Submission to the Productivity Commission Inquiry into National Water Reform 2020

16th June 2020

Thank you for the opportunity to provide input into this inquiry.

I note with interest the request from the Treasurer for the Commission to consider "the interaction between water policy and other policy areas". I also note that this request does not specifically extend to drought policy, but I would nonetheless encourage the Commission to reflect on the relevant interactions.

In that context the remainder of this submission comprises a paper developed to consider the linkages and current contradictions in drought and water policy. I developed the paper with reference to:

- The Commission's earlier inquiry into water policy in 2017;
- The government's response to the recommendations of the earlier inquiry in 2019;
- The government's Drought Response, Resilience and Preparedness Plan released in late 2019.

I have sought to align the government's responses to drought and water policies with rudimentary public policy principles, but this has not always been manageable.

I look forward to reading the Commission's findings in due course.

Regards

Lin Crase

What's the point of having 'best-practice' national water policy when the Federal government's drought response is so fickle?

Introduction

In February 2017 the then-Treasurer, and now Prime Minster, Scott Morrison, established a Productivity Commission (PC) inquiry into national reforms related to the management of Australia's water resources. The key task set for the PC was to review progress against the National Water Initiative (NWI) that had been earlier agreed by all Australian governments in 2004. The PC responded to the request by Mr Morrison and submitted their report to his office in December 2017.

The PC's inquiry report listed several key points, observing that "it is crucial that Australia persists in managing its water resources well" and "since its creation in 2004, the National Water Initiative (NWI) has made a significant contribution to this objective". The PC also found that "there has generally been good progress by States and Territories in implementing the NWI, and most of its objectives and outcomes have been met". However, regardless of these generally positive comments, the Commission also noted that "there remains further work to do" and that governments should both attend to the unfinished business from the NWI and simultaneously "respond to the challenges posed by population growth, climate change and changing community expectations" (PC 2017, p. 2).

The federal government responded to the PC report in April 2019 and overwhelmingly endorsed its recommendations. The government also agreed in-principle with renewing the 2004

Intergovernmental Agreement, which was planned to occur by 2020 (Department of Agriculture Water and the Environment 2019a). The NWI blueprint is largely premised on efficiently allocating water resources and government investment in the water sector, so the government's endorsement of the PC's recommendations might not be particularly controversial.

However, since supporting the PC's recommendations on water policy, the Prime Minister has spent much of the latter part of 2019 announcing drought policy measures and it is interesting to consider those responses in the context of the earlier endorsement of the PC document. Also, a significant strand of the NWI focusses on agriculture, as does drought policy, and ideally there would be some degree of consistency between the two, else run the risk of invoking perverse behaviours in the sector.

The NWI has also been widely heralded by various government agencies in Australia to the point that water policy has become a major part of the nation's international diplomacy. For example, the Australia Water Partnership was established in 2015 apparently based on the "keen international interest" in "Australia's experience in water reform in a federal system of government, the application of science to build the foundation for national water policy, and the establishment of policies and institutions to ensure the sustainability of reforms". The partnership has committed $40 million with special attention to "helping developing countries in the Indo-Pacific region" (Australian Water Partnership 2019). Given that areas of the Indo-Pacific can experience both wet and dry periods, like Australia, this raises questions about the extent to which the entire suite of water and drought policies would benefit the region.

The purpose of this short paper is to consider the extent to which drought policy is synchronous with water policy in Australia and thus contemplate the usefulness of any advice offered by Australian agencies to improve the policy settings in neighbouring states. At the outset it is contended that the gains from an efficiency-enhancing water policy are likely to be substantially weakened if responses to drought run counter to this. The analysis centres on the federal government's response to the PC

in April 2019 and the subsequent 'Australian Government Drought Response, Resilience and Preparedness Plan' (the Drought Plan) released later in the same year.

The paper itself comprises four additional parts. In section two a synopsis of the NWI and the findings of the PC's review are presented. In this section we also highlight the specific elements relating to the efficient allocation of water resources and where divergence from the ambitions of the NWI were evident to the PC. We also offer a simplified typology in this section to help highlight those deviations. Section three summarises the key components of the Drought Plan and we apply the same typology to help contrast its relative efficiency in section four. The final section comprises brief concluding remarks and observations about the usefulness of replicating the Australian experience in other nations.

