Submission to Water Amendment (Restoring Our Rivers) Bill 2023

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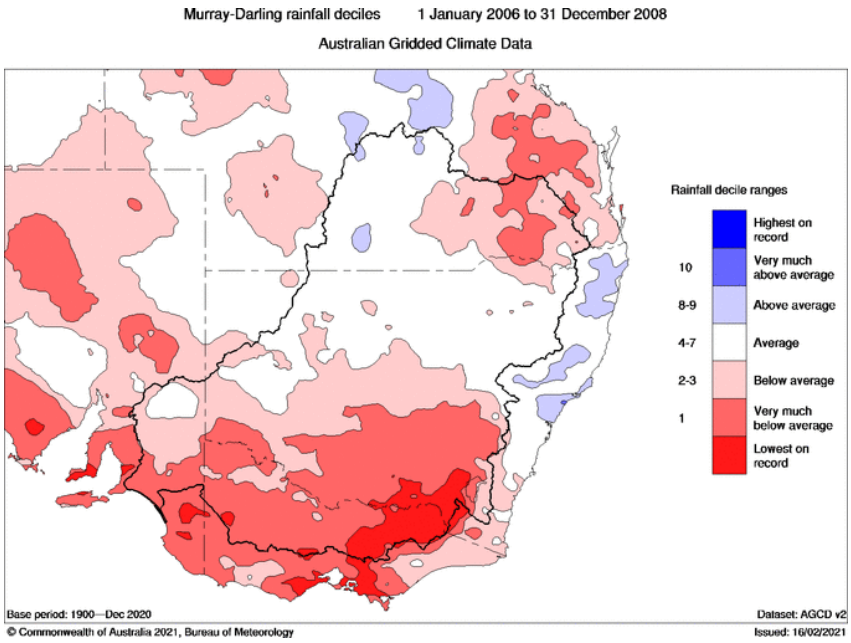
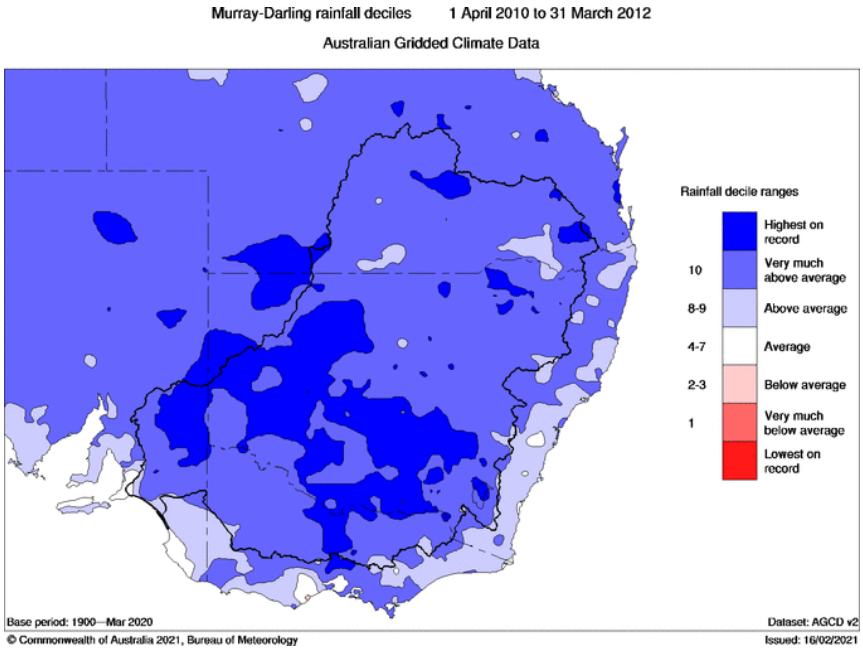
Sources of economic stress in the Murray-Darling Basin

