

Director
Murray-Darling Basin Inquiry
Australian Competition and Consumer Commission
GPO Box 3131
Canberra ACT 2601

28 August 2020

Dear Director,

Submission from Scott Hamilton and Professor Stuart Kells in response to the ACCC's Murray-Darling Basin water markets inquiry – interim report

Thank you for the chance to contribute to the ACCC Murray-Darling Basin water markets inquiry. This is an important inquiry into a matter of high public interest.

Please see some general discussion points, below, that we are happy to submit as input for the Commission's consideration. The points are provided in our personal capacity. Professor Kells and I would be happy to provide further detail and to participate in meetings and forums should the opportunity arise. It may be of interest to the Commission to note that we recently contributed to the Joint Parliamentary Committee into the Regulation of Auditing and the Senate Select Committee on Administration of Sports Grants.

Also, I draw your attention to the following articles on the Murray-Darling Basin Plan published in *The Mandarin*:

<https://www.themandarin.com.au/123299-the-end-of-murray-darling-bipartisanship-means-the-end-of-our-largest-river-system/>

<https://www.themandarin.com.au/104351-murray-darling-basin-bipartisanship-not-new-not-strong/>

Yours sincerely,

Scott Hamilton

Prologue

It has been a bad couple of months for news. An onslaught of COVID-19 cases and aged care tragedies in Australia. Monsoonal rains and flooding in South Korea. Ships sailing freely over the North Pole. Oil spilling into a reef off Mauritius. A nuclear-scale explosion in the port of Beirut. And a steaming mess of Trumpian disasters oozing from America.

Against this background, you can be forgiven for missing the latest news about Australia's main river system, and the confirmation that decades of water market reviews and reforms have failed. The implications are wide-ranging. They go to the heart of Australia's vulnerability to climate change.

Damning findings

The Murray-Darling Basin (MDB) river system extends across four Australian states and one territory. Winter rains have brought drought relief to some parts of the system, but many regions continue to struggle simultaneously with the tragedy of our climate and the 'tragedy of the commons' – how best to make use of a resource that is both shared and scarce.

Dry July was especially parched in areas of western Victoria, which recorded 18-year lows in rainfall. Another important winter water event was the release of the interim report from the Australian Competition and Consumer Commission's Murray-Darling water markets inquiry.

On 7 August 2019, following reports of water theft and questionable market conduct, the federal government announced it would direct the ACCC to inquire into markets for tradeable water rights in the MDB. On 30 June 2020, the ACCC delivered its interim report to the Treasurer, Josh Frydenberg, and the 554-page report was released publicly on 30 July.

The report is a damning doorstopper. It carefully details gaping holes and appalling failures in our principal market for irrigation water. Here's the ACCC's own summary of

the problems it identified in the market for our most important tradable natural resource (*we've added the underlining*):

- water market intermediaries such as brokers and water-exchange platforms operate in a mostly unregulated environment, allowing conflicts of interest to arise, and opportunities for transactions to be reported improperly
- there are scant rules to guard against the emergence of conduct aimed at manipulating market prices, and no particular body to monitor the trading activities of market participants
- there are information failures which limit the openness of markets and favour better-resourced and professional traders who can take advantage of opportunities such as inter-valley trade/transfer openings
- differences in trade processes and water registries between the Basin States prevent participants from gaining a full, timely and accurate picture of water trade, including price, supply and demand
- important information, such as allocation policies and river operations policy, which can significantly impact water pricing, are inadequately communicated to the irrigators and traders who rely on these to make business decisions
- there is a disconnect between the rules of the trading system and the physical characteristics of the river system. For example, on-river delivery capacity scarcity, conveyance losses and adverse environmental impacts are not considered in the processing of trades that change the location of water use, except through some blunt and imprecise rules, such as limits on inter-valley trade/transfers
- overarching governance arrangements, which result in regulatory fragmentation and overlapping of roles of different governing bodies, contribute to many of these problems, or prevent them from being addressed in an effective and timely way.