The National Water Initiative and the Productivity Commission Inquiry into National Water Reform

The history and detail of the emergence of the NWI is described elsewhere (see, for example, Grafton 2019), but in simple terms the NWI represents a comprehensive blueprint for efficiently managing Australia's water resources (National Water Commission 2015, p. 8). The adoption of the NWI occurred in a broader context, developed in the 1990s, where successive federal governments sought to enhance the overall competitiveness of the economy through micro-economic reform. Each state agreed to the principles in the NWI and then set about modifying legislation, institutions and practices to align with the specific NWI objectives. These included ensuring that water planning processes were transparent and based on sound water accounting, as well as returning over-allocated systems to sustainable levels of take; clarifying the risks that related to reduced water availability, with risks arising from reductions in water availability or reliability primarily borne by extractive users, and; removal of barriers to trade in water, facilitating broader and deeper trade and an open trading market (National Water Initiative 2004, pp. 2-4). Initially, monetary

compensation was provided by the federal government to states in return for making progress on reforms, but cross-jurisdictional reporting by the National Water Commission subsequently provided some momentum for ongoing change.

The National Water Commission was abolished by the Abbott government in 2014-15 with responsibility for assessing states' progress against the NWI then handed to the PC (see, Department of Agriculture Water and the Environment 2019b). The PC is expected to review the status of water reform every three years. In addition to reviewing progress against the initial 2004 NWI, the PC was also tasked with considering future reform priorities in the 2017 review. The PC provided recommendations to government around eight core themes and each is briefly presented along with the government's response to gain a sense of the overall direction of national water policy.

First, water entitlements and planning were scrutinised by the PC and found to be largely in place in most jurisdictions and consistent with the entitlement framework specified in the NWI. The PC specifically noted that "clear and secure water access entitlements have also enabled water trading that can generate hundreds of millions of dollars in economic benefit each year" (Productivity Commission 2017, p. 67). Nonetheless, gaps were identified with Western Australia and the Northern Territory noted as lagging in the establishment of statutory entitlements and planning. In addition, the PC recommended that future water planning processes take greater account of indigenous interests in water. The PC recommended that consideration be given to how extractive industries, like mining, are brought into the entitlements framework and to also regularly assess water plans to take account of climate change and the likelihood of a dryer climate (Productivity Commission 2017). The Federal government 'supported' the recommendations of the PC in this regard and further noted that "secure entitlement frameworks are also key to promoting investment in new water infrastructure" (Department of Agriculture Water and the Environment 2019a, p. 3).

Second, the PC turned its attention to water trading. The development of water trading is frequently heralded as one of the major accomplishments of water reform in Australia (Hughes, Gupta and

Rathakumar 2016) and ample empirical evidence is on hand to attest to its benefits (e.g. Wittwer and Griffith 2011). The PC traced the growth of trade, particularly in the southern Murray-Darling Basin, and noted that some barriers remained, especially in the context of transfer of water between irrigation and the urban sector. The PC recommended removal of rules, policies and other barriers in this domain along with some improvements in the approvals processes to accelerate the process of trade. Similarly, the PC urged enhancing the quality and accessibility of trade data. The Federal government chose to 'support in-principle' further removal of trade barriers and actions by the states to improve trade data. In its response the Federal government also noted that "water trading within and between sectors needs to be more transparent and have similar costs and administrative rule" (Department of Agriculture Water and the Environment 2019a, p. 5). In addition, the government 'agreed in-principle' to a process for updating the service standards for trade approvals (Department of Agriculture Water and the Environment 2019a, p. 5).

Environmental management was the third area reviewed by the PC and it found significant progress, with all jurisdictions recognising environmental demands on water. Cases where environmental water entitlements had been established were noted along with the existence of agencies to take responsibility for the management of environmental water in each jurisdiction. This section of the review primarily recommended that the next reform phase focus on "enhancing the efficiency and effectively to get the best outcomes" (Productivity Commission 2017, p 141). The Federal government responded positively to most recommendation on this front 'agreeing', 'supporting' and 'agreeing in-principle' to most suggestions. It was more jaundiced on one point only 'noting' the recommendation that Commonwealth environmental water should be managed in a more devolved manner (Department of Agriculture Water and the Environment 2019a, p. 9).

