managed efficiently and in accordance with community expectations and standards
- water service providers consider integrated water cycle management in their planning.

Opportunities for addressing future NWI challenges

Areas requiring more work to achieve the outcomes of the NWI and where Regional NRM organisations can play important roles due to their technical expertise and community networks include:

- Managing the potential effects of the long-term impacts of climate change, as well as the short-term effects of extreme events (see page 13 of Issues Paper).
- Supporting the identification and participation of Traditional Owners in water management decisions, particularly regarding integrating cultural values into environmental water management where Regional NRM organisations have critical roles, particularly in some State jurisdictions, such as Victoria and SA.
- Environmental management, including that associated with managing environmental water. Section 78 calls for the integrated management of environmental water, however the actions focus more on managing environmental water and the recovery of environmental water rather than how water management is integrated with other NRM programs to improve biodiversity outcomes (including aquatic/riparian biodiversity) and water quality. Regional NRM Organisations are becoming increasingly important in the management of Environmental Water Reserves. In some States, for example Victoria, they are the body that develops Annual Watering Plans around climate scenarios working with Water Corporations to deliver environmental water to priority sites, and then undertaking long-term intervention monitoring programs. The maturity of this model is now seeing water planning occurring across catchment boundaries and ultimately State boundaries.

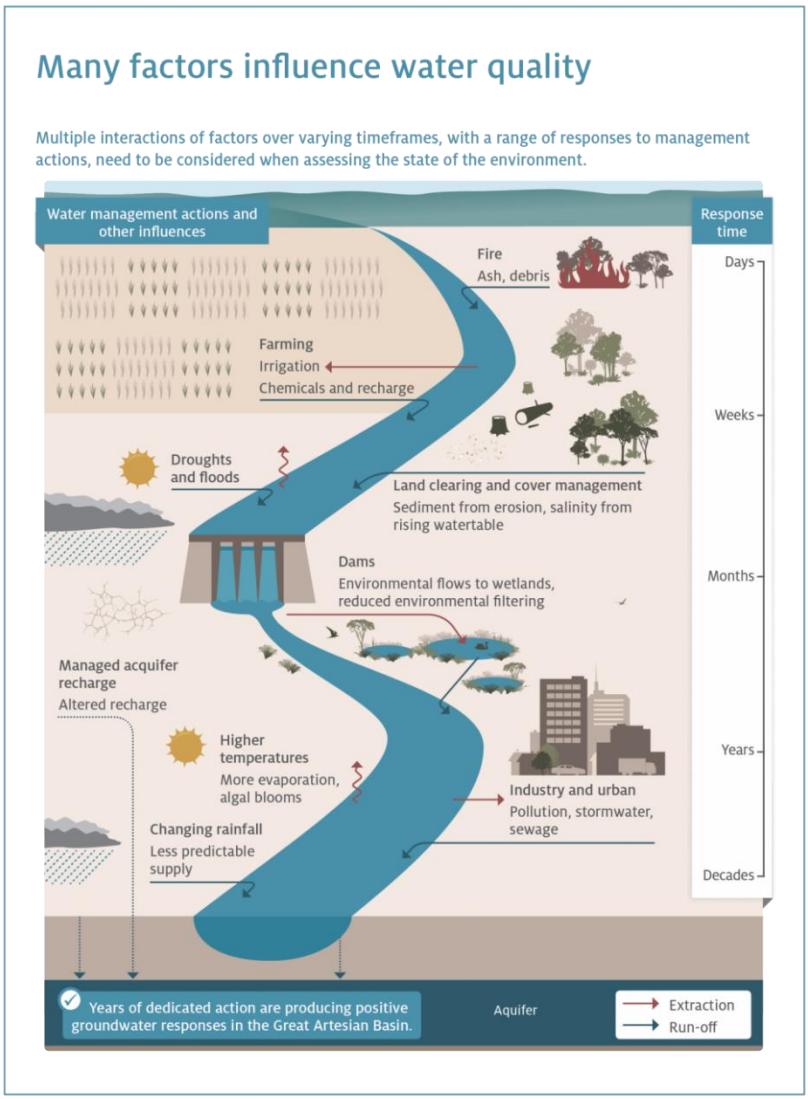
More detail on these opportunities is provided throughout the submission.

Government investment to address water quality issues

Water Quality concerns have been a major driver for government water policies since the early 1980s. For example, salinity impacts on the River Murray resulted in a total overhaul of the River Murray Commission in 1989 to establish the Murray Darling Basin Commission and for the new Commission to address land management impacts on water quality.

In addition, Australian and State governments have invested substantially in salinity and water quality programs with these investments targeting land management programs that reduce salt, phosphorus, nitrogen in run-off from agricultural lands.

