



Australian Government
Department of Agriculture

Submission to the
Australian Competition and Consumer Affairs Commission
Murray Darling Basin Water Markets Inquiry

1. Introduction

1.1. The rationale for the inquiry

Trading water in the Murray-Darling Basin (MDB) has provided an efficient way for many farmers to manage their irrigation business needs and manage risk. However, some irrigators and irrigation-dependent communities have raised concerns about the water market's operation, such as access to appropriate and timely trading information; the adequacy and efficiency of regulatory arrangements; and whether some market participants are distorting market prices.

The department welcomes the ACCC's inquiry into these concerns and the other issues facing the market at this time. The department looks forward to the ACCC's analysis and recommendations to improve the operation of the markets and enhance the contribution that water trading makes to agricultural productivity and sustaining the environment in the MDB.

1.2. Department's perspective of water markets

Water trading occurs in a number of countries and is recognised as an efficient way to achieve economic and environmental outcomes in areas where water resources are scarce. Water trading allows water users to better adapt to prevailing economic and climatic conditions such as agricultural commodity prices, locational water demand, and highly variable weather such as flooding and drought.

In Australia, water trading reportedly started when temporary transfers of water rights were permitted in New South Wales and Victoria during the droughts of 1966–67 and 1972–73¹. At that time water trading was a short term response to isolated and temporary water shortages. However, from 1986-87 trading was permitted more widely.

Water markets expanded in the 1990s and 2000s following nationally-agreed water reforms, with state and territory governments separating land and water rights and expanding trading across connected valleys. More efficient trading systems have developed over time and now water trading makes a substantial contribution to an irrigator's risk management, portfolio and production decisions. Water licenses are mortgageable assets and have enabled greater access to capital, supporting investment in farm production and expansion.

Over 90 percent of Australian water trading occurs in the southern MDB where the value of the water allocations trade was estimated at \$566 million and entitlement trade at \$699 million for 2018-19². The total market value of entitlements for consumptive use was estimated at \$17.6 billion for 2018-19.

Water trade is considered to have been highly beneficial for irrigated agriculture over the past 15 to 20 years, as a mechanism to deal with shorter term shocks, such as the Millennium drought, longer term structural changes, including changes in the profitability of irrigated activities, and policy changes such as environmental water recovery.

The MDB is an agriculturally diverse region. It has a highly productive irrigation sector with the gross value of irrigated agricultural production (GVIAP³) estimated at \$8.62 billion for 2017-18⁴. Estimating the contribution of water trading to irrigated agriculture in the MDB is inherently difficult as changes in agricultural production are influenced by highly variable factors such as rainfall and climate, commodity prices, improvements in technology and the efficiency of irrigation infrastructure.

¹ National Water Commission. (2011). Water markets in Australia: A short history
<https://apo.org.au/sites/default/files/resource-files/2011/12/apo-nid27438-1224671.pdf>

² Aither Water Markets Report (2019) www.aither.com.au/water-markets-report-2018-19

³ GVIAP refers to the gross value of agricultural commodities that are produced with the assistance of irrigation

⁴ Australian Bureau of Statistics (ABS), (2019) 4610.0.55.008 - Gross Value of Irrigated Agricultural Production, 2017-18

Never the less, water trading helped to reduce the impact on irrigated agricultural production during the Millennium drought as demonstrated by the changes in water use compared to changes in the value of production. Between 2005-06, which was a relatively normal year in terms of seasonal conditions, and 2007-08, water use fell by 57 per cent while GVIAP fell by only 13 per cent.

Water trading has also facilitated the expansion in higher value activities such as almond and cotton production, with GVIAP increasing by around 17 per cent between 2005-06 and 2017-18, despite the volume of water used for irrigation decreasing by around 8 per cent over the same period⁵. In terms of estimating the benefits of water trading, the ACCC may wish to address this topic directly with the Australian Bureau of Agricultural and Resource Economics (ABARES), noting their work using a water trade model to estimate changes in irrigated agriculture under different policies, with and without trade, and for different water prices under different climatic conditions in the MDB.

2. Legislation and governance

The states and territories have primary responsibility for managing water resources. The first significant step in coordinating water resource management was made in 1915 when the River Murray Agreement was agreed by New South Wales, Victoria, South Australia and the Commonwealth. Subsequently these states signed the Murray Darling Basin Agreement in 1992, with Queensland and the Australian Capital Territory joining in 1996 and 1998 respectively.

