

VicWater submission – National Water Reform Issues Paper

Thank you for the opportunity to respond to the *National Water Reform Issues Paper*. VicWater is the peak body of the Victorian water industry with its membership comprising Victoria's 19 statutory water corporations. They are responsible for the provision of urban water and wastewater services, rural water supply including irrigation and related drainage services.

The Productivity Commission (PC) (and its precursor) has had an active role in water reform for decades, as Australia's dominant water resource challenge has shifted from using existing resources more efficiently and effectively, and restoring environmental flows, to making significant investments to expand urban water supply in the face of population growth and threats such as climate change.

Throughout this time the PC has steadfastly advocated for reforms to institutional and water governance arrangements aimed at maximising net benefits to the community. These concepts and objective are irrefutable in principle, but as a basis for a new water reform program, they must be applied with caution. Caution is required in the sense that these institutional and governance reform principles reinforce a technocratic narrative for water resource management in the community. Such a narrative can have two undesirable outcomes: (1) suggesting a dichotomy of water management policies and (2) undermining the community's critical role in deliberating on fundamental matters such as service standards, risk appetite, financial sustainability and liveability outcomes.

Our submission proposes that an alternative 'community-values' narrative should be developed in the new NWI which recognises the complexity of the water challenges facing Australia and emphasises community's role in deciding the most fundamental aspects of the response. Institutional reform is one of several substantive policy instruments that drive implementation. Communities must be more deeply involved in setting the overall direction for water resource management, which subsequently influences the choice and adoption of such policy instruments. It is this contrast that is critical; the locus of the narrative being with the community gives rise to the policy setting and instrument choice, reversing the previous trend of a predefined governance mechanism with a controlled policy setting and attendant instrument path-dependency imposed on communities.

The 2004 NWI's role in the 1980-2010 water reform agenda

The NWI 2004 was the most prominent milestone during an era of significant national water reform. It consolidated the national policy agenda for water resource management, including on sustainable extraction limits, consumption-based pricing, property rights and the removal of barriers to trade. Despite its prominence, the 2004 NWI did not initiate a reform dialogue on any of these topics. In the words of the PC (2005) “reform initiatives in this area date back to the early 1980s” (p26).

In 2020 as in 2004, it is important to see the NWI in the context of the broader water reform picture, in 2004 it was National Competition Policy, The Living Murray Initiative, (and later) the Murray-Darling Basin Plan. Key policy reforms did not appear first in the NWI, but it played a critical role in shaping the community narrative for water policy challenges.

Likewise, the next iteration of the NWI should not strive to uncover a bold new policy initiative, all the technical elements are already broadly known. Instead, close attention must be paid to the opportunity afforded by NWI's prominent role of shaping the ongoing water reform community narrative.

NWI 2004 became the highest profile public face of water reform, the way it characterised the challenges and suitable responses (broadly speaking, the ‘community narrative’) was important. A striking feature of the narrative was strong technocratism. The objectives and key elements of NWI 2004 (clauses 23 and 24) are purposefully written as a list of technocratic prescriptions for “optimis(ing) economic, social and environmental outcomes” (pp3-4). Unsurprisingly, this encouraged a community narrative whereby challenges and responses were perceived in as dichotomy of ‘right’ and ‘wrong’ policies.

Wrong	Right
Mainly fixed-cost urban water charges	Greater consumption-based urban water charges
No water trade, unclear property rights	Water trade and clearer property rights
‘Unsustainable’ extraction limits	‘Sustainable’ extraction limits

In relation to water trade, consumption-based pricing and property rights, these technocratic prescriptions have stood the test of time. The technocratic theme also imbued the community narrative in regard to environmentally-sustainable extraction limits, but with less success.

At the time NWI 2004 was drafted, there was increasing evidence of environmental degradation in waterways and thus the NWI set an objective (p4) of the “complete the return of all currently overallocated

or overused systems to environmentally-sustainable levels of extraction". The lack of progress towards environmentally sustainable extraction limits in the immediate years post-NWI 2004 and the challenges encountered during the implementation of the Murray-Darling Basin (MDB) Plan will not be analysed at length here. Nevertheless, VicWater submits that a significant failure of those reforms, was the mischaracterisation of the challenge as purely technical.

