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Productivity Commission Inquiry into National Water Reform
http://www.pc.gov.au/inquiries/current/water-reform-2020
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Dear Commissioners

Submission to the Productivity Commission Inquiry into National Water Reform

Sustainable Population Australia[1] (SPA) wishes to emphasise the challenges that Australia's population growth is presenting – and will increasingly present – to successful water management policy. Australia routinely fails to find sufficient water to meet human and environmental needs and on-going population growth will ensure we continue to fall short and do so more often. The most immediate and effective initiative – and certainly the only one with genuine longer term efficacy – that the Commission could propose in pursuit of water security would be a reduction in, and then a cessation of, Australia's population growth.

In 2009 in the middle of the so-called millennium drought, Maude Barlow–the then Senior Adviser on Water to the President of the UN General Assembly–declared in her opening address to the Australian Water Summit that Australia was '*a nation destroying its water heritage in order to remain an economic powerhouse and lulled by successive political leaders into thinking that this is just a temporary drought and that technology will save the day*'. Given Australia's most recent drought and unprecedented fires, one might observe that little has changed.

The terms of reference from the Treasurer instruct the Productivity Commission (PC) to assess '*the extent to which the NWI reforms are adequate to support government responses to emerging or changing water management challenges such as climate change*'. As the inquiry's Issues Paper notes, population pressures are among those challenges. Further, the Treasurer instructs the PC to consider '*the interaction of water policy with other policy areas such as climate, energy, agriculture, forestry, land use planning and urban development*' which SPA notes are all impacted by population growth.

The PC's 2017 '*National Water Reform*' report[2] makes extensive reference to the significance of population growth for future water management issues. However, it makes no mention of limiting this same growth as a strategy to ensure water security and related ecosystem services.

[1] Sustainable Population Australia is an independent, not-for-profit organisation seeking to protect the environment and our quality of life by ending population growth in Australia and globally, while rejecting racism and involuntary population control.
[2] PC 2017. National Water Reform. Productivity Commission Inquiry Report No. 87, 19 December 2017. https://www.pc.gov.au/__data/assets/pdf_file/0007/228175/water-reform.pdf

The PC should seize its mandate to examine '*the interaction of water policy with other policy areas'* by highlighting the intimate link between water security and population policy. It is insufficient, and disingenuous, to state merely that '*Ongoing research and capacity building will be central to Australia's ability to deliver sustainable management of water resources in the face of future challenges from climate change, population growth and evolving community expectations*', when it is abundantly clear that no amount of further research will ensure future water security against an indefinitely increasing population.

The 2010 report from CSIRO and Flinders University, '*Research into the long-term physical implications of Net Overseas Migration*', found that water will increasingly threaten the viability of Australian lifestyles and economy if high levels of population growth persist.[3] We recommend this important report to the Commission.

Until the outbreak of COVID-19, Australia's population had consistently been increasing by 1.5-1.7% p.a. for more than a decade. Since 2003, Australia's population growth has been 2.5 times that of the OECD, the fastest of any advanced English-speaking nation. During most of that time more than 60% of the population growth has come from immigration. The rest was due to natural increase (births minus deaths), around two-thirds of which can be attributed to births to recent migrants exceeding their deaths. While immigration is temporarily limited during the pandemic, SPA notes with concern statements from the federal government of its post-COVID intention to return to these high levels of immigration when it is safe to open borders. Similarly, and echoing the former Treasurer Peter Costello, current Treasurer Josh Frydenberg has enjoined Australians to produce more babies. It seems to have escaped our leaders that Australia's population will continue to grow for several more decades, albeit at a slower rate, through natural increase even if we had net zero immigration.

The pandemic provides an opportunity to reset Australia's population policy by not returning to previous levels of immigration. A net immigration level between 50,000 and 70,000 would be more in line with historical averages, and ample to provide for international recruitment of high-level skills, family reunion and refugee allocations. These numbers represent the maximum sustainable level, depending on Australia's fertility rate. High levels of unemployment in Australia provide a further motivation to limit additional inputs to the labour market. As the PC's 2016 'Migrant Intake Into Australia' report[4] noted, ordinary Australians lose out from high immigration, due to lower wages and less job security, not to mention impacts on environmental amenity and housing. The water inquiry should provide additional motivation to reduce population growth by highlighting the water infrastructure requirements to supply the equivalent of an extra city the size of Canberra every year, while having to resort to increasingly expensive technologies to supply water from already over-utilised catchments.