The key strategies of water reform including separating water access rights from land title, ensuring tradeable water rights and reserving water for the environment, were recognised in the 1994 Council of Australian Government (COAG) Water Reform Framework. Further reforms were monitored and financially supported as part of the National Competition Policy reforms of the mid 1990s.

The 1992 Murray Darling Basin Agreement established the Murray-Darling Basin Ministerial Council to promote cooperative development in the Basin and in 1995 the Council agreed to cap diversions from the river system to protect the environment. These decisions made in the 1990s to establish tradeable rights and place a cap on extractions provided the essential framework for the water market.

In 2004, COAG committed to the National Water Initiative (NWI) with key objectives that included:

- Water access entitlements to generally be defined as perpetual access to a share of the water resource that is available for consumption
- More efficient administrative arrangements to facilitate water trade in connected systems
- The removal of institutional barriers to trade in water
- New land use activities that are expected to intercept significant volumes of water are to hold a water access entitlement
- National standards for water accounting, reporting and metering.

For the MDB water markets, the most substantial coordinated reforms undertaken since the NWI, has been the Commonwealth *Water Act 2007* which includes a number of measures designed to support efficient and effective water trading and is consistent with the NWI commitments made by all governments.

2.1. The Commonwealth *Water Act 2007*

The *Water Act* commenced on 3 March 2008 and implements key water management reforms in Australia. The Act provides the legislative framework for managing the MDB in the national interest. The key features of the Act include:

⁵ ABARES (2019) Information provided to the department.

- Establishing the Murray-Darling Basin Authority (MDBA), with statutory functions and powers, including compliance and enforcement powers and a role in implementing the *Basin Plan 2012* (the Basin Plan) to ensure that Basin resources are managed in an integrated and sustainable manner
- Preparation of the Basin Plan by the MDBA, a strategic plan for the integrated and sustainable management of water resources in the MDB
- Providing for water charge and markets rules and their regulation and enforcement by the Australian Competition and Consumer Commission (ACCC)
- Establishing the Commonwealth Environmental Water Holder (CEWH) to manage the Commonwealth's environmental water to protect and restore the environmental assets of the Murray-Darling Basin, and outside the Basin where the Commonwealth owns water
- Providing national water information, a function of the Bureau of Meteorology.

The Water Act is supported by subordinate arrangements including the Memorandum of Understanding on Murray-Darling Basin Reform and the subsequent Intergovernmental Agreements (IGAs) on Murray-Darling Basin Reform. The IGAs support the objectives of the Basin Plan and are between the Commonwealth and the Basin states of New South Wales, Queensland, Victoria, South Australia and the Australian Capital Territory.

2.2. The Basin Plan 2012

In 2012 the Commonwealth Minister responsible for water adopted the Basin Plan, prepared by the MDBA, with bipartisan support and the support of governments in the Basin states. The Basin Plan seeks to restore a healthy and working Murray-Darling Basin that includes:

- Communities with sufficient and reliable water supplies that are fit for a range of intended purposes, including domestic, recreational and cultural uses
- Productive and resilient water-dependent industries, and communities with confidence in their long-term future
- Healthy and resilient ecosystems with rivers and creeks regularly connected to their floodplains and, ultimately, the ocean.

To achieve these outcomes, the Basin Plan sets extraction limits for consumptive purposes, known as sustainable diversion limits (SDLs). Additionally, Basin states have agreed to prepare new water resource plans (WRPs). WRPs cover a wide range of water management subjects, including compliance with SDLs, protection of environmental water, measuring and monitoring and arrangements for extreme weather events.

The water trading rules in Chapter 12 of the Basin Plan are intended to provide greater clarity and consistency for water trading across state boundaries without duplicating state government trading rules.

2.3. Murray-Darling Basin Agreement

The *Water Amendment Act 2008* commenced on 15 December 2008. The amendment transferred most of the functions of the former Murray-Darling Basin Commission to the new MDBA. Additionally, many of the functions of the former Commission and the Murray-Darling Ministerial Council were referred to the new Murray-Darling Basin Ministerial Council (Ministerial Council).

The Ministerial Council functions include:

- Considering and determining outcomes and objectives on major policy issues of common interest to parties to the Murray-Darling Basin Agreement (MDB Agreement)
- Making determinations about matters in the MDB Agreement
- Agreeing amendments to the MDB Agreement and its schedules.

The MDB Agreement provides the framework to establish the Basin Officials Committee and the Ministerial Council. The Basin Officials Committee advises the Ministerial Council.

