Submission No 22

INQUIRY INTO STATUS OF WATER TRADING IN NEW SOUTH WALES

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The Hon. Robert Borsak MLC
Committee Chair
Select Committee on the status of water trading in New South Wales
NSW Legislative Council

Dear Committee members,

Submission from Scott Hamilton and Stuart Kells in response to Select Committee Inquiry into the status of water trading in New South Wales

Thank you for the chance to contribute to the Select Committee's 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 Committee'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 hearings should the opportunity arise. It may be of interest to the Commission to note that we recently contributed to the ACCC Murray-Darling Basin water markets inquiry.

https://www.accc.gov.au/focus-areas/inquiries-finalised/murray-darling-basin-water-markets-inquiry/submissions-to-interim-report

Also, I draw your attention to the following articles published in *The Conversation* and *The Mandarin*, and the University of Melbourne's *Pursuit* magazine.

https://theconversation.com/robber-barons-and-high-speed-traders-dominate-australias-water-market-166422

https://www.themandarin.com.au/168637-dead-water-the-plan-that-failed-the-environment/

https://pursuit.unimelb.edu.au/articles/how-to-undo-australia-s-epic-water-fail

https://pursuit.unimelb.edu.au/articles/australia-s-water-tragedy-has-urgent-lessons-for-america

Yours sincerely

Scott Hamilton

Prologue

The impacts of climate change are intensifying around the world. In the northern hemisphere this year, one third of Pakistan has been under water, with millions of people displaced. In the United States, Californians are living in their driest period on record.

In Australia, winter rains have brought relief to many parts of the Murray Darling Basin (MDB) river system. The focus of governments has turned from drought and bushfires – to recovery from floods. But it won't be long before Australia experiences another severe drought. Urgent action is needed to fix how we manage our water resources, and that includes the MDB water market.

In February 2021, Australian Competition and Consumer Commission (ACCC) deputy Mick Keogh delivered a damning 700-page report to Treasurer Josh Frydenberg. The report of the ACCC inquiry into the water market had taken 19 months to produce and it set out 29 recommendations aimed at repairing Australia's most important natural resource market.

On 25 October 2021, the Federal Minister for Resources and Northern Australia, Keith Pitt, appointed Daryl Quinlivan as the 'independent principal advisor' to develop a water reform roadmap for the MDB. In his December 2021 report on progress, Quinlivan proposed admirable new commitments to water market reform, including:

- *Commonwealth legislation to establish a Basin-wide mandatory water market intermediaries Code;*
- *Commonwealth legislation to prohibit insider trading and market manipulation across the MDB;*
- *Collecting and publishing further trade data, such as reasons for trade and 'strike-date' information; and*
- *Immediately amending the Basin Plan to remove the grandfathered tags exemptions.*

The term of principal advisor Quinlivan is scheduled to conclude on 31 December 2022. He was tasked to 'develop a phased implementation plan ('roadmap') for water market reform that is practical, cost-effective, and supported by Basin states, by September 2022'. Time is *running out. Waiting until the next drought might seem easy, but it will make reform many times harder.*

Origins

The Murray-Darling Basin in eastern Australia is crucially important. It is home to more than forty First Nations and covers an area larger than France. One of Australia's greatest environmental assets, it is threatened by climate change and over-use. Demand for the Basin's water is rising at a time when the supply is dwindling.

In the first decade of this millennium, Basin governments responded to the problems of over-extraction and over-use by creating a market in water for irrigation. Rights to divert and use water were 'unbundled'. This process unlocked hidden complexity in the original water rights.

At the time of unbundling, banks and hedge funds were allowed to own and trade the new types of rights, even if they owned no land and had no direct interest in agriculture. Once inside the water market, the hedge funds and their professional traders imported computer programs and the aggressive trading techniques that were common in the stock market and in commodities trading. And in water, the traders were allowed to go even further: the newly 'financialised' water market was excluded from ordinary financial market rules and protections.

