

WENTWORTH GROUP

OF CONCERNED SCIENTISTS

**SUBMISSION TO THE PRODUCTIVITY COMMISSION
ON THE FUTURE OF
AUSTRALIA'S WATER REFORM**

APRIL 2017

Summary

Water is an environmental asset and an economic enabler. In recent decades, Australia has been widely regarded as the international leader in water management. Largely as a result of the reforms introduced through the 2004 National Water Initiative, water is now used more efficiently in both urban and rural settings: finances of water agencies have improved; some of the over-allocation of surface and groundwater systems has been addressed; a market has been introduced that gives water users much greater choice; institutional structures are being made more transparent; and water law is more comprehensive and consistent in most jurisdictions. Most importantly, the 2004 National Water Initiative provided a nationally consistent framework within which industry and governments had certainty for investment.

In the past two years Australian water reform has lost momentum and, in some jurisdictions, even appears to be in retreat at a time when the World Economic Forum has identified water as one of five global issues.¹ It appears that our Australian governments are walking away from strategic water reform at the very time when we should be preparing for the next inevitable drought. The Wentworth Group believes that we urgently need to reinvigorate the reform effort in order to tackle issues that remain unresolved as well as emerging water challenges. Water reform, and the socio-economic adjustment it entails, must be seen as a long-term endeavor, rather than a one-off effort.

Securing a healthy, resilient and prosperous future in our highly variable climate will require the next generation intellectual framework for managing water. Complacency or backsliding in national water reform will lead to long term detrimental economic, environmental and social outcomes for all Australians.

Loss of Direction

The 1994 Council of Australian Governments water reform framework made considerable progress, albeit in specific areas, towards the improved management of Australia's water resources. Ten years later, recognising that aquatic environments continued to deteriorate and that water needed to be used more efficiently, governments agreed to broader and more detailed reforms. The 2004 National Water Initiative was driven by *'a recognition of the continuing national imperative to increase productivity and efficiency of Australia's water use, the need to service rural and urban communities, and to ensure the health of river and groundwater systems by establishing clear pathways to return all systems to environmentally sustainable levels of extraction.'*

The National Water Initiative is now 13 years old. There are a number of signs that indicate we are departing from the leadership of the last few decades:

- The National Water Commission, established to lead the 2004 reforms, was abolished in 2014. It was central to guiding the reforms. In its absence, there is no single, independent entity responsible for undertaking those specialist tasks that were defined for the National Water Commission: auditing progress on the national reform agenda, auditing the outcomes of the Murray-Darling Basin Plan, advising the Council of Australian Governments on further opportunities for improvement, and the critical roles of funding for new knowledge on water management and assisting state governments to implement

¹ See Global Risks 2014, Ninth Edition published by the World Economic Forum. Water has featured in the top five risks for impact and likelihood since 2012.

reforms. Some of these functions have been distributed across organisations such as the Productivity Commission and government departments.

- The Council of Australian Governments Standing Council on Environment and Water, the peak body for coordinated government action on water reform, has been abolished without replacement. We should always remember that the great federation debates of the 19th century revolved in part around water issues; requiring compromise and agreements that forced state and federal governments to cooperate in perpetuity. A recent crisis resulted in one aspect of water reform to be included on COAG's agenda - the implementation of the Murray-Darling Basin Plan, but this is no substitute for the responsibilities of the former Standing Council.
- Programs to recover water in over-allocated systems have stalled (e.g. recovery of 3200GL under the Murray-Darling Basin Plan) or have ceased (e.g. Great Artesian Basin Sustainability Initiative). In addition, water has been allocated to mining projects without appropriate assessment of impacts to the long term availability of water resources (e.g. Adani Carmichael coal mine).
- Funding to improve our knowledge for decision-making on water related issues has been progressively reduced over the past 5 years. For example, the Sustainable Rivers Audit of river health in the Murray-Darling Basin was discontinued after 2012 without suitable replacement. This will leave us ill-equipped and without the information required to implement water reform.