2.4. Governance

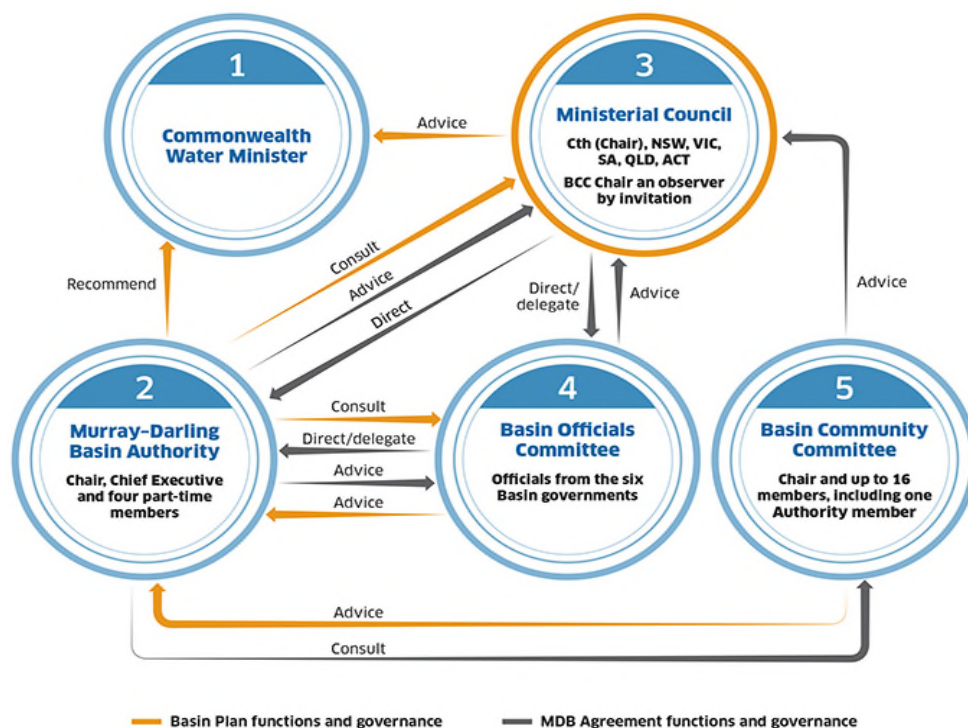
The Basin states (New South Wales, Victoria, South Australia, Queensland and the Australian Capital Territory) remain responsible for managing and regulating water in the Murray-Darling Basin through their own policies and legislation, in a manner consistent with the *Water Act* and Murray-Darling Basin Plan. Basin states continue to exercise responsibility for decisions around water harvesting and water allocations.

Governance in the MDB is underpinned by a partnership between the Australian and Basin state governments. Arrangements between these parties are established in Part 1A of the *Water Act*. The governance arrangements are set out in the MDB Agreement and include several key agencies and committees:

- The Commonwealth Water Minister chairs the MDB Ministerial Council and has certain obligations as set out in the Water Act and the Basin Plan
- The MDBA is responsible for developing, implementing, evaluating and reviewing the Basin Plan
- The Ministerial Council has policy and decision-making roles on state water shares and funding of joint programs as per the MDB Agreement
- The Basin Officials Committee makes decisions consistent with the delegations from the Ministerial Council and advises on the Basin Plan
- The Basin Community Committee provides advice to the MDBA and the Ministerial Council on Basin community issues.

The diagram below shows the interaction between these parties.

Figure 1: Governance of the Murray-Darling Basin Authority



Source: Murray-Darling Basin Authority

3. Roles and responsibilities

3.1. Commonwealth water department

The primary role (in water markets) for the Commonwealth's water department is to support the development of policy and provide advice to government. The department seeks to ensure consistency with the *Water Act* and the NWI, to enhance sustainability, efficiency and productivity in the management and use of water resources, or to reduce barriers to water trade.

The department is also responsible for acquiring water rights for the environment and administering programs to enhance the efficiency of water use, such as the Sustainable Rural Water Use Infrastructure Program (SRWUIP). This national program invests in rural water use, management and efficiency, improving water knowledge and market reform, and acquiring water for the environment. Water entitlements acquired by the department are transferred to the Commonwealth Environmental Water Holder (CEWH) for ongoing use and management (refer section 3.3).

Since 2007, the department has acquired approximately 2,100 GL of water entitlements⁶ through trading water entitlements and investment in efficient water infrastructure. The department engages with the market in a manner that is consistent with Commonwealth procurement and grant rules and reports regularly on its market activities, including progress towards achieving environmental water recovery as set out in the Basin Plan.

The Australian Bureau of Agricultural and Resource Economics (ABARES) is the primary research division within the Department of Agriculture. ABARES collects data, including through surveys, and analyses and publishes reports on agriculture. ABARES produces water market outlook reports every six months.

