AUSTRALIAN WATER ASSOCIATION

Submission to Productivity Commission National Water Initiative Inquiry

Prepared by the Australian Water Association to the Productivity Commission

4 September 2020

Executive Summary

Australia's water sector warrants national policy attention. It is a sector that provides essential services to almost all Australians, delivers a vital input to agriculture, businesses across the industrial and services sector, and is playing an increasing role in enhancing the liveability of our urban communities and circular economy.

The efficiency and quality of its services can impact the national economy, the productivity of cities and the health and wellbeing of all Australians. This has been evident in recent times as Australia has responded to bushfires, drought and the COVID-19 pandemic, where national coordination between all levels of government has been part of the response and recovery efforts.

The Australian economy and water sector have seen significant gains from over two decades of nationally coordinated water reforms. However, as stated in the Australian Water Association's (AWA's) 2017 submission to the National Water Initiative (NWI) review, water reform principles had not been fully embedded in government processes and there is evidence of backsliding on previously delivered reform outcomes. The risk of water reform benefits not being sustained in the long term has been magnified since the 2017 review, given the additional challenges posed by extremes in drought, fire, flood and the COVID-19 pandemic.

The future of Australia's water reform journey is now at a critical junction after decades of positive gains under Australia's nationally coordinated water reform agenda. The AWA is pleased to be coordinating a submission on behalf of our members into the Productivity Commission's review of the NWI. To do this, the AWA has undertaken a multi-phased industry-wide consultation process with its members which has highlighted the need for further nationally coordinated water reforms in six key themes:

1. **Urban water**
2. **Rural water**
3. **Groundwater management**
4. **Community engagement in water management and planning**
5. **Research and development**
6. **National reform agenda**

These themes are a synthesis of the views of water professionals from utilities, government, design and planning, research and academia, manufacturing, energy, mining and agriculture and indigenous representatives. There are clear benefits to be delivered through each theme from greater levels of national collaboration and consistency.

The successful national reforms typically involve leadership, coordination and facilitation and we call on Australia's national, state and territory governments to work together to deliver better outcomes for constituents as well as the national economy. As successful reforms have shown in the past, this has required an independent and statutory reform agency to provide the leadership, coordination and facilitation between jurisdictions.

The following functions are important characteristics of a national reform agency:

a. Independent, statutory based and resourced.

b. Provide national leadership and direction to oversee a revised NWI, assess progress and shine a spotlight on reform deficiencies.

c. Facilitate inter-jurisdictional collaboration in the development of nationally consistent regulatory frameworks, guidelines and governance arrangements.

d. Coordinate knowledge sharing across Australia's water sector in overcoming barriers to reform.

Contents

1 Introduction to the Australian Water Association

1.1 Who we are

The Australian Water Association (AWA) is Australia's largest water network inspiring and driving a sustainable water future. We provide individuals with career enrichment and organisations with business development opportunities as we share information and knowledge, connect members with industry and stakeholders, and inspire a sustainable water future. Through our extensive range of technical seminars, courses and conferences, we also provide a forum for debate and best practice dissemination at a state, national and international level.

The AWA is committed to building Australia's water capabilities to maintain its position as a world leader in water management. The AWA is a key gateway to international collaboration and networking in water and is delivering a range of initiatives to showcase Australia's water reform journey and create opportunities for the Australian water sector.

1.2 Our members

AWA's members cover every facet of the water sector including professionals and practitioners working in utilities, government agencies, engineering, urban design and planning, science, research, academia, energy, resources, manufacturing, mining and agriculture.

2 Overview of submission to the 2017 National Water Initiative review

The AWA provided a submission to the Productivity Commission's Draft Report in 2017.

The submission highlighted the significant progress Australia had made through nationally coordinated water reforms since the 1994 National Competitional Policy and under the National Water Initiative (NWI) and noted evidence of slow progress or backsliding against agreed NWI commitments since the National Water Commission's previous review in 2014.

The AWA's recommendations included:

2.1 Rural water reform

a. Moving towards a national water market for water that avoids the variants and inconsistencies of the current local markets that are driven by contrasting value drivers

b. The prevention of unwarranted market interventions by the Commonwealth Environmental Water Holder

c. Timely and transparent price registers and settlement processes

d. Recognising water as a tangible asset

e. The role of a national water authority as national water trading regulator

2.2 Urban water reform

a. Efficient and effective service delivery

b. Aligning institutions and regulatory frameworks to reduce costs, both in the management of regulation itself but also to encourage productivity and innovation in the sector

c. Access to capital and private sector investment to service expanding populations, especially growth areas on the fringe of cities and in developing regional centres

d. A customer focused sector, an engaged community through giving a greater voice to customers through customer choice in pricing and service delivery

e. Enabling regional and remote communities to have access to safe, secure, reliable and healthy water

2.3 National water agency

The AWA also recommended that a national water authority be established to implement and manage a national water plan approved by the Council of Australian Governments (COAG) to provide water security and sustainable water management.

