



Australian Government

Commonwealth Environmental Water Office

The Australian Competition and Consumer Commission

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## ACCC inquiry into water markets in the Murray-Darling Basin Commonwealth Environmental Water Holder Submission

As the Commonwealth Environmental Water Holder (CEWH), I am pleased to make the following submission in response to the *ACCC inquiry into water markets in the Murray-Darling Basin* issues paper, dated 17 October 2019.

### [Overview of the interaction of the CEWH with the Water Market](#)

The function of the CEWH was established by Part 6 of the *Water Act 2007* (the Water Act). The statutory obligations of the CEWH prescribed in the Water Act stem from the National Water Initiative (NWI) imperative to ensure the long-term health of river and groundwater systems through establishing clear pathways to return all water systems to an environmentally sustainable level of extraction. The role of the CEWH is also governed by the *Basin Plan 2012* (the Basin Plan) and subsidiary documents, such as the Basin-wide environmental watering strategy and the Basin annual environmental watering priorities.

The primary role as the CEWH is to use the environmental water holdings to protect and restore environmental assets within the Murray-Darling Basin and other areas outside the Basin where the Commonwealth holds water. The Commonwealth environmental water holdings are a mix of entitlement types, including regulated, unregulated and groundwater licences across the Murray-Darling Basin, with varying levels of water access reliability. The entitlements are subject to the same state water management frameworks, operating rules and legislation as equivalent entitlements held by other water users.

The delivery of environmental water is done using existing state or privately-owned infrastructure, which has historically been designed, operated and regulated for the delivery of irrigation water for agricultural purposes and to supply critical human needs. We use existing water market trade mechanisms to transfer water to Basin state environmental water holders, state authorities, non-government organisations and other third parties to deliver water on our behalf. In undertaking these actions, the Commonwealth pays the same statutory fees and charges levied on all entitlement holders with equivalent rights to hold and use water allocated to the entitlements, to transfer water to delivery partners when undertaking



environmental watering actions on my behalf and to meet any prescribed delivery fees and charges related to the use of Commonwealth environmental water.

The Water Act also provides for the trade of the holdings (including both entitlements and allocations) to the consumptive pool under limited circumstances. Trade of the environmental water holdings is relatively small in scale and is undertaken on an irregular basis with the objective of improving environmental outcomes. The trade of water is governed by Section 106 of the Water Act, which outlines the circumstances under which sales can be undertaken and the objective of the trade. Since the role of the CEWH was established in 2008, a total of 60.7 GL of Commonwealth environmental water allocation has been sold in five trading actions; 43.7 GL in southern-connected Basin catchments and 17.0 GL in northern Basin catchments. The volume of allocation sold to date represents approximately 0.6 per cent of all water allocated to the Commonwealth's entitlements since the holdings were established; the sale of 60.7 GL compares to a total of 9,732 GL of water delivered for environmental outcomes since Commonwealth environmental watering commenced in March 2009.

The Commonwealth environmental water holdings are subject to the same trade, allocation and carryover rules for each entitlement type as all other entitlement holders. As a government entity, the Commonwealth Environmental Water Office (CEWO) staff must also comply with a wide range of existing legislative requirements during our trading actions, including: statutory Commonwealth financial management obligations; freedom of information legislation; and various policies relating to information management, auditing, employee conduct and accountability.

To mitigate potential market impacts made as a result of the management of the holdings, the trade and transfer of Commonwealth environmental water is conducted in accordance with the Trading Rules outlined in Chapter 12 of the Basin Plan. This includes the statutory obligations the CEWO to operate under "Chinese Wall" arrangements, to limit potential access to inside information through other Commonwealth and State agencies responsible for decisions and announcements that are likely to impact market operations and prices. After extensive water market consultation, the CEWO has also established a Commonwealth Environmental Water Trading Framework and Operating Rules (<http://www.environment.gov.au/water/cewo/trade/trading-framework>) to govern the process by which trades are undertaken by the Office. The Operating Rules have been developed to provide clear guidelines on how we will behave through the trading process, including:

- A commitment to not trade in a system where I or my staff are aware of a water announcement that has not been made generally available.
- Undertaking trades using a competitive process.
- Trading based on a market assessment.
- Implementing price limits in every trading action.
- Assessing trade offers on a consistent, equitable and transparent basis.
- Providing regular guidance on trading intentions.
- Publicly announcing trading actions prior to trade.
- Releasing relevant market information prior to each trading action.
- Publicly reporting trade outcomes following the trading action.