The dominant technocratic community narrative for environmentally-sustainable extraction limits is evident in the CSIRO MDB Sustainable Yields Project. This was a very high-profile project at the time which aimed to reveal the technical environmentally-sustainable extraction limit in each valley of the MDB.

Such was the power of the technocratic narrative that, for many years, little consideration was given to alternative formulations of the challenge. The environmentally sustainable diversion limit was not formulated as a question of community values, trade-offs and an open discussion about what level of environmental conservation communities desire. It was formulated as a technical task with an answer to be found.

This point is not made to diminish the importance of factual rigour to inform our understanding of the water resource management challenges. The point is to understand there is no 'right' answer on the spectrum of environmental outcomes (from pristine to highly degraded) and that formulating that question as purely technocratic does not preclude values and assumptions from influencing the outcome. To devise an answer, decision-makers and experts will necessarily project their own values and assumptions, rather than making them transparent and open to community deliberation.

It is an interesting thought experiment to consider how the MDB reform process would have turned out if an alternative narrative had been created, one that emphasised that there is no right answer to 'environmentally sustainable diversion limit', instead the path forward should simply aim to combine factual scientific rigour with contemporary community values, recognising that both the scientific knowledge and community values may change over time.

A new narrative for the new NWI

The new NWI faces a similar but evolved context to 2004. Inter-jurisdictional challenges remain, there is an abundance of technical policy prescriptions (including from recent PC inquiries), there are new institutions (such as Infrastructure Australia), and there are lessons from the millennium drought and Basin Plan. In 2020, there is a pronounced awareness and greater industry focus on socially-oriented urban water challenges, in

particular those of liveability, climate change and regional population dynamics, rather than on the technical problems of irrigation and bulk environmental flows.

The 2017 PC inquiry report includes an extended discussion on approaches to manage scarcity or augment urban supplies in the future, including: desalination, potable reuse, expanding dams, water efficiency, water restrictions and higher unit water rates. The PC also correctly notes that “planning should be transparent and consultative [and that] trade-offs should be informed by meaningful customer engagement” (2017 p186). Yet there remains a risk that the new NWI merely updates the technocrats’ water policy paradigm for the new decade. A rehashed technocratic narrative on urban water policy settings risks repeating past mistakes.

The new NWI will have great effect if it enables and empowers a new community-values narrative for water reform. The urban water challenges (as with environmentally-sustainable diversion limits) should first and foremost be characterised as the materiality of community values, trade-offs and an open discussion about what service outcomes communities need and desire – not the institutions and predefined policy settings to drive implementation. Resilient decision-making requires communities to understand the water management risks and challenge so as to choose a collective destiny and a productive legacy.

Policy settings and institutions

The discussion paper reiterates the PC’s 2017 National Water Reform Inquiry recommendations to “significantly enhance other policy settings relating to: urban water management, environmental water management, (and) decision-making on building and supporting new infrastructure”. These recommendations to “enhance policy settings” must be unpacked. What decisions and outcomes do the “enhanced policy settings” favour?

The PC’s 2017 language on “enhanced policy settings” could be misapplied to favour the technocratic approach. Concepts such as “clearer roles and responsibilities”, “strengthened and streamlined institutional, governance and management arrangements” and “all options on the table” are irrefutable concepts in the abstract, but risk reproducing the shortcomings of the NWI 2004, if they are put to the service of seeking technocratic truths rather than transparency and community empowerment. “Streamlined arrangements” should not create an easy path for technocrats to decide the result, which necessarily involves projecting their own values and assumptions. Recent research reveals the pitfalls of such a technocratically biased decision-making arena¹.

¹ <https://pursuit.unimelb.edu.au/articles/water-management-yes-it-s-personal>

Naturally, the PC's 2017 Inquiry makes several statements in support of community and stakeholder engagement. Consultation was equally identified as important to achieving environmentally sustainable extraction levels in the NWI 2004 (action 95). What is proposed herein goes substantially beyond traditional stakeholder consultation on individual water planning decisions. Instead, it goes to the fundamental question of community empowerment to shape service standards in an uncertain future.