1. Worsening extreme seasonal events

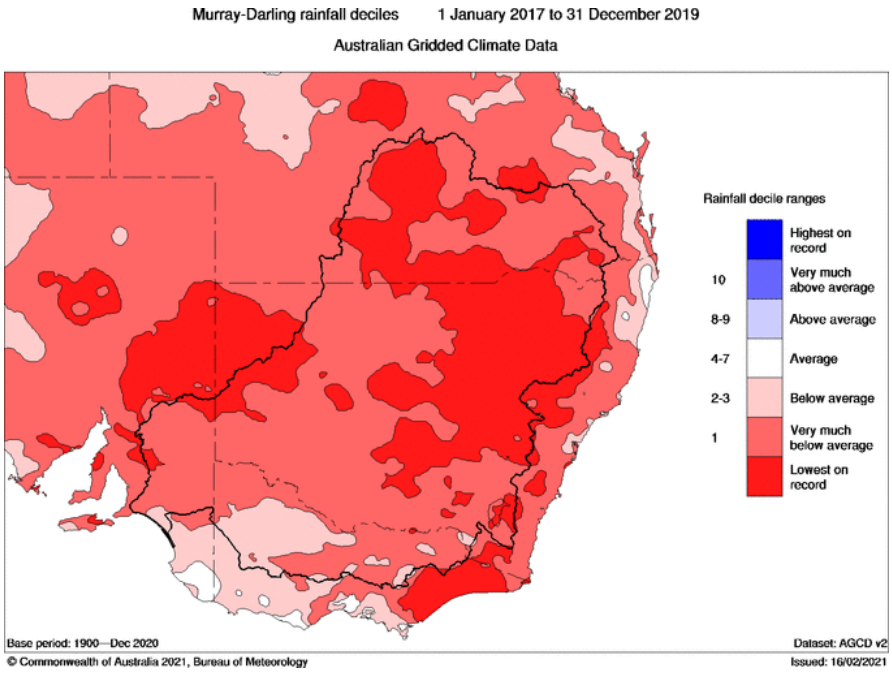
The three years ending 31 December 2008 were the driest on record in the headwater regions of the southern Murray-Darling Basin. This led to water allocations being far below 100% for all levels of security. In addition, dryland farm productivity collapsed across the basin.



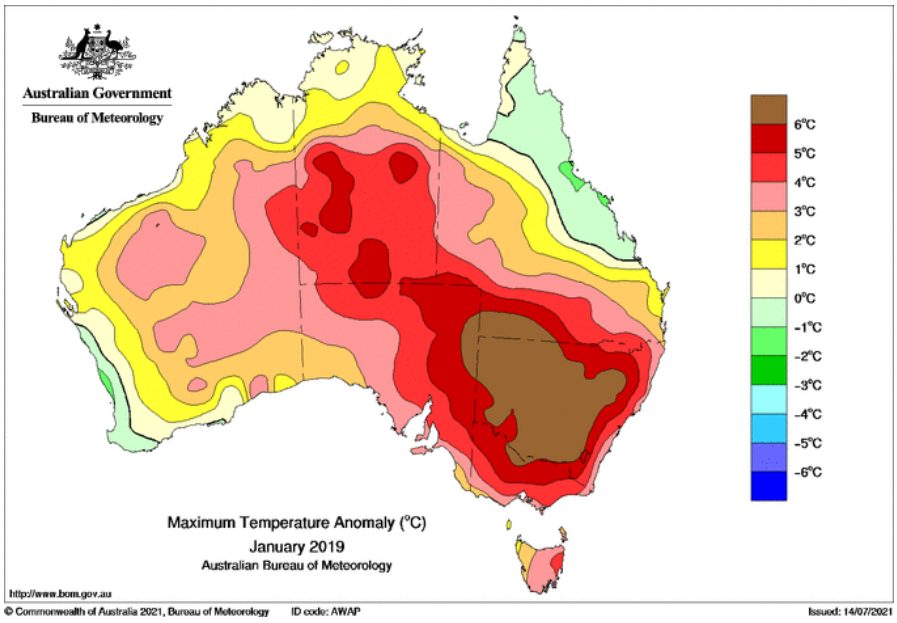
Within several years, much of the basin experienced its wettest ever two year period ending 31 March 2012.



The year 2019 was the hottest and driest recorded in Australia. For farmers in the northern part of the basin, it was the third year of severe drought. The three year period ending 31 December 2019 was the driest such period recorded over much of the northern basin.



Rainfall records alone mask the severity of drought, as temperature in the northern basin in this time were far above average at the hottest time of the year.



Irrigation does not prevent drought impacts. Much more than half of farm output in the basin uses dryland technologies. In addition, extreme seasonal events worsen the volatility of irrigation water availability.

Water trading is an efficient way of managing fluctuations in water availability. However, this assumes that production of annual crops is reduced or suspended during dry times, and that a sufficient volume of water remains for perennial producers to purchase, in order to manage shortfalls in their own allocations. The higher the proportion of irrigation water in perennial production on average, the more vulnerable perennial production is to collapse. The almonds planting boom presents a major difficulty for next time drought brings a period of significantly reduced water allocations.