The fourth area of analysis undertaken by the PC dealt with urban water. Here, the PC found that numerous benefits had accrued to urban water users but "many of these benefits were achieved through reforms in the 1990s" (Productivity Commission 2017, p. 175). Concerns were raised about

challenges posed by population growth in major cities and the impacts of climate change. Subsequently, the PC recommended greater clarity around responsibilities for supply augmentation within jurisdictions; rigorous consideration of decentralised integrated water cycle options; cost-effective environmental regulation to protect urban waterways; improvements in the independence of economic regulation in some jurisdictions (namely, Western Australia, Northern Territory and Queensland); enhanced access to performance monitoring data and independent scrutiny of its quality; use of community service obligation payments to regional New South Wales and Queensland water utilities instead of capital grants, and; making some of these payments contingent on the establishment of alliances between small utilities to improve service delivery. The Commonwealth 'supported' all recommendations with the exception of that relating to independent economic regulation, which it 'supported in-principle' (Department of Agriculture Water and the Environment 2019a, pp. 10-15).

Fifth, the PC focussed on agriculture water use and the impacts of reform. Of particular interest was the three commitments made by all governments under the NWI comprising: (1) independent economic regulation for the sector (2) separating water planning and management from irrigation service delivery, and (3) ensuring public investment in infrastructure is economically viable and environmentally sustainable (Productivity Commission 2017, p. 238). The Commonwealth opted to 'support' both recommendations offered by the PC in reviewing this sector. More specifically, the government supported the view that state-owned irrigation infrastructure services should be underpinned by full cost recovery instigated with arm's length economic regulation. Similarly, the efficient recovery of joint state infrastructure costs from water users was 'supported'. The Commonwealth further confirmed its earlier commitment to the NWI pricing principles in 2010 (Department of Agriculture Water and the Environment 2019a, p. 15).

Sixth, the PC reviewed and made recommendations regarding water infrastructure and repeated its call for adherence to the NWI principle that investment in water infrastructure by governments

should be economically justified and ecologically sustainable. The PC noted that "there is little sign that government enthusiasm for investing in new infrastructure is waning" and "there is considerable risk of poor project selection, poor investment and the continuation of historical failures" particularly in the context of enthusiastic government funding of water projects in northern Australia (Productivity Commission 2017, p. 267). In reviewing major infrastructure projects since 2014 across all jurisdictions, the PC identified numerous cases where projects had proceeded without a detailed and publicly available benefit cost analysis being on offer. It noted that "the lack of transparency regarding the underlying assessment of costs and benefits is unacceptable and does not meet the intent of the NWI (or good governance processes more generally)" (Productivity Commission 2017, p. 266). Whilst some of the projects reviewed had been funded by the Commonwealth, the Federal government nonetheless 'agreed in-principle' with the PC's recommendation on this issue and noted that the National Water Infrastructure Development Fund (worth $1.3 billion) and the National Water Infrastructure Loan Facility ($2 billion) only supported investments that were consistent with the NWI.

The seventh component of the PC review dealt with key supporting elements of the NWI and resulted in two main recommendations. The first of these focussed on increased knowledge sharing between jurisdictions and enhanced compliance and enforcement in some specific cases. This recommendation received the Commonwealth's 'agreement'. The second recommendation centred on the adjustment of communities. Here the PC received 'in-principle agreement' from the Commonwealth on the four sub-elements of the PC's recommendation that any response from government to communities facing significant and rapid adjustment should "(a) avoid industry assistance and subsidies, (b) consider all the factors affecting the community (not just water reform), (c) target investment to developing the capacity on the community to deal with the impacts of structural adjustment, (d) be subject to monitoring and publicly reported evaluation of outcomes" (Productivity Commission 2017, p. 42). In offering its 'in-principle agreement' the Federal government poignantly noted that the Australian government had a range of support measures to

"help farmers and their families prepare for and manage through tough times" (Department of Agriculture Water and the Environment 2019a, p. 18). Further, it referenced the 2013 Intergovernmental Agreement on National Drought Program Reform as an exemplar of this approach, claiming that "this agreement focuses on encouraging preparedness and self-reliance. It guides in-drought assistance policy based on preparedness, risk management and support in times of hardship" (Department of Agriculture Water and the Environment 2019a, p. 18).