Australia's 2016 State of the Environment (SOE) Report draws attention to the factors that influence inland water quality:



The SOE Report noted that "water quality has largely stabilised, with some signs of improvement, and risks exist from fragmented management efforts". This finding was based on local or regional report card assessments – the SOE also drew attention to "risks have arisen as resources

allocated to ongoing broad-scale monitoring, analysis and reporting have diminished". This is consistent with the unfinished business described in the Issues Paper related to the NWC priorities (p.7) where an appropriate monitoring effort is noted as being critical to underpin the ecological outcomes of water reform.

An emerging issue in the water quality space related to integrated catchment management is the potential increase in incidents of widespread blackwater. With the changing climate across South-East Australia there is the strong possibility of increased blackwater events due to more ephemeral waterways receiving large inputs of organic material precipitated from summer storms. This rotting vegetative material building up and being washed into waterways across Catchments in warmer weather is a sure recipe for driving blackwater. These situations along with sediment movement may also result in further widespread Blue-Green Algal outbreaks, such as the one recently experienced in the Murray in 2016.

Regional NRM Organisations and integrated water management

All Regional NRM organisations deliver actions to improve the health of waterways and most include water in their regional planning. Some examples of major water programs that our members are engaged with include:

- Regional NRMs in the Reef Catchments area in Queensland are working with famers to reduce sediment and nutrient input to the Great Barrier Reef;
- Regional NRMs along the Murray River Corridor have formed an Alliance to coordinate land and water management works to maximise the environmental benefits and improve irrigation efficiency and drainage to assist with meeting the outcomes of the Basin Plan;
- In South Australia, Regional NRMs are responsible for water allocation planning and the application of funds generated by those plans;
- In Tasmania, Regional NRMs are assisting with the irrigation developments in northern Tasmania to ensure new developments meet best practice irrigation development;
- In Victoria, Regional NRMs (Catchment Management Authorities) are formally designated as the caretakers of river health and facilitate environmental watering, land management and river health programs. This approach to integrated catchment management is facilitated by the recent release of the State Strategy *Our Catchments Our Communities (2016).*

In addition to these major initiatives, all regional NRM organisations support local projects designed to improve the health of rivers, wetlands and floodplains within their regions.

Regional NRM organisations are now becoming important partners in the development of water planning processes across Australia, particularly in Victoria, NSW, SA and Qld. This is due to their knowledge and skills around environmental water, on-farm water use, river health, sustainable irrigation practices, and community and stakeholder partnerships. One area in which Regional NRM organisations are leading the way that supports future water reform processes is in engaging with Traditional Owners and Indigenous land managers, by incorporating traditional ecological knowledge and an understanding the value of cultural water. Most Regional NRM organisations now have Indigenous Participation Plans or equivalent, driving regular and meaningful engagement with Traditional Owners, and working to include Indigenous ecological knowledge in integrated catchment (land and water) planning. It is important to recognise in future water reform that Traditional Owners are not only seeking to influence and control decision making around cultural water, but are also seeking their rights to water to drive social enterprise opportunities achieving economic outcomes.

How can the NWI leverage and support our efforts?

The National Water Initiative is a significant intergovernmental agreement that has resulted in greater recognition of the environment's need for water and the establishment of programs to secure that water. Through water markets it has enhanced the efficiency of the irrigation sector and assisted irrigators to manage the millennium drought and ever increasing competition for this finite resource.

However, the Initiative falls short of its objective of improving environmental outcomes by not acknowledging the value of integrated water management programs and the role of Regional NRM organisations in both managing environmental flows (where appropriate) and addressing land management impacts on water quality and aquatic/riparian associated biodiversity. It needs to be recognised that Regional NRM organisations drive and support increased productivity across the country, not only in facilitating sustainable agricultural production but also the generation of ecosystem services (such as clean water, fresh air, productive soils, carbon sequestration, pollination services etc.). The link between land management and water outcomes needs to be explicit at the national level.

Regional NRM organisations have led the thinking and planning around climate change over the past 5-6 years through the development of NRM Plans for Climate Change across the country. These documents not only flag the impacts of a changing climate on the natural environment, but also provide opportunities to protect and increase sequestration in carbon-rich "Blue Carbon" coastal (mangrove and seagrass) and freshwater (wetlands) systems through good water management.

The Issues Paper flags the need for investment in long-term monitoring. Regional NRM organisations have also been very strong in this push to have long-term data and validated information to support evidence-based decision making to underpin adaptive management. There is also increasing scope for citizen science to play a very strong role here with mutual benefits around providing cost-effective data that may otherwise not be collected, as well as increasing the awareness and knowledge of communities who ultimately manage the land and water resources we are trying to influence.

Lastly, but by no means least, NWI has a strong role in facilitating and driving innovation in the water sector. Regional NRM organisations are again at the forefront with some of this work. One current example is the work associated with the development of 'virtual fencing' to protect waterway frontages being developed by Goulburn Broken and North East Catchment Management Authorities in Victoria, in conjunction with Murray Local Land Services in NSW, and a private company Agersens. This technology aims to accelerate the protection of riparian areas from livestock whilst providing farmers with stock management benefits across their properties.