The Next Generation of Water Reform

Past successes place Australian in an enviable position to undertake the next round of water reform. We know what makes reforms successful. First, all governments – state and federal – must commit strongly to consistent, national principles and actions with measurable outcomes. Secondly, we know that an independent oversight and auditing body with adequate resources and skilled staff is essential for guiding the reforms and overseeing progress. Thirdly, financial inducements or penalties and regular, public, independent assessments of progress are the two most effective methods for making sure governments meet their commitments.² Lastly, we know that investment in new knowledge pays off; it provides the targeted information needed to guide our decisions in addressing the old and new challenges. Cross-disciplinary understanding that bridges environmental science, economics and social science is critical for implementation of water reform.

Completing the National Water Initiative

While the National Water Initiative has achieved some remarkable successes, there are some tasks that have proved difficult to complete. The next generation of reforms must tackle these difficult issues if we are to achieve all the outcomes envisaged in the National Water Initiative and ensure the survival of those already achieved:

1. Water plans are now in place for most of settled Australia. However, many of these plans are weak in describing how extreme events will be handled, especially as a result of climate change, in describing the trade-offs that have been made between environmental, social and economic objectives, and in protecting environmental flow from extraction.

²We note that Independent audit group reports on Murray-Darling Basin Cap implementation have not been published since 2011-12.

2. The maturation of water markets in the Murray-Darling Basin is one of the success stories of the National Water Initiative reforms. But markets need to be improved and expanded. Cross-jurisdictional trading needs to be freed up; there should be improved access to information; and regulations should be introduced to protect the integrity of business practices. Water markets could be introduced for groundwater systems approaching or at full allocation, although the complexity and interconnected nature of some surface and groundwater systems will require a very high level of hydrogeological knowledge.
3. The National Water Initiative placed considerable emphasis on improving the management of groundwater, especially incorporating the connectivity between some surface and groundwater systems and in the protection of groundwater-dependent ecosystems. Even so, integrated management of connected systems is still the exception rather than the norm. More needs to be done to plan and manage surface and groundwater jointly, including investment in better understanding the connectivity of these systems. This would also include the management of risks to the environment and other users in the long term, knowing that groundwater in Australia can be very ancient in age and therefore easily depleted.
4. Restoring over-allocated surface and groundwater systems was a core commitment in the National Water Initiative. Water plans have now been put in place to recover water for the environment in some over-allocated systems, most notably in the Murray-Darling Basin. However, these plans need to be completed in full, and more needs to be done by state governments to identify all over-allocated systems, prioritising areas where aquatic environments remain under threat from water extraction and the interception of surface and groundwater movement by development.
5. While the Commonwealth Environmental Water Holder has made progress acquiring and planning the use of Commonwealth environmental water in the Murray-Darling Basin, in other parts of Australia the roles, responsibilities and accountability for environmental water management is unclear. Coordinated monitoring of the consequences of environmental watering between state and Commonwealth governments is also weak, limiting the success of an adaptive management approach to use of environmental water and transparency of its sale to other water users.
6. The National Water Initiative pricing principles for urban and rural water service providers should be pursued, including recovery of capital expenditure on water supply and wastewater treatment. This is essential if water is to be used efficiently, and if water providers are to make cost-effective investment decisions. Pricing water at its true value including the cost of environmental externalities is an ongoing challenge for reform.
7. Because of the National Water Initiative, there is now greater recognition of indigenous cultural values in water planning and engagement with indigenous communities. Nevertheless, many water plans still do not include indigenous cultural aspirations.

Emergent Challenges

It is important for our next generation of water reform in Australia to also address new issues that were either not included in the National Water Initiative or have arisen since 2004.

1. The impact of a changing climate is barely mentioned in the 2004 National Water Initiative agreement yet it will have a major impact on both availability of water and the demand for water in southern Australia. While climate change is not a new issue, it is becoming increasingly clear that the likely impacts of climate change on water

management now needs to be brought to the forefront of future water planning and water use decisions, allocation rules, investment decisions and adaptation options. Guiding principles regarding sharing a shrinking resource amongst legitimate uses are yet to be developed. The Wentworth Group has commissioned a report on the potential impact of climate change on water resources of the Murray-Darling Basin highlighting concerns over the future availability of water for a range of uses in the new climate era.