The final element of the PC's review considered future reform priorities. The PC recommended a commitment to a renewed NWI, while still maintaining the achievements won to date. It advocated revising some policy elements, like those related to indigenous interest in water and better targeting adjustment assistance. The PC also urged significant enhancements in policy setting related to innovation in the urban water sector, environmental water management and decision making related to infrastructure (Productivity Commission 2017 p. 43). In a separate recommendation the PC advocated consultation in the formulation of a new NWI along with independent monitoring and reporting every three years. The Commonwealth offered 'in-principle agreement' to both sets of recommendations.

Overall, the recommendations offered by the PC align with the ambition to increase the efficient use of water resources and this might be expected given the PC's founding principles of independence, transparency and its community-wide focus (Productivity Commission 2003, p. 1). Moreover, it is possible to trace each recommendation provided in its 2017 review to some of the basic economic concepts that underpin efficient allocation. Arguably, the degree of agreement with each recommendation also gives an indication of the Commonwealth's commitment to efficiency. With that in mind, Table 1 offers a high-level summary of the recommendations provided by the PC, notes some of the broader economic concepts that apply and shows the Commonwealth's degree of agreement.

[Insert Table 1 here]

To the casual observer this would imply a substantial degree of support within government for measures that enhance economic efficiency. Of particular interest is the Federal government's 'in-principle agreement' with recommendation 9.2 and its relationship to the role of government in communities facing structural adjustment. In addition, the government response to this recommendation made specific reference to its actions in the context of drought and the following section provides an overview of the Drought Plan released in late 2019.

The Australian Government Drought Response, Resilience and Preparedness Plan (The Drought Plan)

As with water policy, government approaches to drought have varied with major shifts occurring over time. The link between drought and water policy was probably most apparent throughout the middle of the 20th Century when government encouraged the expansion of irrigation as a means of reducing the impacts of drought. Given the limits of irrigation expansion, government needed a different approach and by the mid-1970s drought became conceptualised as a natural disaster. The National Drought Policy of 1992 subsequently shifted policy towards approaches aimed at making farmers more self-reliant. An additional review of policy occurred in 2008, preceded the Intergovernmental Agreement on National Drought Program Reform in May 2013. Under this agreement all governments committed to encourage self-reliance of farm businesses. This is repeated in the most recent Drought Plan inasmuch as it lists six foundations for successful drought management as follows:

(1) "Drought is an enduring, regular feature of the Australian landscape. It is not a natural disaster.
(2) While droughts are normal for Australia, drought conditions are likely to become more frequent, severe and longer in some regions due to climate change.
(3) Framing is a business and drought is one of many business risks that should be managed.

(4) Drought preparation must continue during times of no drought.

(5) Policies and programs should focus on planning and preparation for future droughts and be developed with industry and communities.

(6) Information (social, economic and environmental) about drought conditions and impacts should be collected and understood at the local level so that governments, communities, businesses and farmers can tailor their preparation, plans and responses" (Department of Agriculture 2019 p. 5).

Whilst these foundations appear in line with the ambitions of the NWI to respond in an economically efficient manner to water resource scarcity, some actions under the Drought Plan appear contradictory to the stated principles of the policy and hose that apply to the NWI. The Drought Plan was released by the Minister who now holds the joint portfolio of 'Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management' and there are clear points of intersects with water policy and the earlier Commonwealth response to the PC's recommendations through the NWI review. For instance, the Drought Plan appendices provide details of the water infrastructure supported by Commonwealth monies and to which the government referred in its 'agreement in-principle' to recommendation 8.1 by the PC, noting that public monies should not be used to provide private benefit. To gain a better understanding of the overlaps and potential inconsistencies, the specific 'actions' identified in the Drought Plan are reviewed here.

The Drought Plan divides Commonwealth 'actions' into three groups comprising immediate acts targeted at farmers, wider initiatives aimed at rural and regional communities and the development of long-term resilience and preparedness for drought.