A safe bet

Let's just pause to digest a few of the ACCC's key words and key findings. A mismatch between the market and the physical system. A gaggle of regulators with fragmented and overlapping roles. Untimely, inaccurate and inadequate information. Improper reporting. Conflicts of interest. Professional traders taking advantage. Imagine what would happen if these criticisms were levelled at the stock market, or the housing market.

The findings are very extensive in their scope. For example, the problems with market information extend to prices, supply, demand and market participants. This list covers all the principal elements of any market. If a market lacks good information, we can have no confidence that it will arrive at correct prices and therefore an efficient allocation.

The most concerning part of the ACCC report is that it confirms what some irrigators and policymakers have long feared, and that major economic policy and water policy agencies such as the Productivity Commission and the Murray-Darling Basin Authority have long denied or downplayed: poor design has turned this crucial market into a casino.

Sophisticated, cashed-up and well informed players, many of them with no direct interest in farming and irrigation, are playing the market and making a killing. The rents they are earning are a one-way drain of income and capital away from farmers and rural communities.

A flawed market design, combined with weak regulatory oversight, conflicting interests and a great deal of wishful and magical thinking in policy circles: this combination has left our irrigation water market open to price manipulation, and the market is in fact being manipulated.

The picture painted by the ACCC brings to mind the wild-west electricity markets of America in the early 2000s, in which players such as Enron made super profits betting on Californian blackouts. Now, the sophisticated traders are betting on droughts – and in Australia, that is a very safe bet.

The ACCC is seeking feedback on its interim report, and it has appealed in particular for advice on how we can get out of this mess. The usual safe options are on the table – incrementally improved governance, more transparency, other tweaking here and there – but the ACCC is also open to more radical solutions.

It has acknowledged that the usual boilerplate public policy responses may not be enough to unwind our water tangle. We have a few ideas of our own about how to do just that. But before we share them, let's take a quick look at how we got up this creek without a paddle.

Water markets 101

Water management in the MDB has been in place for more than 100 years, through arrangements between the basin states to manage and share water. But the phenomenon of water trading is relatively new. It was first introduced on a small scale during the 1980s, to enable trading of modest volumes of water between irrigators within the same region; and to help manage the impacts of drought.

Over time, the scope and ambition of water trading has grown. The MDB now features different kinds of permanent and seasonal tradable water rights; greater trading between regions; and exchanges through which water rights can be traded.

The process of actually trading water is complex. It involves specialised knowledge and a variety of different types of participants, such as irrigators, brokers, investors and bulk water providers. All this complexity is part of the problem: it puts a fog around much of the water market, and it allows well informed participants to play the market with little scrutiny.

Hard and fast

The MDB water market was designed at a time when the discipline of economics was ascendant in public policy circles. The 'Canzuk' countries of Britain, New Zealand, Canada and Australia embraced a particularly pro-market, pro-commercial ideology.

Thus armed, the MDB water market designers went early and – from the point of view of neoclassical economics – they went pure.

Australia pushed water market reform further and faster than most other places around the world, sometimes to the amazement of foreign water-policy people and foreign investment bankers – especially given how important water is in Australia, and given the multi-billion-dollar value of this crucial natural resource.

The idea was that the decentralised decisions of market participants would achieve a more efficient water allocation than central planners ever could. And to make the market as effective and active as possible, policymakers sought to remove as many restrictions as they could, including restrictions on inter-regional trade, and restrictions on what types of participants could enter and trade in the market. (The Productivity Commission was one agency that recommended the removal of restrictions on water trading.)

Yes the market designers went hard and fast, but they lacked the tools and concepts that were needed for a true, sustainable, well-functioning water market. Essential tools were missing in the critical fields of market regulation and governance, electronic trading platforms, the definition of property rights, and financial market innovation. The result was a water market design that looked pure and robust but was actually a makeshift solution and a dysfunctional hybrid.