3 Approach to preparing this submission

The AWA has compiled this submission following an industry-wide member engagement process involving the following steps:

a. A survey sent to all members to gain their response to each of the 41 questions raised in the Productivity Commission's issues paper.

b. Development of a discussion paper that included draft submission themes synthesised from the survey responses.

c. Delivery of the first member consultation meeting on Friday, 3 July to present and discuss each of the draft themes and receive feedback during polls and breakout sessions

d. Revision of themes and development of draft submission.

e. Delivery of the second member consultation meeting on Tuesday, 11 August to present the draft submission and receive feedback during polls and breakout sessions.

f. Revise submission and member follow up.

g. Submission delivered to the Productivity Commission.

3.1 Survey form responses

53 responses were received and collated by the AWA to inform the development of draft themes. The breakdown of survey responders and their views on NWI progress are shown in Figure 1, 2 and 3.

Breakdown of survey respondees

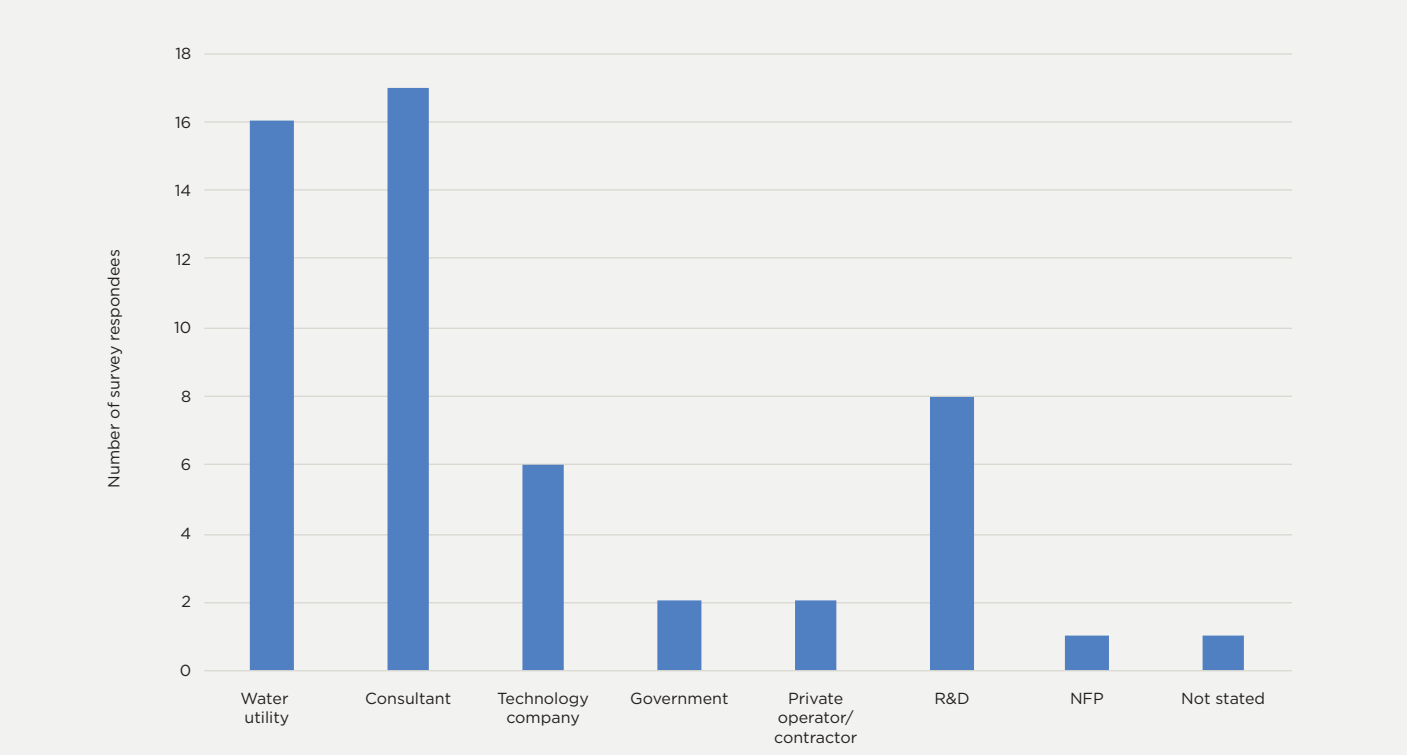

Figure 1: Breakdown of survey responses by AWA member demographics

Of the following elements of the NWI, which do you think have been slow to progress?