Immediate acts targeting farmers

Each 'action' is circumscribed by (at times emotive) descriptions of the specific interventions of the Federal government with some being an extension of existing commitments. For example, the 2013 intergovernmental agreement included a financial counselling service to assist farmers in

understanding their long-term profitability. The agreement also provided access to concessional loans and a farm management deposit scheme that offered favourable treatment to encourage farm businesses to prepare for interruptions to cash flow. A farm household allowance was also introduced to provide relief to cash-strapped farm households and this was extended as part of the (ironically named) Agricultural Competitiveness policy released in 2015. Actions 1.1, 1.2, 1.3 and 1.10 in the Drought Plan commit the government to the continuation and expansion of these measures, along with a review of the farm deposit scheme in 2020-21.

Action 1.4 of the Drought Plan focusses on the purported water efficiency of farmers. Here the government has committed to immediately offer up to $50 million in rebates for the purchase of equipment that "helps address animal welfare and permanent planting needs" (Department of Agriculture 2019, p. 9). Many farmers with permanent plantings have been subject to the impacts of water reform - the intersection between this program and water policy is evident inasmuch as potential recipients of the rebates are also encouraged, via the Department of Agriculture website, to consider their eligibility for support as part of the Murray-Darling Basin 'Water Efficiency Program'[1] (Department of Agriculture Water and the Environment 2020a). A second element of action 1.4 relates to improved management of the Great Artesian Basin, where open, uncapped borewells have been a longstanding problem.

Actions 1.5, 1.6 and 1.7 relate to enhanced information as part of the immediate response to drought. This includes commitments to fund "improve[d] weather monitoring infrastructure" (Department of Agriculture 2019, p. 10) and further investments to help consolidate information on support programs. The Commonwealth also foreshadows enhanced information sharing between levels of government as part of these actions.

[1] This program forms part of the commitments under the Murray-Darling Basin Plan and its related goal of returning the river system to sustainable levels of take – a direct feature of the NWI. The economic and technical inefficiencies embodied in the roll out of this program have been well-documented elsewhere (e.g. Crase and Cooper 2017; Perry and Steduto 2017; Grafton 2019), although the ambition itself is consistent with the NWI.

Similar public good characteristics attend actions 1.8 and 1.9 and comprise commitments to increase resources for mental health programs in rural communities and actions targeting the reduction of pest animals and weeds, respectively.

Although not listed as a separate 'action' per se, the Drought Plan specifically notes the immediate decision by the Federal government to commit around $100 million for the provision of discounted water allocations to specific irrigation farmers for the purpose of increasing fodder production. The arrangement involves the SA government (through SA Water) opting to allow access to up to 100 Gigalitres of stored water that had initially been set aside to service urban water demands in Adelaide. The SA government thus effectively committed to activate its desalination plant to meet urban water demand, should the need arise. Although the 100 Gigalitres was initially envisaged as being distributed in 25 Megalitre amounts to farmers (Calver 2019), it was ultimately assigned in 50 Megalitre parcels for a cost of $5000 in the first round of 40 Gigalitres (Department of Agriculture 2020b). At a price of $100 per Megalitre, this represents a substantial discount on the price of water allocations in the Murray, for those fortunate enough to gain access. For instance, median prices for water allocation trade in NSW and Victoria were both in excess of $600 per Megalitre in 2019 (Bureau of Meteorology 2020).

The water supplied to farmers is to be used solely for fodder production on "land linked to the allocation" (Department of Agriculture 2020, p. 5), although the mechanics of enforcement are unclear. At this point water cannot be resold or carried over to the following year, although the constraint on carry-over can be waived if conditions improve. As far as can be established, there is no instrument that would prevent farmers accessing the discounted water whilst simultaneously on-selling an existing allocation of groundwater or surface water in the trading market. Recipients are expected to sign a deed poll and the guidelines indicate that the government "may conduct a range of compliance and enforcement activities in relation to the program to ensure water is used for the intended purpose" (Department of Agriculture 2020, p. 15). The only sanction described in the

guidelines relates to potential exclusion of non-complying farmers from subsequent rounds of the water for fodder program.