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[3] Sobels, J., Richardson, S., Turner, G., Maude, A., Tan, Y., Beer, A. and Wei, Z. (2010) Research into the long-term physical implications of Net Overseas Migration. National Institute of Labour Studies, Flinders University School of the Environment, and CSIRO Sustainable Ecosystems, for the Department of Immigration and Citizenship. https://www.macrobusiness.com.au/wp-content/uploads/2018/03/Sobels-Immigration-Dept-report-2010-physical-implications-migration-fullreport.pdf

[4] Productivity Commission 2017. Migrant Intake Into Australia. Inquiry report, 12 Sept 2016. https://www.pc.gov.au/inquiries/completed/migrant-intake#report

Urban water

In a media release[5] announcing its 2017 report *Reforming Urban Water: A National Pathway for Change*, Infrastructure Australia (IA) advised that by 2040 'a typical residential water and sewerage bill could be higher than $2,500 in today's money.' They cited population increase as the first reason for the escalation in this cost, and gave ageing water infrastructure as the third reason.

IA's recent audit identified replacement and upgrading of ageing assets as an opportunity to 'rethink' how urban water services are delivered.[6] The idea that we would implement major redesigns seems like a pipe-dream when we are failing even to patch up what we have, while racing to extend services to an extra 400,000 people per year. The IA audit itself admits, '*existing infrastructure struggles under maintenance backlogs and the condition of many assets is unknown*.'

Last year SPA produced a report *Population growth and infrastructure in Australia: the catch-up illusion*[7]. In that report we have noted that each additional person added to the population, whether by immigration or birth, demands over $100,000 of public infrastructure[8] including, of course, water. Far from neglecting infrastructure, all levels of government have been pouring enormous amounts of money into the task of catching up on the infrastructure backlog but they are merely running faster in order to stand still. By treating future population as a given, the wrong question is being addressed. The only sensible question is, '*how soon can we get off this population growth treadmill?*'

Trade-offs between water end-uses

In November 2019 the Federal Government announced a drought relief agreement with the South Australian Government to fire up its mothballed Lonsdale desalination plant in order to free up 40 GL of water in that financial year for use by upstream farmers. The Federal Government (i.e. the taxpayer) would meet all costs. This represents a large subsidy to irrigators, at the expense of more greenhouse gas emissions exacerbating future water shortages. Speaking on ABC radio on 9/8/2020, the South Australian Water Minister, David Speirs, said the 40 GL had cost $40m to produce – about four times the cost of irrigation water rights. Previously it has been suggested desalination could be used to offset the 450 GL environmental flows required within the Murray-Darling Basin. This recent experience shows its financial impracticality.

When water is scarce, a rational water management system must prioritise end-users. The baseline environmental flows in the lower basin must always come first, having already been cut to the bone in determining their baseline. These are followed in priority by domestic supplies, industry, permanent crops and finally annual crops. However, the reverse situation has arisen in the Murray-Darling basin.

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[5] Infrastructure Australia (2017) Without action, water bills set to double by 2040.Media release, 8 Dec 2017. https://www.infrastructureaustralia.gov.au/listing/media-release/without-action-water-bills-set-double-2040

[6] Infrastructure Australia (2019) *An assessment of Australia's future infrastructure needs. The Australian Infrastructure Audit 2019,* p7 https://www.infrastructureaustralia.gov.au/sites/default/files/2019-08/Australian%20Infrastructure%20Audit%202019.pdf

[7] van Onselen, L., O'Sullivan J., and Cook, P.G. (2019). *Population growth and infrastructure in Australia: the catch-up illusion*. Discussion Paper. Sustainable Population Australia. http://population.org.au/publications/discussion-papers

[8] O'Sullivan, J (2014) Submission to the Productivity Commission Inquiry into infrastructure provision and funding in Australia. https://www.pc.gov.au/__data/assets/pdf_file/0004/135517/subdr156-infrastructure.pdf

Through political influence, large broad-acre irrigators changed the rules in 2012, giving themselves access to top-priority water rights and, consequently, increasing extractions in the upper Barwon-Darling – even during low-flows – and pushing the lower basin into drought conditions three years early.[9] The Australian Rivers Institute at Griffiths University prepared a technical review for the NSW Natural Resources Commission about this situation. According to report author Professor Fran Sheldon, '*the current cease-to-flow period in the Barwon-Darling is the longest on record …. We also know that the fauna and flora of the Barwon-Darling are not typical of a river that frequently dries.*'[10] They observe that if the absence of flow is prolonged the ancient red gums lining the river banks will die, and the ecosystem service they have provided for millennia – that of reducing erosion by holding the soil of the river banks together – will no longer be available. The consequence will be river bank collapse and enormous amounts of sediment released downstream to create further environmental problems when flooding does occur.