The Trading Framework was first released in 2014 and was most recently updated in November 2016 to incorporate amendments to Part 6 of the Water Act.

The trade of Commonwealth environmental water has had negligible impact on market prices. Since July 2009 only 43.7 GL of Commonwealth environmental allocation has been sold in the southern-connected Basin, which is less than 0.4 per cent of the volume of water commercially traded during that period. The sale of Commonwealth allocation has been conducted through an open tender process. Post-trade analysis of these trading actions indicates that, to date, water sold by the CEWH has been used for agricultural purposes and prices paid by the buyers have reflected the prevailing market price. The volumes traded through the sales process and the prices paid have all been recorded on the relevant state water registers.

The water market has significantly evolved and matured over the past decade. The Aither 2019 Water Market Report (<https://www.aither.com.au/2019-water-markets-report/>) reveals market data in the southern-connected Basin over the last 11 years demonstrates that the price of water allocations typically increases as the volume of water allocated to entitlements decreases. However, in 2018-19 average allocation prices were the highest on record, despite available water allocations *not* being the lowest on record. In 2018-19 average water allocation prices were around 38 per cent higher than in 2008-09 (the year with the next highest water prices), despite almost 900 GL of additional water being allocated for consumptive use in comparison to 2008-09. This price increase suggests a significant structural change in agricultural demands is also taking place in the market, which is now a primary price driver in conjunction with the volume of water available to trade. The report goes on to suggest that the increasing water demand from permanent horticulture in the Lower Murray system is increasingly driving water demand, and therefore prices, especially during current dry conditions. These structural changes are not only impacting on water prices across the southern-connected Basin, but are also impacting on river operations with respect to the inter-valley trade (IVT) of water from the Murrumbidgee and Goulburn systems into the Murray, and the delivery of water through the Murray.

The changing market drivers for rising allocation prices could be further investigated. This includes the shift in the type and location of horticultural plantings across the Basin and the propensity of some market participants to supply their water demands through the temporary trade of water allocation and/or through derivative market products such as water entitlement leases and options contracts.

The CEWO leads the market in its transparency with other market participants. This includes publishing monthly water holdings updates; quarterly trade intention statements; and annual Portfolio Management Plans on our website <http://www.environment.gov.au/water/cewo>. We encourage all market participants to follow suit, especially those that manage a significant volume of entitlement, including other environmental water holders, water authorities, irrigators and investors.

## Market issues of concern to the CEWO

### Carryover arrangements

The CEWH's planning and decision-making is driven by the need to fulfil legislated environmental outcomes under the Water Act, Basin Plan and the *Basin-wide environmental watering strategy*. Basin state water authorities create the rules that apply to the carryover of water, including carryover limits. These rules underpin the utility and value of the Commonwealth environmental water holdings and the environmental outcomes that can be achieved from the significant investment made by the Commonwealth to establish these holdings.

The portfolio of Commonwealth water holdings is actively managed to adapt to seasonal and operational conditions, in much the same way that an irrigator would adapt to changing conditions to achieve the best yield with their water. This is particularly important because environmental conditions and water requirements differ over time and across catchments. In regulated systems, the ability to carry water over from one water year to the next provides flexibility to deliver water at environmentally optimal times; to retain water in accounts to meet future environmental needs; or to maintain sufficient environmental reserves to protect critical habitat in extreme dry conditions. In unregulated systems, carryover of account balances can be used to protect river flows during times that are optimal for achieving environmental outcomes.

At any given time, Commonwealth environmental water typically makes up a relatively small portion of all water held in regulated storages across the Basin. At the end of October 2019, the volume of Commonwealth environmental water held in the major storages accounted for just over 1 per cent of total storage capacity, and less than 4 per cent of the total volume of water held in storage. As the Commonwealth environmental water entitlements are subject to the same carryover rules as equivalent entitlements held by other water users, including when those entitlement were held by irrigators or other extractive users. It is therefore important to note that it is not even possible for us to use carryover provisions to fill up public storages to the exclusion of other market participants.

We support the maintenance of carryover provisions to allow entitlement holders (including environmental water holders), to optimally manage inter-annual resource risk.