Responding to extreme events

The PC has observed that the decision to invest in desalination in Victoria during the millennium drought as “potentially unnecessary or ill-timed” (PC 2017, p183). It is easy to pass this judgement with the benefit of hindsight. Nevertheless, this conclusion is insightful regarding the lesson taken by the PC from the millennium drought vis-à-vis future water policy settings which may shape the new NWI. This lesson appears to be that better planning frameworks would have delivered a better result during the drought.

The PC's apparent interpretation is aligned with a technocratic analysis in which the investment in desalination was potentially unnecessary, but occurred due to shortcomings in the planning frameworks, and a better decision would have been made had superior planning frameworks been in place. It is implied that superior frameworks could have led to better planning for the eventuality of the millennium drought (presumably by taking a more conservative, risk-adverse approach), developed alternative responses, consulted on those (but necessarily ignored negative feedback about gold-plating and being too conservative), and had the optimal solutions ready for implementation by around 2006. In this formulation, superior planning frameworks would have overcome seemingly intractable trade-offs facing decision-makers at the time.

An alternative interpretation is that the post-hoc criticism of the decision to build the desalination plant is the inevitable result of a technocratic public narrative which had trained the community to always expect the ‘right’ water management decisions. Therefore, once the drought broke, the decision to build the desalination plant could be perceived as “unnecessary”, the *wrong* decision had been made, a result of *mismanagement* or *poor planning*². Subsequently, once the desalination plant began making a serious contribution to greater Melbourne's water supply, the post hoc critique was revised such that the decision was merely “ill-timed”.

² The politicisation of the Melbourne desalination plant decision in the lead up to the 2010 Victorian election and subsequent change of government led to a policy change with a supporting rhetoric that continued to reinforce a theme of “mismanagement”.

The lesson to draw from this alternative interpretation is that during extreme events, the technocratic narrative can come into conflict with reality. Even with the best planning frameworks, decisions cannot wait for everything relevant to be known. It is what Herbert Simon refers to as “satisficing” and is commonplace administrative behaviour. Establishing a risk appetite necessary involves subjective elements. A community-values narrative is more accommodating of these challenges (for example, that planning can never foresee all eventualities and some decisions cannot wait), it provides for more robust consultation about values and desired service standards prior to a crisis and, informed by a clearer understanding of community values, priorities and expectations, potentially better informed decision-making during the crisis.

Water security and resilience

The new NWI will be drafted during a period when the need to augment urban water supply is becoming increasingly urgent, and augmentation options increasingly costly. In 2017, PC noted that “bulk water augmentation decisions can be ... highly contentious” (p20), and made recommendations to improve planning frameworks with the objective of providing for less contentious augmentation decisions in the future.

It is argued above that the contentiousness associated with the decision to build the Victorian desalination plant arises from a technocratic narrative for that decision. Specifically, that the prevailing (mis)judgement on the likelihood and severity of extreme drought, was a planning failure. The key (but unspecified) assumption is that since the experience of the millennium drought, a clearer understanding of extreme events will provide for less contentious planning decisions in the future.

Planning frameworks, hydrological models and contingency plans have evolved immensely since the millennium drought, to be significantly more conservative than pre-2006. But a more conservative set of assumptions for the water planning framework do not substitute for greater transparency and community empowerment in relation to the trade-offs embedded in water planning decisions, particularly, those in relation to establishing a risk appetite.

The fundamental trade-off for water planning decisions is between system resilience and efficiency. The most efficient and cost-effective approaches have the least tolerance to disruption from unforeseen or extreme events. For example, travel restrictions and shutdowns caused by the COVID 19 pandemic have exposed limitations of just in time supply chains for some products.

It is proposed that the only way to make water augmentation decisions less contentious is to be completely transparent regarding the balance between higher water bills and the risk of water shortage. The assumption that imposing ever more conservative hydrological parameters on planning processes makes for less contentious decisions, should be avoided.