This sounds eerily reflective of the comments from Maude Barlow cited at the beginning of our submission. Something is terribly wrong when the environment is suffering in these ways at the hands of irrigation.

Responding to climate change and managing associated extreme events

Climate change will intensify the already mounting competition between agricultural, urban, industrial and environmental demands for water. Sydney's Warragamba Dam illustrates how the environment always loses out, against the needs of population growth which is entirely avoidable. The NSW Government plans to increase the Warragamba Dam wall's height by 17m to decrease downstream risks of flooding, enabling more housing to be inappropriately developed on flood-prone land. This height would result in the loss of 6000 hectares of land behind the dam wall, including part of the Blue Mountains World Heritage Area. The Sydney Morning Herald has revealed the Draft EIS argues this cost be treated as an 'indirect impact' which would let the government off the hook for any offsets.[11] Professor Fran Sheldon says impacts of dams, in general, range from '*inundation of the land and river ecosystem upstream of the project to fragmentation and de-watering of the river downstream. These impacts change the migration pathways of fish and other vertebrates and affect dispersal of a range of flora and fauna, impacting populations and in some instances causing extinction*'[12].

[9] Davies, A. (2019) Big irrigators take 86% of water extracted from Barwon-Darling, report finds. The Guardian, 21 Aug 2019. https://www.theguardian.com/australia-news/2019/aug/21/big-irrigators-take-86-of-water-from-barwon-darling-report-finds

[10] Sheldon, F. (2019) Balancing water needs for humans and nature. Australian Rivers Institute Magazine, Issue 3, pp 4-5. https://www.griffith.edu.au/__data/assets/pdf_file/0027/953154/FINAL-PDF-ARI-Magazine-October-2019-web-1.pdf p7

[11] Hannam, P. (2020) Cracks in Warragamba Dam plan revealed by leaked documents. Sydney Morning Herald, 22 July 2019. https://www.smh.com.au/environment/conservation/cracks-in-warragamba-dam-plan-revealed-by-leaked-documents-20200721-p55e3e.html

[12] Sheldon, F. (2019) Balancing water needs for humans and nature. Australian Rivers Institute Magazine, Issue 3, p5. https://www.griffith.edu.au/__data/assets/pdf_file/0027/953154/FINAL-PDF-ARI-Magazine-October-2019-web-1.pdf

Both financial and environmental affordability must be essential considerations in adapting to climate change and its extremes. In a 2019 report[13], Infrastructure Australia argued for resilience to be balanced with affordability: '*The challenge for water managers is to undertake proportionate and efficient risk mitigation. Measures to improve resilience should be tailored to each local context, and should consider customers' capacity to pay*'. It is SPA's view that treating the environment as expendable against avoidable population growth is not proportionate or efficient.

Resilience against climate change depends on redundancy in current resource supply options. This is particularly true for water. Population growth eliminates such redundancies, predictably building supply deficits. Further population growth in the Sydney basin will only push technically feasible options out of economically feasible bounds. Perth, Melbourne and Adelaide face similar constraints, as do many of the 'regional' towns to which the government fantasises about directing future population growth. There is no solution to this dilemma that does not include ending population growth.

Conclusions and Recommendations

- Trade-offs between environmental flows, urban use, industry and agriculture will increasingly threaten the viability of annual irrigated cropping – a major income-earner for Australia but, by necessity, the lowest priority when water is scarce. The only way to maintain broad-acre irrigated cropping in Australia is to limit demand growth in other sectors, particularly urban consumption.

- Energy intensive 'solutions' such as desalination expose future communities to increased vulnerability through their dependence on costly, complex, high-input systems to deliver water. These are not solutions, they are symptoms of failure.

- The Commission should highlight the link between water policy and population policy. It should frame future population growth as a policy choice, not an inevitability.

- It should be made clear that, whatever technologies and management mechanisms are deployed, water security becomes increasingly precarious as Australia's population increases.

- Weasel words like 'increasing challenges from population growth and climate change' should not be used to imply that such challenges are always surmountable, when they are clearly not. A perpetually growing population is simply incompatible with water security.

Yours sincerely,

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[13] Infrastructure Australia (2017) Reforming Urban Water: a national pathway for change. p22. https://www.infrastructureaustralia.gov.au/sites/default/files/2019-06/reforming_urban_water_web_version.pdf