3.2. Murray-Darling Basin Authority

The MDBA as an independent body is responsible for developing, implementing and overseeing compliance with the Basin Plan. Its primary water market roles are to monitor and enforce compliance with the Basin Plan's water trading rules and facilitate and coordinate interstate water trade in the southern Basin. The MDBA is responsible for enforcing the Basin Plan, and regulating water users and managers, including the Basin state water agencies who have the responsibility for water planning, rule-setting, river operations and compliance.

3.3. Commonwealth Environmental Water Holder

The primary functions of the Commonwealth Environment Water Holder (CEWH) are to manage Commonwealth environmental water to protect, restore the environmental assets of the MDB and administer the Environmental Water Holdings Special Account. The CEWH has other functions including:

- Exercising commonwealth powers to purchase, dispose of and otherwise deal in water and water access rights, water delivery rights or irrigation rights
- Enter into contracts for the purpose of purchasing, disposal or other dealing
- Maintaining an up to date record of the Commonwealth environmental water holdings

We note that the CEWH will make its own submission to this inquiry.

3.4. Australian Competition and Consumer Commission

Under the *Water Act* and the *Competition and Consumer Act 2010* (the CCA). The ACCC functions in water markets under the *Water Act* include:

- Enforcing the water market rules and water charge rules under the *Water Act*

⁶ This is expressed in terms of long term average annual yields.

- Monitoring and reporting on regulated charges and compliance with water market and water charge rules
- Determining regulated charges (or delegate determinations to state regulators)
- Providing advice to the Commonwealth minister responsible for water on development of water market rules and water charge rules
- Advising the MDBA on the development of water trading rules.

The ACCC enforces the CCA and the Australian Competition Law (ACL) in water markets which apply to the conduct of entities such as water brokers and exchanges. It has also published guides for market participants including water brokers, exchanges and irrigation infrastructure operators and their customers to understand their fair trading obligations.

3.5. Bureau of Meteorology

The Bureau of Meteorology (BOM) has water information responsibilities under the Water Act, these include:

- Collecting, holding, managing, interpreting and disseminating Australia's water information
- Providing regular reports on the status of Australia's water resources and patterns of usage of those resources
- Providing regular forecasts on the future availability of Australia's water resources
- Compiling and maintaining water accounts for Australia, including the National Water Account
- Issuing National Water Information Standards;
- Giving advice on matters relating to water information
- Undertaking and commissioning investigations to enhance understanding of Australia's water resources
- Any other matter, relating to water information, specified in the regulations.

3.6. Interim Inspector-General of the Murray-Darling Basin Water Resources

The Interim Inspector-General will provide independent oversight and assessment of the performance and effectiveness of Australian Government and state and territory based agencies who have responsibilities for Basin water reform, including obligations under the Water Act, the Basin Plan, water resource plans and other legislative instruments made under the Water Act. The Interim Inspector-General will be a non-statutory role for a period of 12 months or until a statutory appointment is made.

3.7. Productivity Commission

The Water Act gives the Productivity Commission a role in reporting on the effectiveness of the implementation of the Murray-Darling Basin Plan and associated water resource plans, and the progress towards achieving the objectives and outcomes of the National Water Initiative (NWI). The Productivity Commission undertakes inquiries into the effectiveness of the implementation of the Murray–Darling Basin Plan every five years, and inquiries to assess progress in achieving the objectives and outcomes of the NWI every three years.

3.8. Australian Bureau of Statistics

The Australian Bureau of Statistics (ABS) collects and publishes statistical collections on water supply and use including:

- Water Use on Australian Farms
- Gross Value of Irrigated Agricultural Production (GVIAP)
- Water Account.

Water Use on Australian Farms presents estimates of agricultural water use (including irrigation), the number of businesses and irrigation water sources and expenditure. Estimates are presented for Australia, each state and territory and the MDB. ABARES uses data from this collection for much of its research on the MDB and water.

The GVIAP collection provides statistics for irrigated agricultural production and agricultural production as a whole. Annual data is presented for Australia, each states and territory, MDB, Natural Resource Management regions and for key agricultural commodity groups.

The ABS Water Account provides statistics on water supply and water use within the economy. The ABS Water Account is distinct from the Bureau of Meteorology's National Water Account, which focuses on the quantity and quality of water resources in the wider physical environment.

The ABS derives the majority of its water information from four main sources: the Water Supply and Sewerage Services Survey, the Rural Environment and Agricultural Commodities Survey, the Agricultural Land and Water Ownership Survey; and the Energy, Water and Environment Survey.