### Quality and timeliness of state water register data

The state water registers are a critical source of publicly available water market information. Water registers that contain timely, accurate and complete records underpin a transparent and functioning water market. Each of the Basin states operate water registers that offer varying types of information with varying degrees of complexity to access market data. The Bureau of Meteorology (BOM) also provides Basin-wide water market information through their *Water Markets Dashboard*, which is a consolidated source of water entitlement and allocation data across the Basin states. There are also a number of third party products that provide water market information, such as online water exchange systems operated by private water brokers; water entitlement and allocation trading platforms developed by irrigation infrastructure operators (for their internal customers); and the *Waterflow* market analysis and reporting

tool developed by Marsden Jacobs Associates, which aggregates information from state registers the BOM, and a number of third party water exchange platforms. The quality the data provided through these third party sources is not regulated and therefore the information provided can be of varying quality and reliability.

Water register and market information is used by the CEWO for a number of purposes, including the tracking of water allocation determinations to determine water availability; analysis of water allocation trade data to inform market decisions to buy and sell water; and analysis of water entitlement trade data to undertake an annual valuation of the Commonwealth's portfolio of water holdings. On a number of occasions, it is apparent that state water register data has either been missing, is incorrect or may be out of date – particularly with respect to allocation announcements, trade data and water utilisation statistics. This can undermine confidence in decision making based on the information provided through the registers and can ultimately result in negative market impacts based on incorrect pricing information.

The way information is presented in each of the states' water registers is not consistent. For example, the Victorian water register reports the volume of water entitlements and water availability by trading zones within each catchment, whereas the NSW water register reports information aggregated at the catchment level. None of the official state water registers report on the water entitlement and allocation trade information of irrigation corporations that operate within the state; the state registers only provide information on the transfer and trade of water rights into and out of the corporation. In lieu of standardised water register data made available by the states, the BOM *Water Markets Dashboard* provides trade data inclusive of information provided through the state registers and trades that occur within the irrigation corporations. It is unclear whether there is a time lag between trades reported by the state water registers and irrigation corporations, and the data provided through the BOM portal. It is also unclear what process is used by the BOM to 'cleanse' trade data to exclude trades of erroneous prices from its summary market reports.

Given the disparate nature of water market data, there is also no central source of information on the status of inter-valley trade (IVT) opportunities, or the drawdown of IVT accounts by river operators. Market information is provided by a number of water authorities, including WaterNSW; Goulburn-Murray Water; the Northern Victoria Resource Manager; and the Murray-Darling Basin Authority. This makes it challenging for most market participants to understand when and how trade opportunities between valleys and trading zones will become available, or the factors that impact on why IVT opportunities open and close, particularly those within the southern-connected Basin system.

There are a number of issues that limit the reliability of water register information, including the self-reporting of trade prices and the lack of capacity for the registers to handle market derivative products such as forward contracts, options contracts, entitlement leases and the trade of carryover capacity. Accurate pricing for entitlements sold with and without allocation attached to the licence (often referred to as 'wet' and 'dry' entitlement trades) is also an issue of interest. It appears that there are a number of issues with data provided through the Queensland water register, with entitlement trade prices seemingly linked to the valuation of land sales (contrary to the NWI requirement to separate or unbundle water rights from land and delivery rights for trading purposes). The recording of misleading price information in the state registers as a result of these matters, as well as recording commercial trades at \$0 (or nominal)

values, can dramatically skew pricing data for entitlement and allocation valuation and trade decisions – especially in regions or for products where the trade of water rights are undertaken infrequently.

As part of the annual valuation of the Commonwealth environmental water holdings in 2018-19, the Department of Environment and Energy (the Department) engaged KPMG to undertake an analysis of water market to determine whether the data contained in the state registers could be used to accurately value the portfolio. Consistent with the result of previous financial years, KPMG concluded that the water market could not be considered ‘active’ from an accounting perspective, for the purpose of accurately valuing the portfolio at ‘fair value’. Therefore, in accordance with the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*, it was recommended by KPMG that the cost accounting model be adopted, meaning that the Commonwealth’s portfolio of entitlements could only be tested for impairment in accordance with AASB standard 138 for Intangible Assets. One reason for KPMG’s conclusion of the absence of an active market was that state register data is of insufficient reliability to undertake a full and proper valuation of the assets. The key contributing factors to this assessment included:

- the time delay between trade approval, the settlement of the matter and its subsequent recording on the state register;
- data integrity issues between the different registers; and
- different values in pricing for transactions made on the same day.