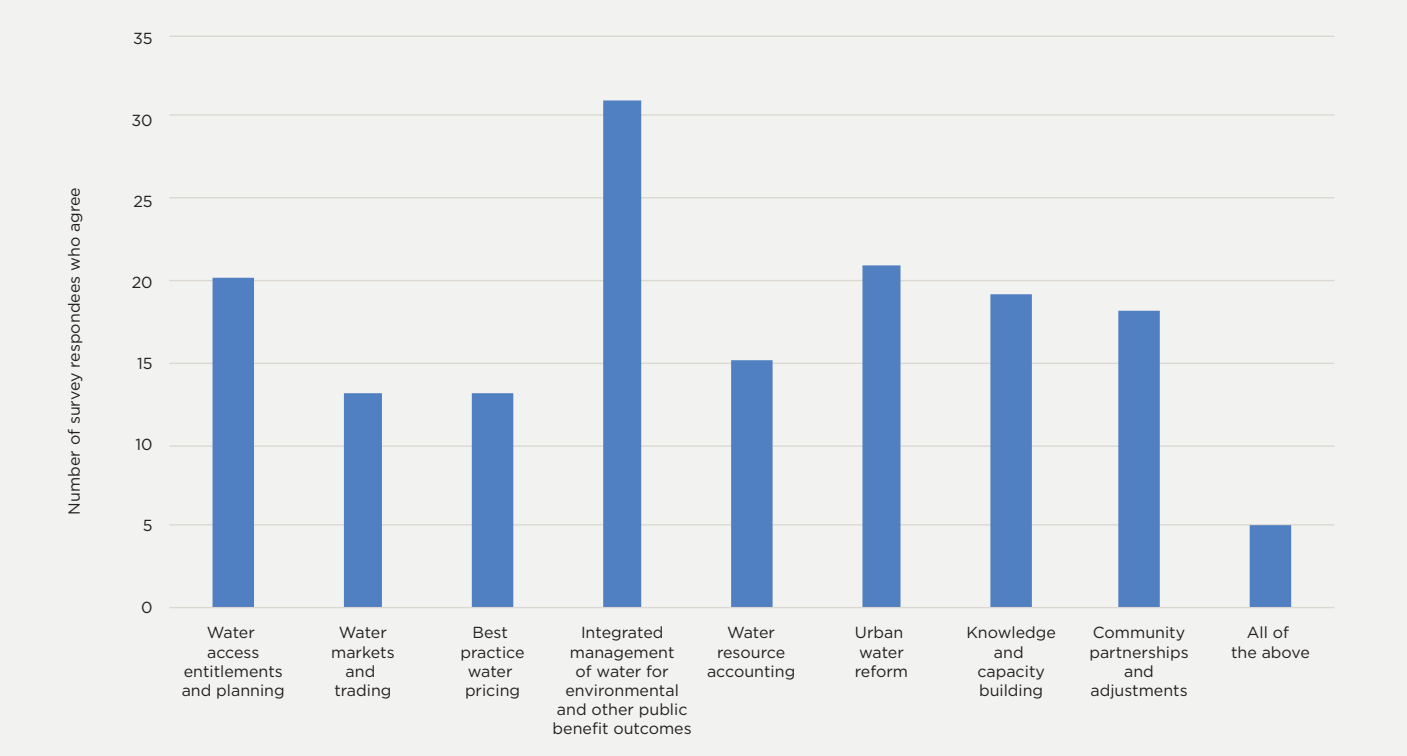

Figure 2: Summary of AWA member responses to progress of individual NWI element

Do you agree that states and territories are achieving the agreed objectives and outcomes of the NWI agreement?