By February 2020 over 4000 applications for the discounted water had been received and 800 applications were granted. The assignment of the water to applicants ostensibly followed a first-in-time approach with farmers submitting online applications with proof of eligibility. Once eligible applications exceeded the water available for the 'sale day', those applications that were submitted on the 'sale day' were then randomly selected as successful (Department of Agriculture 2020). The algorithm by which random success was assigned is not specified[2].

Whilst the water is only available for fodder production, the program is silent on how that fodder should be distributed. Rather, the response provided by the (then) Minister in late 2019 indicated that the fodder would be "released onto the market [… and] this will increase supply of fodder available to all farmers, not just drought-affected farmers, which will be of benefit all across our primary production network" (McKenzie quoted in Calver 2019). Similarly, the Minster foresaw no material deleterious impacts on fodder producers outside the benefiting areas, regardless of the professed downward pressure on fodder prices from the program.

Wider initiatives aimed at rural and regional communities

The Drought Plan lists three 'actions' aimed at generating wider influence across drought-affected communities but, as with the immediate actions in the Plan, the extension or continuation of existing initiatives also features in this section. For example, additional road funding is provided to councils subjected to drought with a view that this "will improve road infrastructure and road safety outcomes and an additional economic stimulus in drought-affected communities" (sic) (Department of Agriculture 2019, p. 13). Other existing programs embodied in this action receive additional

[2] This is noted inasmuch as the Minister for Agriculture at the time of the first round was forced to resign in early 2020 following concerns raised over the non-random allocation of public funds when she held a different portfolio.

funding targeted at drought-affected communities including the Building Better Regions Fund and the Foundation for Rural Regional Renewal.

Similar to the concessional loans on offer to farmers as part of the suite of immediate actions, action 2.2 announces the development of concessional loans for small businesses (not farm businesses) directly dependent on agriculture. Also mirroring the approach to farm businesses is action 2.3 that deals with the piloting of a financial counselling service for small rural business experiencing hardship.

Although not given the status of an 'action' per se, the Commonwealth also used the Drought Pan to support some non-government schools through a 'keeping kids at schools' initiative[3]. This was accompanied by other funding for early learning centres in drought areas.

Long-term resilience and preparedness

The final component of the Drought Plan comprises only one direct action that relates to modernising and improving the research and development system that attends agriculture –i.e. research and development corporations. An advisory panel was established to inform government options by mid-2020. In a related development, the Commonwealth also redirected $3.9 billion from the Future Fund to be solely targeted at supporting primary producers and regional communities and foreshadowed that these monies be used to "enhance the public good (that is benefits that are not solely for individual farm entities" (Department of Agriculture 2019, p. 15). The Drought Plan foreshadows that the monies will be used to support research, innovation, adoption of technologies while improving natural resource management and other infrastructure works.

As noted earlier, the interest with the Drought Plan and extant water policy settings was emphasised by specific reference to the Commonwealth's current support for water infrastructure programs and

[3] The fact that this program targeted only non-government schools and included transfers to cover boarding fees did not go without criticism, given that poorer households in drought regions often use public school education (Karp 2019).

as noted by the PC this enthusiasm shows no signs of waning (Productivity Commission 2017, p. 267). Using the heading 'Just add water' the Drought Plan references 21 water infrastructure projects (Department of Agriculture 2019, pp. 28-29) including some that the PC had previously noted had been undertaken in the absence of a publicly available cost benefit analysis (see, Productivity Commission 2017 p. 266).

The Efficiency of the Drought Plan and Comparisons with the Government's Stance on Water

In reviewing the government's response to the PC's analysis of water policies it was possible to find (a) an economic rationale for the PC's recommendations (b) considerable agreement with those recommendations from the Commonwealth. It was thus reasonable to reach a view that the Federal government's overwhelming emphasis in the context of water policy was the efficient allocation of water resources, as intended by the initial NWI. This includes agreement that water access entitlement holders, mostly farmers, should bear the risk of reduced water availability due to periodic droughts, and as already noted, support for the view that "water trading within and between sectors needs to be more transparent and have similar costs and administrative rule" (Department of Agriculture Water and the Environment 2019a, p. 5).

An attempt was made to analyse each of the actions and other pronouncements in the Drought Plan along similar lines to that applied to the Commonwealth response to the PC – i.e. is there a logical economic rationale to each component? The outcome appears as Table 2.