2. The mining and petroleum industries, carbon sequestration methods and all energy generators must sit within new national water reforms so that water is consistently managed across all sectors. Exemptions granted in the 2004 National Water Initiative, particularly for the mining and petroleum sectors, depart from principles underlying the national framework and compromise the ability to address cumulative impacts of water extraction, placing entire groundwater and interconnected surface water systems at risk.³
3. Northern Australia has been identified as a region of potential for the large-scale development of water resources for agriculture and industry. While the National Water Initiative already applies in principle to development in the north, the reality is that neither the Northern Territory nor the Western Australian governments have yet passed legislation to implement the 2004 reforms. As a consequence, new water resource developments in these jurisdictions would not necessarily be based on agreed national principles. In addition, the White Paper on Developing Northern Australia and the Agricultural Competitiveness White Paper released by the Australian Government in 2015, along with a \$500 million fund for water infrastructure, is, in many respects inconsistent with the National Water Initiative.
4. Earlier reforms were focussed on improved planning and management of water flows. However, Australia faces a number of water quality issues including salinity, eutrophication, exotic weed and pest species, turbidity and sedimentation, as well as pollution in both rural and urban areas. Most of these water quality issues originate within water catchments (e.g. from land management practices) and so cannot be managed just within rivers. The next generation of reforms need to incorporate principles for land management to help control water quality issues.
5. Urban water was largely neglected in the National Water Initiative Agreement, even though 89% of Australians live in urban areas. Although there have been subsequent attempts to improve urban water management, a number of serious problems remain including: ageing infrastructure; difficulties for some smaller regional water authorities to meet increasing public health standards; social and environmental amenity expectations; unclear institutional responsibilities; and a lack of meaningful benchmarking and performance reviews. A review and update of the National Urban Water Planning Principles should be undertaken and include a framework for ecologically sustainable urban water planning that assists transparent multi-criteria decision-making when planning options for future water supply augmentation.

What's needed now?

³ Without a complete understanding of cumulative impacts, groundwater aquifer depressurisation from the fracking activities of multiple coal and coal seam gas developments in NSW and QLD jeopardise water yields and quality for future generations.

There needs to be a fresh commitment to protect the advances on the 1994 and 2004 reforms, to complete the unfinished reforms embedded in the 2004 National Water Initiative, and to tackle the new issues facing Australian water management.

The steps are:

1. All governments to commit to a reinvigorated National Water Initiative Agreement with a focus on completing unfinished tasks and incorporating responses to emerging water resource issues, with a priority on:
 - Moving towards recovering the full cost of surface and groundwaters in pricing that includes the scarcity value of water and cost of environmental externalities.
 - Reforming the urban water sector by improving investment decisions, increasing the independence of urban water utilities, streamlining water regulations, and incorporating environmental externalities in investments and pricing.
 - Increased attention to groundwater management including better integration with surface water management.
 - Identifying all over-allocated systems, providing adequate environmental water for their recovery, and ensuring this water reaches intended targets such as floodplains and the end of systems (e.g. estuaries, nearshore waters, terminal wetlands).
 - Extending water markets to heavily used groundwater areas approaching full allocation.
 - Incorporating all mining and petroleum activities, energy generation and carbon sequestration and other land management practices into water planning.
 - Explicitly incorporating climate change projections in all water planning, allocation rules and investment decisions.
2. Institute an independent organisation with sufficient skills and funding to drive the remaining reforms, including the authority to recommend financial sanctions for unsatisfactory performance and to publish regular, fearless reports of progress.
3. Combine water (flow) reforms with water quality and associated land management objectives, so that all causes of ecological threat are dealt with in an integrated way. This includes restricting approval and funding of environmental works and measures which carry adverse risks to the environment.
4. Invest in new knowledge so that water planning and management can be based on a factual understanding of the consequences of decisions. Our failure to invest in water reform now will result in the loss of a great opportunity to market our skills and knowledge internationally as other countries face their water issues.

Australia already has one of the most variable climates in the world and will almost certainly become even more variable as a result of climate change. The 2004 reforms provided the tools by which we managed the subsequent Millennium drought. Australian governments need to show a renewed leadership in taking the long view and prepare the country for this new climate regime by recommitting to water reform through a new, broader national agreement.