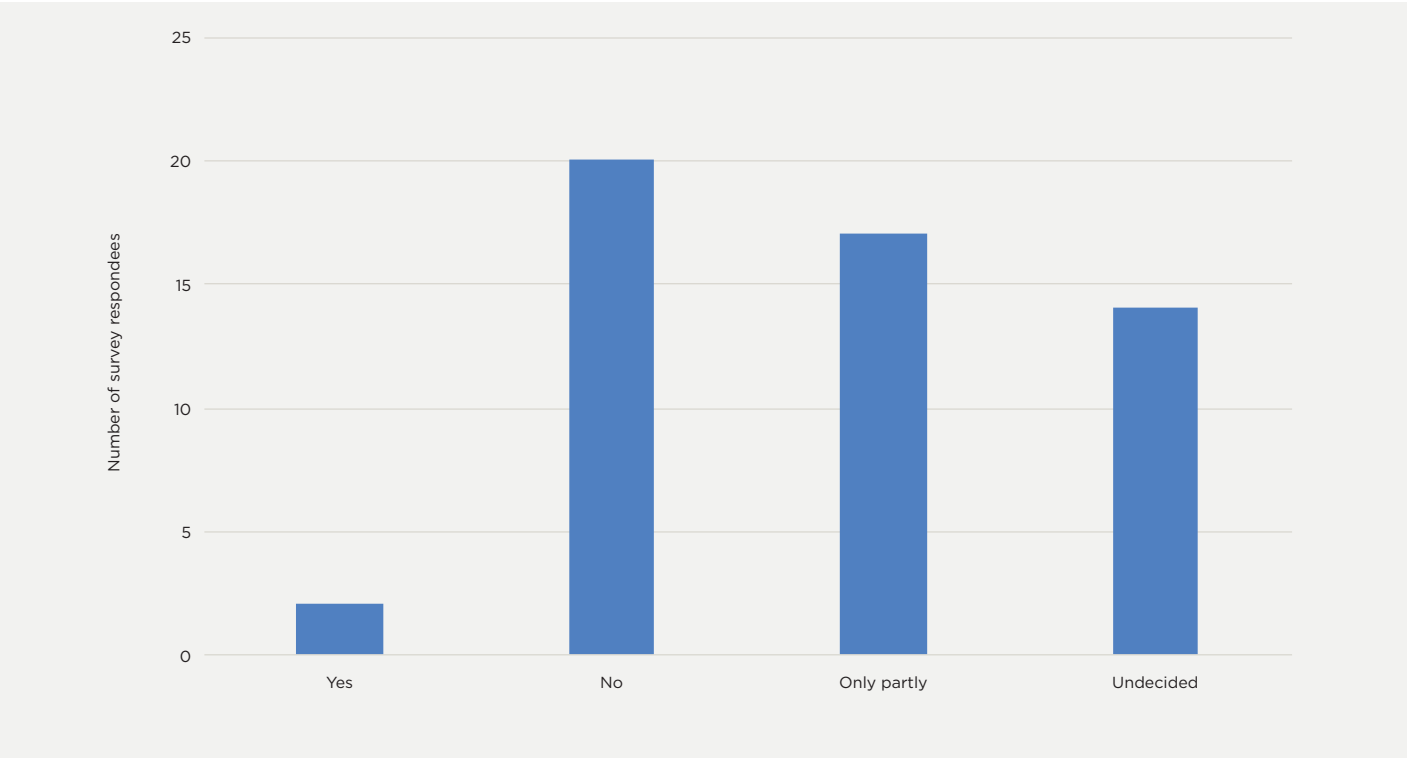

Figure 3: Summary of AWA member responses to progress of NWI

3.2 Discussion paper

The AWA circulated a discussion paper to members that summarised the key themes synthesised from the survey. The discussion paper was the focus of the first consultation session.

The themes are summarised in Section 3.4.

3.3 First member consultation meeting

During the first virtual consultation meeting, attended by 60 members virtually, participants were asked to participate in a live poll to rate the importance of each theme and corresponding sub-theme in the context of national water reform. The results are provided in Appendix A. In summary, attendees rated the following themes as most important (in no particular order):

- Enabling a diversity of water supply sources (47% rated as most important).
- Greater resilience built into urban water supply systems (50% rated as most important).
- Transparent regulation, compliance and enforcement of rural water markets (78% rated as most important).
- Adaptive response to stresses like climate change and governance failures (70% rated as most important).
- Investment in technology to monitor and understand water availability (67% rated as most important).
- Strengthened groundwater management especially surface-groundwater interactions (58% rated as most important).
- Need for objectives or outcomes related to Indigenous access to water (52% rated as most important).
- Improved national coordination of research and development (42% rated as most important).
- National leadership and direction to undertake water reform (70% rated as most important).
- National collaboration and consistency to undertake water reform (55% rated as most important).