Damning findings

On 8 August 2019, during a severe drought, the Australian Government directed the Australian Competition and Consumer Commission (ACCC) to publicly inquire into the Murray-Darling Basin water market. In February 2021, the ACCC delivered its report on the market that is now worth more than $26.3 billion.

The ACCC's report contains striking findings about the failure of the water market as a public policy experiment. According to the competition regulator, the market has 'major deficiencies'. Market information, for example, is fragmented, incomplete and neither timely nor comprehensive. Traders moved water rights around in search of profits from 'arbitrage' – buying low and selling high.

> The investors [actually hedge funds and traders] often transferred water between water accounts, including within an IIO [Irrigation Infrastructure Operator], to move some allocations to the trading zones with a higher demand and price prior to sale. They also moved water between zones to take advantage of price differentials for forward contracting and water leases. This involved moving water between different trading zones separated by the Barmah Choke or the Murrumbidgee and Goulburn intervalley trade restrictions. (*ACCC Final Report 2021.*)

The ACCC confirmed that the market was very one-sided, benefiting traders at the expense of farmers. There had been an information arms race in Australian water, along with a race for speed in the market. In both races, everyday farmers lost. Large traders, moreover, invested in agribusinesses so they could 'leverage knowledge of irrigated agriculture' (ACCC) to increase their trading profits.

> The large investors had sophisticated understanding of the market dynamics of the Southern Connected Basin. They were conscious of the seasonal and long-term needs of different industries in the Basin and how that demand may impact Basin water markets. In addition, three of the large investors had agribusinesses are and were able to leverage knowledge of irrigated agriculture from their groups' respective agribusiness portfolios. (*ACCC Final Report 2021.*)

Here's the ACCC's own summary of the problems in the market for our most important tradable natural resource:

- 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.

Market manipulation

Since the ACCC report was released in early 2021, there has been widespread misunderstanding and misreporting of the regulator's findings, and particularly the extent to which the ACCC found traders could exert market power and manipulate the market. The qualified ACCC comments about lack of evidence of investors using market power or manipulation to increase prices in the field of study – should not be construed that these are not issues of concern to the regulator and stakeholders.

ACCC Deputy Commissioner Mick Keogh emphasised that, by virtue of the lax rules, market manipulation is legal in the water market. The ACCC also found there were significant gaps in data and evidence that made market manipulation difficult to detect. 'It is very difficult to **regulate**,' Keogh said, 'what is not **recorded**' (original emphasis).

The ACCC did discover, however, instances of market conduct that would not be permitted in other markets, such as widespread misreporting of trades and other market-sensitive information; unaddressed conflicts of interest between brokers and traders; and the use of inside information to support trading strategies.

Sold Down the River

In our own research, we found further evidence of water market manipulation and the use of market power. We heard traders explain how they used information gaps against farmers, and how they used their own agribusiness investments as cover for large-scale arbitrage trading. And we saw how hedge funds used large purchases and sales to affect the price of water in a way that maximised their profits.

We were able to make findings and reach conclusions that the ACCC did not reach because we approached the market afresh, without a pro- or anti-market bias. We considered water trading as the financial market it had become, and we looked at it with financial market tools and through the lens of adjacent financial markets. We spoke to people – the people behind the numbers – some of whom had refused to speak to the ACCC. And we put all the pieces together into a complete picture.

Here is that picture: today, around half a dozen hedge funds dominate the Murray-Darling Basin water market. They make hundreds of millions of dollars in trading profits each year, a direct loss from the Basin. This money could be retained to pursue economic, environmental, social and cultural benefits for the Basin and regional Australia.

We heard that farmers every day run a gauntlet of stale and incorrect information, tactical bids and asks, and automated trading tools such as 'bots'.

The environmental impacts are most evident during times of severe drought, such as when a million fish died in the parched lakes of Menindee in 2019. But the environmental damage continues over decades. The most recent State of the Environment Report 2021 (released in July 2022) found water levels in the MDB were at record low levels in 2019 due to extraction of water and drought. Rivers and catchments are mostly in poor condition, and native fish populations have declined by more than 90 per cent in the past 150 years, a trend that appears to be continuing. The 2021 report also found 'Indigenous people remain distant from the benefits of water ownership and participation in the water market. Their engagement and role in water remain limited; some states and territories have progressed, but most lag.'