Playing the market

In 2016, Adam James Loch and Erin O'Donnell wrote a piece for the *Conversation* on the impact of investors and speculators in our irrigation water markets. Loch and O'Donnell reached the following sanguine conclusion: 'Although there remains room for improvement in terms of environmental outcomes, water accounting accuracy, and managing social impacts, these markets are very successful at achieving efficient, flexible water transfers between users.' Loch and O'Donnell also reached a specific conclusion: 'investors and speculators aren't disrupting the water markets'.

(<https://theconversation.com/investors-and-speculators-arent-disrupting-the-water-markets-69492>.)

If the ACCC's interim report is right, then the conclusions of Loch and O'Donnell are plain wrong. The market share of outside parties has grown over the years. In 2018–19, for example, investors and fund managers accounted for at least 16 per cent of the total number of water purchases and 14 per cent by volume, in the Southern Basin. Their water sales accounted for five per cent of the total number and 20 per cent by volume. So the potential for outside players to influence the market has grown. But perhaps more importantly, these aggregate figures conceal a crucial fact.

Outside investors and speculators can have a disproportionately large but less visible impact, by buying and selling rights, and shifting their capital and attention to where the biggest profits are to be made. Let's be absolutely clear. The impact of one market participant or a set of market participants does not depend primarily on their market share. Well informed, active traders with agile capital can strip gains from a market and have an impact out of proportion to their total level of capital.

The ACCC has made two discrete interim findings. First, non-irrigator participants are playing a bigger role in the market for irrigation water. And secondly, a subset of market participants are investing in trading strategies, trading capabilities and informational advantages in order to make low-risk super profits – and they are able to do this because of weak regulation and poor market design, at the expense of other participants including irrigators.

If we put these facts together, it is more than likely that some well informed, non-irrigator participants are using the lax market rules to gouge the water market. The stated aim of the original designers of our water market was to improve the allocation of our scarce water resources. What they have instead done is build a river of gold for clever players.

Outside participants seem to have earned rents, not for taking risks, but for being first movers in learning about how the market actually works day-to-day, and then gaming it; using information cleverly, and exploiting wrinkles between seasons, valleys, jurisdictions, exchanges, market segments, and categories of rights.

What went wrong?

In major public policy interventions, it often takes years of ‘sitting and germinating’ before the actual benefits and costs become clear – especially the perverse and unintended ones. We have seen this in aged care, for example, and in the privatisation and deregulation of electricity assets. Now, we are seeing it in the design of our water markets.

The original National Water Initiative did not envisage external speculation or water banking. But, over time, the water market designers have made fateful decisions that allowed perverse conduct that has affected investment in farms and water. The first mistake: within the irrigation water cap, the irrigation water rights were defined as ‘water *qua* water’, rather than water in use, and specifically water in its irrigation and farming uses. The second mistake: in the interests of greater market ‘liquidity’, policymakers have allowed external, non-user parties (those with no intention of using the water themselves for farming and irrigation) to buy and trade water rights.

These two mistakes decoupled the market value of water from its irrigation use value. Australian water rights have become a financial investment product. As a result, there has been an influx of capital from non-users, for purposes such as branded water ‘investing’, hedging, speculation, and ‘water banking’. Too much capital is chasing too little water.

Why does an artificially high water price matter? Surely a higher water price encourages more careful use? Yes, but it is important to remember that the trading is of water within the capped amount already allocated for irrigation, as opposed to the separate flows reserved for the environment. From a public policy perspective, the purpose of water trading within the cap is to direct the water to where it can best be used. But pushing up the price of water beyond its scarcity value can have perverse and unforeseen impacts.

One potential consequence is a distorted incentive for existing farmers to sell rights and close farms. (Excessive prices can also encourage water theft and non-compliance. <https://www.theguardian.com/australia-news/2020/aug/27/up-to-half-of-worlds-water-supply-stolen-annually-study-finds>) Another is a shift of farming activity towards investors and investments that can tolerate very low returns. Artificially high water prices can favour

non-traditional products and production, such as mass-scale dryland commodity producers, for whom a marginal unit of delivered water has the highest value.