Previous buybacks in theory had at most weak impacts on permanent water prices (Dixon et al., 2011). However, willing sellers to the Commonwealth are compensated at market prices. Buyback proceeds can be used for farm restructuring, retirement plans or other purposes. The largest contribution to rising permanent water prices across the basin over the past decade has been from worsening global water and land scarcity. That is, worsening scarcity drives up agricultural output prices which in turn impose upward pressure on water prices. A falling Australian dollar has also raised water prices. Conversely, an appreciation of the dollar would lower both commodity and water prices. Extensive almond plantings in the past decade have also contributed to higher water prices.

Temporary water prices are driven by water availability and are not independent of dryland drought conditions. Changing seasonal conditions are the main source of price volatility in temporary water trading.

Despite rising prices for permanent water due to global market conditions and a low dollar, the price of temporary water can still fall to near zero (i.e., less than $10/ML), as it did during the very wet conditions of 2022. Conversely, temporary water trading prices soar during extreme drought conditions as in 2019. Dramatic temporary price fluctuations will continue given that climate change appears to be leading to more extreme seasonal variations.

Apportioning of blame to government policy such as past buybacks for water price volatility is false attribution.

2. Exchange rate fluctuations

Around the turn of the millennium, Australian farmers became more competitive due to a period in which the Australian dollar was weak. From mid-1997 until late in 2003, the dollar was worth less than US 70 cents. In this time, for example, Australian wine exports grew rapidly.

From around 2006, the Australian dollar started rising with the mining boom. Just as some farmers were recovering from adverse seasonal conditions around 2009, the Australian dollar soared. This reduced the international competitiveness of Australia farmers. The dollar persisted above US 80 cents until late in 2014.

Australian cents per US dollar, 2007 to 2016

Source: https://fx.sauder.ubc.ca/

3. The dairy crisis

It is beyond the scope of this submission to comment on domestic processing issues that contributed to the difficulties of dairy farmers in the southern basin.

However, international events had adverse impacts on the industry. The shooting down of Malaysian Airlines flight 17 by separatists in Ukraine in 2014 resulted in Australian dairy producers being caught in the crossfire of trade sanctions.

On the supply side, changes in dairy production technologies appear to have moved the Australian industry towards cooler, wetter regions, away from the basin.

4. The wine industry

Australia's wine exports suffered a downturn during the mining boom as the dollar appreciated. Then better times appeared to return, before a prohibitive tariff imposed by China led to a collapse in exports in that market. Unfortunately, there is not going to be a full restoration of exports to the Chinese market (Anderson 2023). In addition, there are signs that global wine consumption is decreasing, without a compensating switch to higher quality consumption (Willsher 2023).

5. Other issues

Regional communities are extremely sensitive to government directives that come across as ill-considered. In the early stages of COVID lockdowns, border communities in the southern basin were subjected to severe hardship as everyday movements across the border were prohibited. The state governments were slow to respond to the particular needs of border communities. Although this is not directly related to basin policy, it is an example of a response that diminished community trust in government.

6. The biggest threats to economic well-being in the basin

All of Australia has become more service-oriented over time. Agriculture's share of the Murray-Darling Basin's income base is lower than the corresponding share was for all of Australia 70 years ago.

The implication of this is that access to services is an extremely important contributor to quality of life in both city and country. Regional communities suffer from a shortage of access to essential services, covering general health, women's health, mental health, education and training, child care and aged care. It reflects positively on local spirit that many communities manage despite ongoing essential service shortages.

We can calculate a pessimistic estimate of the impact of 450 GL of water being taken out of the basin, given entitlements of around 8000 GL. Irrigation accounts for around 8% of basin income, so we could calculate lost income as 450/8000 x 8%, which equals $1/220^{th}$ of the basin's economic activity. This assumes that buyback revenues leave the basin entirely, contrary to evidence. It assumes no alternative uses for farm inputs, no alternative crops or no changes in irrigation technologies. What ever happened to government departments, politicians and consultants advocating and supporting technological advancements and adaptation in agriculture?

The assertions that buybacks will have severe negative impacts on basin employment are ironic, given labour shortage difficulties faced by basin irrigators in recent years. Employment in agriculture in the basin fluctuates with seasonal conditions.

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