The water market has had perverse and unintended consequences on the environment, as described by renowned water researcher and former MDBA Director Maryanne Slattery in August 2019.

> Without those other two tributaries [the Darling and Murrumbidgee] coming in, you have to push water down through the Murray, at a rate of knots, to get it to the border. Now add on top of that, a water market that has been introduced as part of these water reforms, that moves water supposedly to its highest value use. We've seen a huge increase in nut plantations around the border and they need water permanently. You can't turn off water to permanent plantings like nuts… [they] need water all the time.
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> What we are seeing now is a huge amount of water being pushed down through the Murray, to go down through that [Barmah-Millewa] forest at the wrong time of year. The time of year that the environment doesn't want it, causing a huge amount of

> scouring because of the volumes of water that is being pushed through. You are seeing trees that are hundreds of years old collapsing into the banks.
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> (*Australia Institute podcast. 'Follow the Money. What's wrong with the Murray Darling Basin'*)

Right back at the beginning of the water market, in early milestones such as the National Water Initiative and the creation of tradable rights, the intention (and the rhetoric) of politicians, policy makers and regulators was that unbundled water rights would flow to their highest and best uses. But through the market design, what actually happened was that the rights flowed to where there was the greatest prospect of a high financial return.

This is our central finding. Policy makers had made a critical assumption that both of these things would be the same – that the highest and best economic use would also provide the highest financial return – but they are emphatically not. This is the basic, catastrophic mistake at the heart of our water market.

The results of the failed water market can by seen with the enormous expansion of the almond industry, for example, which has grown by 1500 per cent since 2000 with 30 per cent of the almonds trees being planted in the 5 years to 2021. As the almond trees mature, there will be increasing demand for water – and the situation will be exacerbated by climate change.

The role of hedge funds in the water market highlights a larger problem in our systems of economic and financial regulation. Paradoxically, the riskiest areas of finance are subject to the weakest regulation. The state of the water market also has wider implications for political accountability, environmental regulation, and how effectively the different spheres of public life – urban and rural communities, politicians, regulators, officials, academics – speak to each other.

Summary:

1. Australia's water market designers did not pay enough attention to market governance or to trader conduct or integrity. There are few controls in Australia on water exchanges or water brokers. Behaviours that are prohibited in other markets are widespread in water trading. Greater transparency, compliance and enforcement is needed. NSW might consider the recent changes such as implemented in Victoria to improve water ownership and trading, including that the names of the largest water owners are published on the water register.

2. Australia's water market is overly fragmented. There are multiple trading platforms, and for every type of water right there is no single 'market price' at any given moment. Information is fragmented, and the overall market is in a permanent state of disequilibrium. As we told Ben Ryder Howe for the *New York Times*, the result is 'a paradise for arbitrage'.

3. The 'cap and trade' model doesn't cover the whole river system. Some farmers engage in large-scale unregulated capture of water. This undermines the basic purpose of the cap and trade scheme and reduces confidence in the market.

4. Water policy is too important to be left to water regulators. The morphing of water trading has not been matched by the competition regulator's capability to oversee such a market. The Australian Securities & Investments Commission type powers, including the power to 'follow the money' is needed.

5. There is a huge power imbalance between farmers and professional traders. Big advantages in speed, computer programs and market expertise allow professional traders to dominate the market, while farmers need to spend time actually farming.

External traders were invited into the market because they would bring 'liquidity'. But Australia has paid too much for the liquidity (in the form of lucrative arbitrage profits at farmers' expense). The liquidity itself is of poor quality, and the market does not function well despite the presence of external traders.

There is great frustration among people in Basin communities, who feel that few parliamentarians and regulators have heard their concerns about the everyday reality of the water market. The present inquiry is an important step in hearing what has gone wrong in the water market, and in mapping out urgent improvements.

Scott Hamilton *and* ***Stuart Kells*** *are the authors of 'Sold Down the River' (Text Publishing).*