[Insert Table 2 here]

Overall, the success of mapping the actions in the Drought Plan to standard economic rationale is mixed. In some circumstances, there are clear public goods on offer – e.g. improvements in information – and in other instances the rationale is far less clear. The problematic actions usually relate to the provision of capital and some specific infrastructure at lower-than-market rates. Where extant markets exist and deliver reasonably efficient outcomes the basis of government actions is usually premised on some other priority. Moreover, rudimentary economics would suggest that offering an input at a subsidised rate will increase its use implying the government must see some other benefits to enhanced access to that resource. However, the extent to which this occurs in practice will be a function of the capability of farm and (now) non-farm businesses to access the various programs. There is at least some evidence from earlier episodes of government intervention on drought that the most-needy were not well-served. Rather, programs were later shown to benefit larger more profitable enterprises whilst purportedly serving equity agendas (e.g. see, Botterill 2006). There is also a view that some interventions effectively hold businesses in an unsustainable practice.

In addition, there are also clear contradictions with the stance offered by the Commonwealth through its endorsement of the PC inquiry into the NWI. Arguably, most egregious in this context is the water-for-fodder program described earlier. Recall, that this program involves farm businesses accessing discounted water allocation on the proviso that they commit to grow fodder. At the time of the announcement the Minister noted that this could bolster fodder supplies by up to 120,000 tonnes.

A cursory analysis gives some indication of the immediate costs of this approach. First, the price paid by farmers was capped at $100 per Megalitre implying that 100 Gigalitres would involve a payment of about $10 million from private farmers. Second, the incremental cost of producing the offsetting desalinated water is difficult to adjudge but if we accept that Adelaide had access to much cheaper

rainfed supplies in close proximity then this equate to a production cost of about $95 million[4]. The total cost to taxpayers thus approaches $85 million. Third and in contrast, the most expensive fodder on offer at the time of the announcement – lucerne hay – was available in the southern Murray-Darling for between $450 and $600 per tonne (Dairy Australia 2019). Obviously, not all farm businesses who access the water-for-fodder are capable of growing lucerne, but even if they were this equates to a value of between $54 million and $72 million. Put simply, even the most heroic favourable assumptions would imply a net welfare loss of at least $13 million. This says nothing of the distributional impacts or wider consequences for water and fodder markets.

It also is clearly at odds with the efficiency-enhancing support offered by the Commonwealth via its endorsement of the recommendations of the PC inquiry into the NWI. Ultimately, this leaves analysts to ponder the merits of simultaneously advocating efficiency-enhancing water allocation while simultaneously intervening to distort the efficient operation of input and output markets in agriculture.

Concluding remarks

Australian governments have generally had a good track record with water reform since the 1990s and the NWI remains one of the most widely respected international examples of sensible reform. The NWI emphasises measures that help communities adjust to changing water availability and limits the role of government to legitimate activities that do not distort the incentives to access and use water. It emphasises the need for government monies to only be spent on water projects once positive economic and environmental merits are established for the community as a whole. The federal government support for the continuation of the NWI principles is thus well-justified.

[4] Storage levels for most dams in the Adelaide Hills were at about 60 per cent at the time of the announcement. Marsden Jacobs and Associates (2016) estimate the incremental cost of desalinated water in Adelaide at about $950 per megalitre when the alternative is to draw water from storages in the Adelaide Hills.

That said, claims of international expertise in water management are substantially undermined by ad hoc interventions on drought. There are substantial parts to the federal government's Drought Response, Resilience and Preparedness Plan that will likely lead to costly distortions for agriculture particularly.

Against that background, the purported generous advice we offered to help our poorer neighbours craft reforms should be taken cautiously. After all, these countries can hardly afford the costly mistakes now being exacted on the Australian taxpayer.

The Drought Plan also leaves unclear the role of government in a future regional and rural Australia. Drought seems to be a prerequisite for communities to be recipients of public goods. This raises unanswered questions about why such goods are not on offer as a matter of course.