3.4 Development of priority themes for inclusion in the draft submission

In response to the feedback provided by members, the following themes were developed:

Urban water

1. Diversity of alternative water supply sources
2. Greater resilience built into urban water supply systems
3. Nationally consistent regulations for water service and quality standards
4. Sustainability principles embedded into new water infrastructure
5. National coordination and collaboration of regulation to enhance efficiencies and drive innovation
6. Collaborative models to assist regional and remote utilities
7. Stronger partnerships with other sectors
8. Institutional alignment across urban water cycle

Rural water

1. Transparent regulation, compliance and enforcement of rural water markets
2. Investment in technology to monitor and understand water availability
3. Adaptive response to stresses from climate change
4. Strengthening of statutory planning and water access entitlement frameworks

Groundwater management

1. Accounting and monitoring of groundwater and surface water interactions
2. Enabling sustainable extraction of groundwater

Community engagement in water management and planning

1. Integration of community-based adaptation into governance arrangements
2. Indigenous engagement in water management and planning

A focus on research and development reform

1. Economic and public benefits of sustained research and development investments
2. Training and investment in skills to retain water industry talent

National reform agenda

1. A reinvigorated and refreshed NWI that encapsulates new and emerging risks
2. Creation of a national reform body to oversee the NWI, with three main functions:
   a. National leadership and direction
   b. National collaboration and consistency
   c. National facilitation of research and development and knowledge sharing

3.5 Second member consultation meeting

These themes were presented during the second member consultation meeting (attended by over 100 members virtually) where members were polled on their comfort with the draft themes (Figure 4). Breakout groups were facilitated for focused discussion on each theme. Outcomes from these discussions were recorded and captured in the final themes in Section 4.

Please indicate if you are comfortable for the AWA to continue to build the submission around these themes.

