National Water Reform: Productivity Commission Draft Report

& Draft Recommendations

Comments Relating Knowledge and Capacity Building

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The Productivity Commission draft Report concluded that knowledge and capacity building will need to improve. "Further, as experience through the Millennium Drought demonstrated, there will be a need to invest in knowledge generation and capacity building if water management regimes and service delivery models are to adapt to changing environmental and operating conditions". This is a sound conclusion recognising the need to invest. However the draft recommendations that follow do not reflect either the importance of the task or the need to invest.

Australia's water resources are punctuated by severe droughts. The Millennium Drought from 1997 to 2009, the worst in the historical record for south eastern Australia created a veritable flood of investments in the Murray Darling Basin, Australia's major cities, and in national expenditure on research. Figure 8.1 Australian Government Investment in Water Research looks just like a flood hydrograph! This "boom and bust" approach to water research is not conducive to cost effective management of knowledge generation; think of the investment in research infrastructure made during the boom that was then dissipated during the bust. This approach is equally destructive of capacity building.

Provision of stable funding for sufficient periods of time is crucial to both knowledge generation and capacity building. The contribution of water related Cooperative Research Centres illustrates the value of predictable funding. The CRC for Catchment Hydrology, the CRC for Freshwater Ecology and the CRC for Water Quality and Treatment all made substantial contributions to water management in Australia. All 3 of these CRC's existed for a decade or more. Their greatest legacy, however, is the cohort of the then young professionals who developed knowledge while gaining insights into the challenges facing water management agencies. This cohort of water professionals is now making a substantial contribution to water management in Australia; an exemplar of capacity building.

The most relevant characteristics of these CRC's are:

- The mix of research and water management agencies bringing the people with the problems together with the innovative thinking of researchers;
- The critical mass of water researchers created from the dispersed and frequently small research groups around Australia;
- The discipline of a business plan defining the research plan and funding priorities, that evolved with each annual review; and
- The 7 year core funding; the glue that brought the collaborators together and kept them productively engaged.

Yes, there are 2 active water related CRCs doing valuable work on groundwater and water sensitive cities, but there are yawning gaps in other critical areas. The Australian Government has invested $13 billion into implementing sustainable diversion limits, and creating substantial environmental water holdings. The investment in research to inform both of these activities is modest in relative to the scale of these investments. The cities have invested some $50 billion in desalination and recycling facilities. Where is the research that would facilitate better decision making when the next drought inevitably occurs? Potable recycling is a potential option for managing critical water shortages resulting from climate change. Where is the research that would better inform the public discussion of this important issue? Where are the young water professionals gaining the capacity to manage water in an increasingly complex environment?

Currently water is not a subject high on the political agenda, but that could change in the blink of an eye. Who knows when the next drought will occur, or the rate of decline of stream flows resulting from climate change? THe Murray Darling Basin has just suffered the driest September in the historical record. 2019 is a critical year in the life of the Basin Plan. Who knows where that political debate will end up if 2019 is dry ?

An effective approach to manage the boom and bust of water affairs is to use the quiet years to develop plans and initiatives in readiness for the inevitable drought and elevation of water in the political consciousness. Investments can then be directed to create more cost effective outcomes,

Strengthening Recommendation 8.1 relating to knowledge & capacity building

Given the uncertainty it would be wise to insert a time scale in the draft Recommendation 8.1 There is no reason why these tasks could not be done within 12 months. Be prepared is a useful motto. The word investment should also appear even if it has to be diluted to “plan for investment”. Mechanism is a vague term. Options for cooperative research and capacity building centres that address key water management issues should appear in the recommendations.