These issues were identified by the Australian National Audit Office (ANAO) in the audit of the results of the 2018-19 impairment testing process undertaken by the CEWO. The ANAO required the Department to include a disclosure in the financial statements indicating that the impairment assessment is primarily based on water trade price information contained in the State Water Registers and the quality of this data has a direct flow on effect to the ability to undertake an appropriate impairment assessment.

It is recommended that the ACCC investigate ways to improve the accuracy and timeliness of market data recorded on the state water registers, including ways to identify legitimate \$0 trades for non-commercial purposes or transfer of water rights between related parties, and ensuring prices reported do not include other matters such as property linked to water rights. Consideration should also be given to identify trade matters that are market derivative products, which do not accurately reflect the spot prices for conventional water entitlement and allocation trades.

We support the investigation of options to standardise the quality and availability of water market information in the water registers, including the provision of water holdings, availability and use data at the trading zone level. The market would also benefit from the centralisation of information regarding IVT opportunities between trading zones and river systems within the Basin, including providing accurate and timely information on trade and river operation matters that impact on IVT balances.

## The management of inter-valley trade (IVT) accounts and tagged trades

The operation of IVT accounts and their interaction with the tagged (or pre-approved) trade of water allocations is complex. The transparent operations of IVT accounts is fundamental in maintain a fair and equitable water market.

There are three major IVT accounts that impact on the southern-connected Basin system, the accounts that manage trade to and from the Murrumbidgee and Goulburn systems into the Murray system and the account which manages the trade of water through the Barmah Choke in the Murray system. There are also a number of smaller IVT accounts that operate between river systems across the Murray-Darling Basin, including trade between the QLD and NSW Border Rivers systems; between the Peel and Namoi river systems in NSW; and the accounts which manage trade to and from the Lower Darling, Campaspe, Loddon and Broken river valleys into the Murray system. Each of these IVT accounts operate on the basis of limiting the volume of water that can be traded out of an upstream system into the downstream valley on an annual basis, based on the physical limitation of water that can be transferred without resulting in excessive overbank or other transmission losses. The management of IVT accounts include mechanisms to record the 'backtrade' of allocation from downstream accounts into upstream accounts, which opens up opportunities to trade water in the other direction; and rules governing the physical delivery of water held in the IVT account by river operators, which also opens up additional IVT capacity. The delivery of environmental water through these connected river systems is constrained by IVT limits and my transfer or trade of environmental water between river systems is subject to the same trade rules as other commercial market participants.

The three IVT accounts that have a major impact on trade and water prices in the southern-connected Basin are the Murrumbidgee and Goulburn IVT accounts and the Barmah Choke account. The Murrumbidgee IVT account balance has a net 100 GL limit. It has been set at this level so as to not allow excessive Murray 'owned' water to be held in Murrumbidgee storages, which may prevent inflows to be captured for the benefit of Murrumbidgee entitlement holders. The 100 GL limit represents approximately 5 per cent of General Security entitlement volume in the Murrumbidgee, which has been deemed to be an acceptable risk to third parties. The Goulburn IVT account balance has a net 200 GL limit. It represents approximately 20 per cent of the High Security entitlement volume in the Goulburn Valley and has also been deemed to be an acceptable volumetric risk to third parties. The Barmah Choke operates on a zero net trade balance, with the capacity of the Choke limited to guarantee the delivery of water to entitlements held below the Choke. The trade of additional allocation from upstream accounts into accounts held downstream of the Choke is typically limited to the volume of water 'backtraded' from downstream accounts into upstream accounts. On occasion, environmental water is delivered through the Barmah Choke from upstream storages. When these deliveries may have third party impacts on the deliverability of consumptive water through the choke, the delivery of held environmental water is subject to modelled transmission losses to account for overbank flows into the Barmah-Millewa forests and other transmission losses through the Murray River channel.