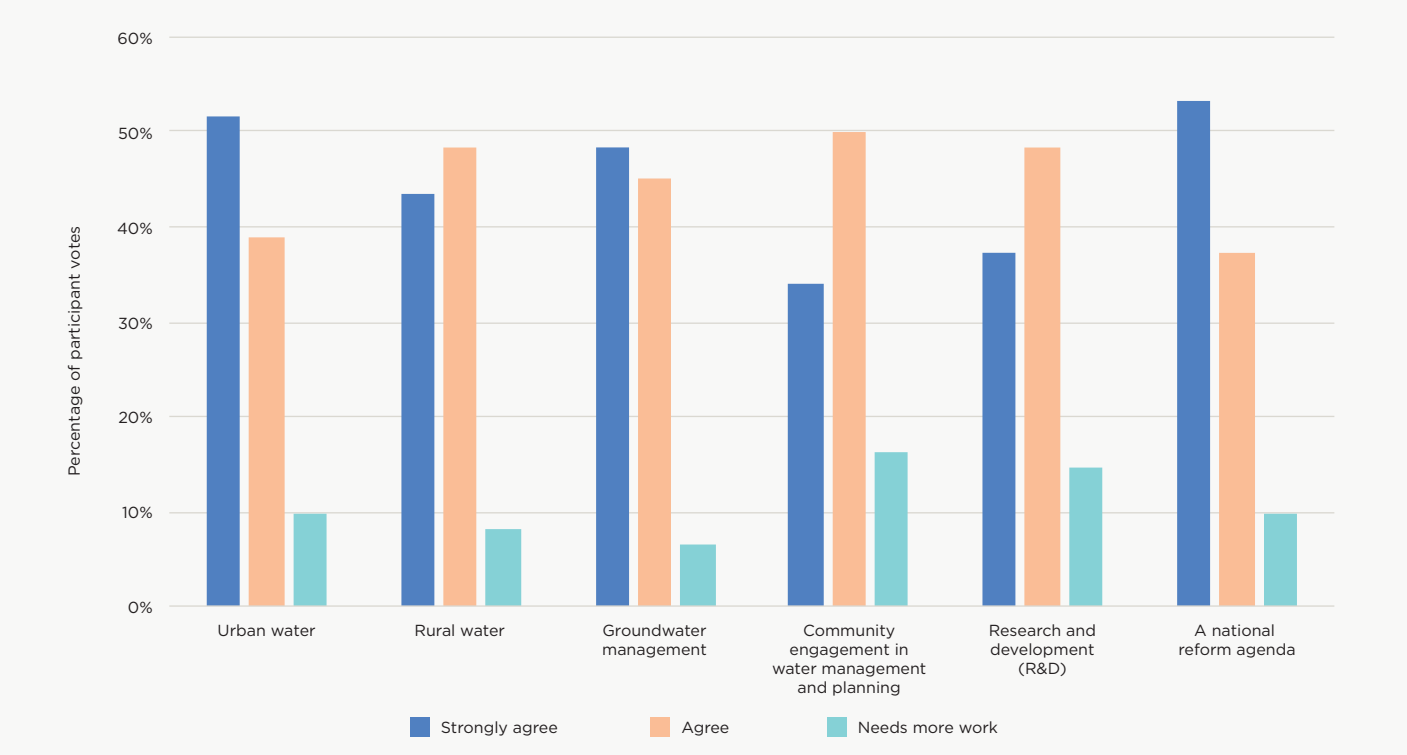

Figure 4: Summary of AWA member poll to on submission themes

4 Overview of submission themes

4.1 Urban water

Diversity of alternative water supply sources and demand management methods

To establish reliable water security standards at the lowest expected cost across all urban water utilities, a diversity of supply and demand options is required with all options being on the table. The development of additional centralised and/or decentralised water supply options is warranted, including recycled water, desalination, rainwater tanks, stormwater harvesting and water wastage programs, where appropriate.

To capture the full potential of supply-demand diversification, leadership is required by governments and water sector decision makers. AWA supports of the use of alternative water supply options throughout Australia, subject to four conditions:

a. Prior cost/benefit and risk analyses are conducted which take full account of social and environmental externalities and avoided costs.

b. The best available science is utilised.

c. The project is subject to best practice regulatory arrangements (based on available Australian Guidelines).

d. The community participates in decisions to introduce new water supply or demand management schemes and that subsequent management arrangements are transparent and accountable.

Greater investment in urban water supply system resilience

There is a need for increased investment for adaptive planning in the face of increased risks caused by greater extremes in drought, flood, fire and now the COVID-19 pandemic. Greater resilience needs to be built into urban water supply systems including the proactive management of water networks through replacement of ageing infrastructure, reducing water wastage and ensuring coastal water assets are resilient to sea level rises.

Establishing a recognised framework for addressing urban water system resilience will be important for mitigating both short-term water supply disruptions and long-term droughts in the future. There is a need for consistent emergency response and incident management procedures across jurisdictions that enables a flexible response to different scenarios including withstanding bush fires and pandemics.

Sustainability principles embedded within blue and green infrastructure

New ways of delivering water and supplying stormwater and wastewater services are required and integrating these solutions to provide multiple benefits is essential. Sustainability principles should be embedded into the way water and wastewater services are delivered and planned (with a strong emphasis on water quality) and consistently applied across urban planning and land-use planning frameworks. The focus should be on improving integrated management of water for environmental and public health benefit outcomes, including the use of green space to enhance liveability.

Urban planning and regulatory arrangements are generally not structured to enable a balanced assessment of the costs and benefits of decentralised approaches against more traditional centralised infrastructure solutions. Urban planning processes should develop mechanisms to ensure decision makers can see, and have regard to, the full costs and benefits of all options that best support liveability objectives. Governments should review the structures in place to manage the interaction between water planning decisions and urban planning processes with a view to ensuring that, wherever possible, across those interfaces, the full costs and benefits of major decisions are considered in the context of sustainability principles.

Collaborative partnerships to enable integrated water management and urban liveability

There is a need to build stronger partnerships across other sectors i.e. urban planning, catchment management, energy and transport as well as between industry and government to enable integrated water management and urban liveability outcomes.

Mechanisms for encouraging effective engagement across the 'interfaces' between different aspects of water cycle management and with the wider urban planning system are required so that decisions makers understand the full costs and benefits of their decisions (particularly if they do not bear those costs or capture those benefits).

The water sector needs to partner with other stakeholders in the development of water-sensitive cities and have a seat at the planning table to contribute to liveable cities more effectively.

Nationally consistent regulations for water service and quality standards

Water service standards should be national and regulated consistently across jurisdictions. Regulatory arrangements must provide community confidence that service standards are being met and that public health and the environment are protected across service providers who are public/private and urban/regional/remote. This includes coordination of national

planning standards and infrastructure standards to mandate minimum standards of architecture, urban land use, liveability and environmental outcomes.

Harmonising the legislation between jurisdictions so that the features of the regulatory system are consistent will ensure that what works well in one state is picked up by the other states. There is a need to develop outcomes-based economic, environmental and health regulatory frameworks that are agile and responsive to change as these will facilitate greater innovation within each jurisdiction.