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Area		Background	Economic rationale	Commonwealth response
Entitlements & Planning	3.1	Statutory entitlement and planning frameworks to be completed in lagging jurisdictions	Clear and consistent property rights	Supports
	3.2	Recognition of indigenous cultural objectives in water plans	Clear and consistent property rights	Supports
	3.3	Water for indigenous communities for economic development	Clear and consistent property rights	Supports
Trade	4.1	a. remove trade barriers b. commission a review of approvals services c. improve access and quality of trade data	Increase gains from trade Reduce market transaction costs Reduce market transaction costs and reduce information asymmetry	Supports in-principle Agrees in-principle Supports in-principle
Environmental water	5.1	Efficient and effective use of environmental water	Optimisation of public good provision	Agrees
	5.2	Complementary management of environmental water at local level	Optimisation of public good provision	Supports
	5.3	Independent management of environmental water – at arm's length from government	Optimisation of public good provision	Agrees in-principle
	5.4	Clear roles and responsibilities for management environmental water	Optimisation of public good provision	Agrees in-principle
	5.5	Commonwealth environmental water managed should be devolved to the lowest feasible level	Optimisation of public good provision Subsidiarity principle	Noted
	5.6	Improve monitoring, evaluation, auditing and reporting of water for the environment	Optimisation of public good provision	Agrees
Urban water	6.1	Better forward planning and role assignment	Optimisation of public good provision	Supports
	6.2	Decentralised IWCM	Optimisation of public good provision	Supports
	6.3	Urban waterway health	Optimisation of public good provision	Supports
	6.4	Independent economic regulation	Limit market/government power	Supports in-principle
	6.5	Performance data scrutinised and available	Limit market/government power	Supports
	6.6	Use CSOs not capital grants	Optimisation of public good provision	Supports
Agriculture& Planning	7.1	Full cost recovery and economic regulation of irrigation	Limit market/government power	Supports
	7.2	Full cost recovery of shared infrastructure	Limit market/government power	Supports
Infrastructure	8.1	Public infrastructure should no be provided for private benefit	Limit rent seeking Remove distortions to investment	Agrees in-principle

Supporting elements	9.1	Share knowledge	Reduce cost and increase efficiency of government	Agrees
	9.2	Limit government role in structural adjustment	Encourage adaptation Optimisation of public good provision	Agrees in-principle
Reform progress	10.1	Commitment to new NWI	Reiterate efficient allocation principles	Agrees in-principle
	10.2	Commitment to consultation and review	Manage and limit transaction costs of change	Agrees in-principle

Table 2: Categorisation of actions in the Drought Plan

Area	Action item	Background	Rationale
Immediate actions for those in drought	1.1	Continue farm household allowance	Equity (?)
	1.2	Continue and improve rural financial counselling service	Information as a public good
	1.3	Continue concessional loans for farm businesses	Equity (?) Not possible to rationalize on efficiency grounds given well-developed capital markets
	1.4	Support for farmers to be more water efficient Continue capping open bores in Great Artesian Basin	Equity (?) Not possible to rationalize on efficiency grounds given well-developed markets for such goods Environmental - Public good
	1.5	Development of drought indicators to inform decision	Information as a public good
	1.6	Use of FarmHub to coordinate information on assistance	Information as a public good
	1.7	Cross-government and industry meetings to share information	Information as a public good Potential to reduce cost of service delivery
	1.8	Increased funding for mental health	Public good
	1.9	Reduce impacts of pests and weeds	Public good
	1.10	Farm management deposit scheme reviewed	Equity (?) Not possible to rationalize on efficiency grounds given well-developed capital markets

	?	Water for fodder	Not possible to rationalize on efficiency or equity grounds
Support for wider communities affected by drought	2.1	Investigate options for support – road funding etc.	Public good Some elements based on equity (at best) given existence of functioning capital markets
	2.2	Regional investment corporation for non-farm businesses	Equity (?) Not possible to rationalize on efficiency grounds given well-developed capital markets
	2.3	Financial counselling for non-farm businesses	Information as a public good
	??	Keeping kids at school	Equity ?? Although the details of the program appear at odds with equity per se
Long-term resilience and preparedness	3.1	Modernise rural development corporations and related research	Public good
	??	Just add water – re-statement of Commonwealth commitment to water infrastructure projects	No public benefit costs analysis to adjudge rationale