The balance of IVT accounts are heavily impacted by pre-approved trade commitments linked to entitlements held for a variety of purposes. The Goulburn IVT balance increases at the end of the year by the volume of water allocated to entitlements created from modernisation projects in the Snowy-Murray Development. This volume is carried forward to the start of the following year. The IVT balance also

increases through the year as the result of allocations made during the season to entitlements historically traded out of the Goulburn system into the Murray system as 'exchange rate trade' (pre-unbundling in 2009). Both the Goulburn and Murrumbidgee IVT accounts are impacted by tagged trades, which are pre-approved by the relevant state water authorities irrespective of the balance of the account. These tagged trades can impact IVT balances in both directions. For example in 2018, the Murrumbidgee IVT balance was reduced below the net IVT limit of 0 GL (to approximately -18 GL) as a result of tagged trades of water from the Murray system into the Murrumbidgee system. In the Goulburn system as at mid-November 2019, the IVT balance was surcharged to 258 GL (i.e. the IVT balance was 58 GL in excess of its prescribed limit of 200 GL) as the result of 26 GL in tagged trades and 61 GL of water allocated to entitlements historically traded out of the system. In 2017-18 tagged trades increased to 120 GL, a twelve-fold increase from less than 10 GL in 2012-13. These pre-approved trades are increasingly putting pressure on the trade of water out of and into connected river valleys. While the trading rule 12.23 in the Basin Plan provides for tagged trade as a mechanism for efficient water trade through connected river systems, the rule also requires water ordered under a tagged water access entitlement to be subject to the same IVT account restrictions that would apply to any other trade of water allocations.

The increased volume of water traded out of the tributaries into the River Murray to meet downstream demands continues to put pressure on water market mechanisms and we believe, the health of the river system. The volume of IVT delivery out of the Goulburn system in 2018-19 was unprecedented, with over 433 GL transferred out into the Murray system; more than 40 per cent more than the previous year record of 304 GL. and nearly three times the average volume of 161 GL for IVT traded out between 2012-13 and 2017-18). In 2018-19 IVT began in August, two months earlier than historical precedent, and continued over 10 months through to May. In August 2019 the Victorian Minister for Water announced a review of the IVT rules following concerns about the environmental impact of prolonged high volumes of water being released out of the Goulburn storages into the Murray system. The proposed changes to vary operational (consumptive) flows through summer and to ensure all trades are treated consistently with Basin Plan and state rules are welcomed by the CEWO.

The CEWH supports the codification of the Inter-Valley Trade Procedures to facilitate the operation of an effective and efficient water market and to enable improved reporting required under the Basin Plan. Changes to water access and dealing rules that improve the transparency of water market operations and minimise third party impacts to market participants are also supported. Proposals to amend trade rules that promote the use of pre-approved 'tagged trades' as the preferred method of trade between water sources are concerning—unless those trades are identified and reported in public water registers and are treated with the same level of priority as trades that are undertaken without pre-approved tagging of entitlements. To the full extent permissible, reporting mechanisms that provides a high level of transparency for all water trading should be established.

The regulated capacity of the River Murray for supplying water through the Barmah Choke has progressively declined over successive years. This can create risk for water licence holders in accessing water allocation downstream of the Choke. Restriction of supply of water for meeting both agricultural and environmental water requirements needs to be carefully considered and entitlements need to be treated equally. It is possible that restricted capacity to move water down the system may compromise the long term viability of environmental assets and ecosystem functions. Addressing constraints to river



operations will be important to maximise the environmental benefits that can be achieved with the CEWH's water holdings. Restrictions on water transfers between river valleys does not easily facilitate 'whole of system' environmental watering across the Basin.

The CEWH supports the review, codification and public release of the Inter-Valley Trade Procedures that provide full transparency and enable reporting of matters regarding water allocations dealings under Schedule 12, matter 16 of the Basin Plan. This includes the requirement for state water authorities to comply with the Basin Plan Section 12.23 trade rule, which requires the trade of allocation linked to a tagged water access entitlement established after 22 October 2010 to be subject to the same temporary IVT trade restrictions in place as any other water allocation trade.

## Conclusion

A functioning Murray-Darling Basin water market underpins the economic productivity of the Basin and also provides the statutory framework to actively manage the Commonwealth environmental water holdings to protect and restore environmental assets within the Basin. The water market has experienced significant reform and structural adjustment since the Basin jurisdictions signed on to the Murray-Darling Basin Agreement in 1992. The ACCC's inquiry into the operation of the water market will be important with respect to the consideration of changing economic drivers; the management of delivery constraints; the fair and equitable application of trade and accounting rules for all market participants; and the availability of timely, accurate and complete information by the relevant water authorities.