Strengthening of regional and remote service providers

In considering the challenges to regional and remote water and wastewater service providers, the following characteristics have been expressed as important:

a. Water service and quality standards in regional and remote communities should be consistent with national health standards.

b. Cross-subsidies, where necessary, should be transparent, explicit and regularly reviewed.

c. Regional collaborative models are likely to continue to play a role in assisting smaller entities to address skills and procurement challenges however should not be a substitute for institutional reform where such reforms could deliver more economically efficient outcomes.

d. Transparent and independent monitoring of the economic, quality, and health performance of all water businesses (including under 10,000 connections).

4.2 Rural water

Transparent monitoring, regulation, compliance and enforcement

Efforts to introduce real-time metering and measuring of the amount of water available and extracted across the Murray-Darling Basin has been slow and uneven. Therefore, transparent monitoring, regulation, compliance, and enforcement is needed.

This includes the need for nationally accessible registers of water entitlements, water allocations and water use. Opportunities for trade should exist where there are benefits to both rural and urban sectors and where they could improve economic efficiency by allowing water to be transferred to its highest value use.

Governments should consider any potential negative impacts of trade for regional communities on a case-by-case basis and to ensure appropriate balance between economic value and environmental value of water to enhance any community benefits. This includes a need for stronger or more consistent market (or accountability) regulation to overcome community concerns regarding the current water market system.

Investment in technology to monitor and understand water availability and demand

There is a need to invest in advanced technology for understanding, predicting and monitoring water in the changing Australian landscape, and growing evidence on which water reform can be based. Remote sensing techniques and other technologies exist that can be used to measure changes in water resources, and we need to exploit the available information. This can inform monitoring for active management of river systems and provide information relevant to water compliance issues. Improved technology will also help to identify and monitor water quality and strengthen environmental water management to avoid future concerns (e.g. fish kills and algal blooms).

Adaptive responses to stresses from climate change

Adaptive responses are required to manage water resources for water supplies, the environment and the economy when facing external stresses, including prolonged and more intense drought conditions. Responses can include innovative use and management of stormwater through recharging into the aquifer systems to support high priority users during times of need. An ongoing review of drought triggers is also required to support timely decision making and ensure that different climate extreme scenarios can be tested using the best available data prior to decisions being made.

Strengthening of statutory planning and water access entitlement frameworks

Strengthening of frameworks is required to ensure that the best environmental outcomes can be achieved by water resource managers. The frameworks should prescribe the tools required to support decision making that maintains the health of ecosystems including floodplains. All frameworks and legislation should adopt consistent terminology that allows for clear following of NWI principles.

4.3 Groundwater management

Accounting and monitoring of groundwater and surface water interactions

The management and accounting of groundwater and surface water resources are not well detailed within individual jurisdiction frameworks. There is a need for a system that allows for proper accounting of return flows and transfer of water volumes between different sources. Clearer details on groundwater provisions, allocations, entitlements and carryover is required also. Groundwater levels have been declining in many areas and therefore a set of prescriptive guidelines and regulations are required to enable proper accountability of usage. Greater detail is required from licence holders to demonstrate how they are using groundwater and whether they are extracting groundwater in a sustainable manner.

Enabling sustainable extraction of groundwater through managed aquifer recharge

There is a need to link the potential for managed aquifer recharge and extraction to existing groundwater frameworks and to ensure that managed aquifer recharge is considered in individual water management plans. To build on Australia's groundwater resource availability, further investigations are required into how existing entitlement and licensing frameworks can be modified to facilitate (ground)water banking sustainably. Through implementing water banking systems, groundwater can be recharged within individual aquifers during inter-drought years to enhance water supply security.

4.4 Community engagement in water management and planning

Integration of community-based adaptation into governance arrangements

There is a need to integrate bottom-up and community-based adaptation, including from Indigenous communities, into improved water governance arrangements. Incorporating community inputs into water governance arrangements and enhancing the level of communications with community representatives will provide the community with greater confidence in the sustainable management of water resources. These arrangements need to consider stronger communications and near real-time reporting of information to community members to enhance their level of trust.

Strengthened water literacy and education to build community awareness around water

A greater focus is required to build awareness of water efficiency and to understand customer expectations related to supply and demand, water security, resilience and reliability. National community education programs should be considered, including in schools (linked to the curriculum), to reinforce positive water usage behaviours and drive behavioural change as to how the community values and uses water as well as how water is managed sustainably.