The new NWI has an opportunity to frame water augmentation decision along the lines of a community-values narrative that emphasises the fundamental trade-off between resilience and efficiency rather than merely being more transparent about the decisions that are being taken, or consulting on individual projects. Resilience is maximised by the ability to respond to changing circumstances, whilst reflecting a deep understanding of community preferences and appetite for risk.

Integrated water management

Integrated Water Management (IWM) was a significant theme of the PCs 2017 report, which noted the difficulties of measuring and valuing benefits and identifying funding arrangements for appropriate projects. Nevertheless, the 2017 report recommendations reflect the assumption that such a measurement and valuation of benefits (of on a per project scale) is practicable and can be conducted as part of improvements to the water planning framework.

Difficulties associated with operationalising IWM have been known for decades ([Biswas, et al 2004](#)). It is proposed that these difficulties are an inevitable result of characterising a single path for IWM that is based on a technocratic assessment of IWM projects benefits, and funding worthy projects according to the principle of cost benefit analysis.

Operationalising the concept of IWM will remain “exceedingly difficult” (ibid, p1), if the path to implementation necessitates the integrated assessment and quantification of IWM project benefits across a diverse range of outcomes (including: water security, urban cooling, flood mitigation, green space, habitat, water quality, human welfare, regional equality), which themselves may be highly qualitative. The general principle of the approach is laudable and underpins the continued support for IWM in the Victorian Water Industry. However, multi-criteria analysis at this scale (and integrating qualitative and quantitative elements) is likely to remain impracticable beyond pilots and showcase projects.

The new NWI provides an opportunity for an alternative approach that characterises IWM opportunities as the manifestations of community values, trade-offs and an open discussion about the outcomes communities need and desire. It is proposed that a greater emphasis on reflecting community values rather than

attempting to measure and value benefits (such that the “right” options can be presented for community consultation) would provide an easier path for IWM implementation.

Affordability

The question of affordability is critical to understanding community values towards trade-offs between system resilience and efficiency. The water sector is committed to keeping prices affordable, but that metric cannot be applied in abstract, without transparent consideration of the service standard and system resilience that is entailed from a given level of investment.

VicWater proposes that, as part of the new NWI, PC develops a new metric to measure the affordability of urban water and sewerage services across Australia. The development and implementation of an objective definition and target for affordability has multiple benefits, including:

- ◆ removing uncertainty about what affordability means as a policy objective
- ◆ addressing the tension between efficiency and resilience, particularly where additional investment is required for climate change adaptation or to deliver enhanced environmental or liveability outcomes
- ◆ revising the policy settings to support the most vulnerable segments in our community to provide more scope for appropriate pricing for other customers. The PC has previously noted the most efficient way to support the most vulnerable customers is through the tax transfer system. Further PC work is welcome on considering a whole-of-community approach to lift all customers above the affordability threshold.

VicWater would welcome the opportunity to support this outcome from the PC.

Social licence to operate and water literacy

Community and customer expectations are expanding to include not just reliable water services but environmental stewardship, outstanding customer service, low bills, and deeper involvement in decision making and the design and delivery of services.

Improved water literacy is critical in enabling the community to define its needs and expectations. Creating an understanding of the need to balance water quantity, water quality, and affordability trade-offs is necessary to effectively deliver water services to customers at the lowest practicable cost. The better informed the community is on matters of water management, values, and trade-offs, the more empowered it will be to participate in decision making – which will also contribute to systemic and societal resilience.

Victorian research into water literacy found that once community members have a greater understanding of the water system, they have an increased desire participate in decision-making. The new NWI has an opportunity to combine efforts to improve water literacy with genuine opportunities for communities to play a co-design role in the determination of fundamental matters such as levels of service, risk appetite and liveability outcomes.