These impacts would cause a flight of water, capital and economic activity from the traditional food-bowl regions such as north-central and north-eastern Victoria and southern NSW. That in turn would weaken Australia's food supply. It appears a scenario not unlike that is already playing out – at a time when the local and international opportunities for Australian food are greatest.

A way forward

'Water rights for irrigation' should arguably be defined in precisely those terms, as water for irrigation. The price of water for irrigation should reflect the true, value-in-use price. Urgent efforts need to be made to redefine water rights and to look again at who is allowed to buy and trade them.

Some outside participation in the water market is less about speculation or profit-seeking than about hedging environmental risks. Legitimate purposes such as hedging and risk management can be accommodated without allowing outside investors to own and trade actual water rights. For example, synthetic securities (aka 'water bonds') pegged to the true market value of water would expand the availability of water-value-linked assets without artificially bidding up the price of water rights.

Until now, Murray-Darling Basin water policy has been stuck in a rut, spinning wheels with report after report without tackling fundamental issues of market design.

Australian water policy has failed in its basic purpose of efficiently and effectively allocating a precious resource. Here, in summary, is a way forward for water reform:

- redefine water rights as entitlements for water-in-use, in order to return to the concept of the water market as an efficient water allocation mechanism, not a financialised market
- restrict further external and speculative capital inflows, and establish stronger rules about who can participate in the market
- make water trading more transparent and reliable

- consider phasing out the casino element of water trading, such as by requiring non-users to sell down their holdings over time, or to substitute them for new alternative assets, such as synthetic securities that track the true water price without influencing it
- support expanded use of such new securities as a legitimate way to manage risk, such as by seeking or hedging exposure to water prices or environmental risks
- increase investment in water infrastructure for our foodbowls, to lift the value-in-use of water in those areas and to cement Australia's place in global food supply chains.

These actions would not mean less water for the environment. All the changes would take place within the framework of capped diversion. Nor would they mean moving away from allocative efficiency or a market-based approach. But to rely on a flawed market design that allocates water away from our food-bowls, and sends income and capital away from the Basin and Australia, is gravely ill-advised, especially at a time of national emergency.

A final word about water

Words are a large part of the problem in water, and they help explain why governments over past decades have taken the wrong path. Different states in the Basin use different terminology for tradeable water rights, for example. This is a repeat of the old interstate rail gauge problem.

Linguistic confusion is another barrier. The water lexicon blends terms from different disciplines – economics, finance, politics, public policy, hydrology, engineering, environmental science, community development – often in unhelpful ways. (The different meanings of 'liquidity', 'speculation', 'efficiency' and 'efficient markets' are good examples.) Problems of language are problems of conceptual confusion, hidden assumptions and concealed ideology.

The bottom line: we are paying too high a price for ‘liquidity’ in the water market

It is time to acknowledge an unhappy truth. The failure of the Murray Darling Basin Plan has been a failure of politics but also, in large part, a failure of market design. Bad policy has turned the allocation of our most valuable resource into a gambling pit.

Inquiry after inquiry has looked at this market. There is a huge industry of water-related government reports and academic monographs. It is another difficult truth that a large proportion of the extensive Australian literature on water is hopelessly confused – including literature delivered by major consultancies, university departments and government authorities. Much of it is worthless except as paper for recycling, or as bad examples for use in teaching.

The stakes for Australia right now are incredibly high. You only need to look to Western Australia to see what a step change in water availability looks like and why we need open, transparent and well-functioning water markets.

The ACCC’s interim report should be a turning point in Australian water policy. The report confirmed that our most important natural resource market has been botched. If not for COVID, this would be receiving much more attention. It should be a national debate, and possibly a national scandal.

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