Indigenous engagement in water management and planning

There is a need to implement a First People's Water Council to allow for real engagement in water planning over an extended period across each jurisdiction. There is a need for objectives or outcomes related to Indigenous access to water and greater Indigenous engagement on sustainable water management. There has been no material increase in water allocation for Indigenous Peoples and their engagement in water planning over the past decade. All surface water and ground water plans need to address environmental flows and cultural entitlements within their allocations.

4.5 Research and development

Agreed and sustainable investment in research and development to deliver economic and public benefits

There is a need for sustained investment in research and development (R&D) in multi-disciplinary areas of the water sector (policy, governance, social science, urban planning, rural development, water resources, health science, agriculture development and community engagement) to support greater innovation and efficiencies as well as adaptive responses to prevailing and emerging stresses (i.e. climate change, pandemic etc).

An ongoing focus on research and the application of a wide range of technologies based on supply and demand is required to maintain the costs of blue and green infrastructure at a sustainable level. This will include further research into the water-energy-food nexus which will support the water sector's contribution towards sustainable water management and long-term economic productivity. Research and development should also be managed independently to attract co-investment from other research providers, government and private sector and to share research outcomes that lead to enhanced economic benefits.

Need for continuous research and development 'pipeline' from knowledge generation to implementation

Previous research has focused on idea generation with an unclear plan for upscale or commercialisation of R&D knowledge outcomes. Future research programs should have a clear strategy for implementation to ensure that research is market ready. The pipeline is required to enable basic R&D within institutions to demonstration, application and then implementation of research with feedback provided from the end user through to the researcher. Institutions should be encouraged or incentivised to collaborate and communicate across different parts of the sector to enhance the relevance and uptake of research.

Investment in skills and transfer of knowledge to retain water industry talent

There is a need to strengthen industry investment in the development of water professionals to generate immediate employment opportunities and economic stimulus for local communities and businesses following the COVID-19 pandemic. This investment should include ongoing skills development, transfer of knowledge and training of water professionals including graduates and trainees, particularly in regional and rural areas, to enable them to deliver on the objectives of the NWI.

A national skills accreditation framework that builds on the existing Water Industry Operator Certification framework is required to ensure alignment and recognition of all water professional capabilities and identify industry competency gaps that can inform future industry skills investment. Future secondments of staff between organisations can help to transfer skills and knowledge across different parts of the sector.

4.6 National reform agenda

A reinvigorated and refreshed National Water Initiative that encapsulates new and emerging risks and opportunities

The NWI was developed in 2004 and its nationally coordinated water reforms have delivered substantive gains to the Australian economy and environment. However, since the abolishment of the National Water Commission in 2014, there has been backsliding on previously delivered reform outcomes. The risk of water reform benefits not being sustained in the long term has been magnified since 2014, given the additional challenges posed by new extreme events (drought, fire and flood) and the COVID-19 pandemic.

The AWA calls on the Australian Government to take a renewed leadership role in water policy and provide a clear line of sight for state governments, industry, both public and private sectors, R&D institutions as well as the indigenous community to identify the opportunities for progress and continue the drive for effective and efficient reform under a nationally coordinated framework.

National reform agency to oversee water reform implementation

There are clear benefits to be delivered from greater levels of national collaboration and consistency in the delivery of water and wastewater services. As successful reforms have shown in the past, this has required an independent and statutory reform agency to provide the leadership, coordination and facilitation between jurisdictions.

The AWA calls on Australia's state and territory governments to work together to deliver better outcomes for their constituents as well as the national economy and considers the reformation of a national reform agency an important step in this journey. We have outlined what we consider important functions of such an agency in Table 1.

Table 1: Potential functions of national reform agency

National approach	Description	Output example
National leadership and direction	To oversee a revised NWI, assess progress and shine a spotlight on reform deficiencies.	Overarching blueprint for water reform Clear institutional and governance arrangements Efficient regulation Clear market structures Regional and remote water services
National collaboration and consistency	Inter-jurisdictional collaboration in the development of nationally consistent frameworks, guidelines and governance arrangements.	National Guidelines and Frameworks, such as: • Efficient economic regulation • Aligning health/environmental regulation • Clarifying market structures • Integrated planning frameworks • Utilities performance reporting • Consultation with Indigenous Australians
National facilitation and knowledge adoption	National facilitation and knowledge sharing across the urban sector on barriers to reform implementation.	National forums and R&D platforms, consolidating: • Skills and training • System validation • Asset management • Customer/community engagement • Operator certification • Efficient regulation • Financial valuation

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