Water allocation frameworks

The NWI 2004 and the PC have generally favoured policy settings which maximise the economic value of water, such as water trade. PC has also specifically opposed policies that undermine the economically efficient allocation of water, for example restrictions on water trade between irrigation and urban areas (PC 2017 pp125-8). Yet governments sometimes maintain these restrictions, such as those on the North-South Pipeline in Victoria, because there remains a level of public support for some policies that seek to promote social, community or regional benefits rather than the most efficient economic resource allocation.

Water is a basic necessity with unique social, environmental and economic characteristics when used for the provision of drinking water, environmental or cultural purposes. It can also be considered as an economic commodity when used or traded for commercial purposes such as agricultural and industry. This dichotomy creates challenges for economists and policy makers (and the new NWI) to allocate water between the potentially divergent uses with varying social, environmental and economic objectives.

Market mechanisms are a tool for the economically efficient allocation of resources. Yet, there is potentially a need for greater transparency and community deliberation on the allocation of water between potentially divergent objectives. As with land use planning regulations that protect historic buildings, preserve neighbourhood character, or prevent the conversion of peri-urban agricultural land to housing development, there is clearly a level of public support for some non-market interventions – and the transparent policy settings to guide them. It is proposed that such restrictions cannot easily be characterised as a right/wrong policy dichotomy. A community-values narrative for the new NWI could provide for a more nuanced approach to these challenges that may provide for easier decision making at a time when the circumstances demand that the policies be reconsidered.

As part of the new NWI, the PC should consider initiating the development of an alternative approach to transparently reflecting community values in the bulk allocation of water for social, environmental and economic objectives, which would overhaul the awkward combination of market mechanisms and ad hoc

restrictions and interventions that is currently in place. The principles for an alternative approach (which could also apply to supply augmentation) include:

- ◆ the equitable and efficient use of all water
- ◆ equitable security of supply for all domestic water customers, as far as practicable, across variable hydrological conditions and accommodating climate variability and change
- ◆ transparent cost allocation among all water users
- ◆ transparent frameworks to encourage the use of alternative water sources and investment in liveability objectives
- ◆ transparent frameworks for supply augmentation.

Community values-led approach in practice

Looking across the globe, the Dutch water sector is an exemplar of a community values-led approach. It has embraced integrated water management, and accepts that it is predicated on shared understandings of the interactions between local human interventions and water system functions. Taking a holistic approach with community values that link to water governance, economics, innovations and strategic visions underpins its planning and execution of water systems in The Netherlands. Applying the Dutch philosophy of polderen – working together to reach consensus – significant projects such as “Room for the River” have been successfully supported by local communities.

According to the [Dutch water sector](#), “we believe that bringing together various stakeholders and looking at water challenges from different perspectives are essential to designing suitable solutions that fit local circumstances. ... The larger the scale and more complex the challenges for water management, the higher the demands for organisational capacity to execute them. And the higher the stakes for society, the more participation is required.”

The Victorian water industry is transitioning toward deeper, earlier and broader engagement with customers and communities as part of the Victorian Essential Services Commission’s PREMO reforms to the customer price regulation. In preparation for regulatory price submissions, Victorian water corporations conduct in-depth engagement and consultation with customers and communities in line with the IAP2’s principles of ‘collaborate’ and ‘empower’. Approaches include citizen juries and challenge panels.

These experiences undoubtedly improve the water corporations' ability to reflect customer perspectives regarding the matters under consideration in the price submissions. They also provide insights and a catalyst for yet deeper engagement on the fundamental water issues affecting communities Australia, reflecting the case that we are advocating – embodying a community values narrative that underpins water planning, policy and implementation.

Conclusion

The new NWI has an opportunity to advance the community narrative of water planning frameworks, governance and institutions, moving away from a dichotomy of 'right' and 'wrong' policies and decisions. The prevailing narrative promotes a mischaracterisation of urban water planning challenges as purely technocratic in nature.

Values imbue all policy decisions, from urban water planning to environmentally sustainable diversion limits. These values must represent the community, and its deliberation leads to representative decisions and effective policy that is emblematic of a resilient path forward. The new NWI must emphasise the complexity of the water challenges facing Australia and community's role in deciding the most fundamental aspects of the response.