3.9. Australian Taxation Office

The Australian Government established a national register of foreign ownership of water entitlements on 1 July 2017 to increase public transparency about the level of foreign ownership of water entitlements. The Australian Tax Office administers the register and publishes an annual report. The first report was published on 1 March 2019.

4. Water market architecture

Water market rules are one of the key reforms that have enabled water markets to establish and develop across state boundaries. Others reforms include separating (or unbundling) water rights from land, water resource planning, establishing registers of entitlements and trade and capping water use. This submission focuses on aspects of the architecture concerning water market information.

4.1. Water market rules

Basin state and territory governments regulate water management and water markets by:

- Developing policies and procedures for trade
- Day-to-day trade operations such as trade applications and approvals
- Developing water resource plans that set the rules for sharing water
- Determining water allocations
- Monitoring water use.

The Commonwealth government has regulatory responsibilities for the water market rules and water charge rules, which are subsidiary to the Water Act and are enforced by the ACCC. The water market rules address: irrigation and delivery rights; termination rights and fees; and the transformation of irrigation rights. The water charge rules address: termination fees; infrastructure charges; and planning and management fees. Amendments to the water charge rules will commence on 1 July 2020 and are designed to improve pricing transparency and simplify the regulatory framework.

4.2. Basin Plan water trading rules

The MDBA is responsible for administering the water trading rules as set out in Chapter 12 of the Basin Plan. The trading rules provide for: reporting of trading prices; appropriate trade restrictions; rules for irrigation infrastructure operators to minimise trade restrictions; trade approval processes; information and reporting requirements for Basin states; restrictions on the delivery of tagged water; and trade of groundwater.

Two inter-agency working groups seek to identify and where possible resolve trade implementation issues, or escalate them for resolution at the appropriate level. These are the Trading Rules Working Group, which focuses on the implementation of the Basin Plan Water Trading Rules, and the Trade Working Group (TWG), which focuses on Basin Agreement matters and reports to the Basin Officials Committee under the Ministerial Council.

We encourage the ACCC to seek comment from the inter-agency working groups about their views, noting they are made from state governments and Commonwealth agencies, some of which we know are making submissions of their own.

4.3. Entitlement and trade registers

Basin states maintain water registers and are the only source of entitlement-related information. State registers record the trade in entitlements and allocations within their respective jurisdictions. State registers do not facilitate trade between buyers and sellers. Private water brokers and water trading platforms often take on such a facilitation role (see 4.4).

Basin states have improved their registers over time. Currently, a water allocation trade can be completed entirely on-line in Victoria. Registry transactions in other states can be lodged on-line, but not completed. A water registry modernisation project is currently underway in South Australia. A nationally coordinated initiative to modernise and improve interoperability of registry systems is outlined in Case study 1, below.

Case study 1: National Water Market System

In 2008 the Council of Australian Governments (COAG) agreed to a program of further water reform which included the introduction of a national water market system (NWMS). COAG agreed that a national system was needed to improve the operation of the water market and to facilitate interstate trading. The NWMS proposal included provision of:

- Centralised collection, verification and reporting of trade data including water entitlements, water accounts, trade prices, volumes and use approvals
- Means of providing compatibility and interoperability of registries as well as, as far as possible, entitlement and trade language harmonisation
- Efficient and secure processing of transactions to facilitate interstate trade
- On-line lodgement of application forms for transfer, changes to entitlement attributes and registration of dealings.

The project was led by the Commonwealth through the COAG structure and an operational NWMS was planned for the 2011-12 water year. Funding for NWMS was provided by the Commonwealth and state and territory governments.

However, the development of the NWMS did not progress as well as expected and the revised total costs to deliver the project were much higher than originally estimated, causing the government to terminate the project in 2014-15. Developing a coordinated and consistent approach to the administration and terminology of water entitlements, trading and water registers was one of a number of significant hurdles to the timely completion of this work.

When the project ceased in 2014-15 it had delivered:

- A national water market website with information on water market trades
- Enhancements to the Victorian Water Register System
- Improved system interoperability and interstate trade in the Southern Murray-Darling Basin
- A comprehensive solution architecture and design for a Common Registry System.

The BOM took over the NWMS website following the project closure, adapting it to produce its dashboard of water market information. The dashboard, which continues to improve, is an online analytics application that enables users to generate market summaries and historical trends by selecting timelines, locations and water products of their choice.

Despite the absence of a complete NWMS, state water agencies developed a better knowledge of water registration and trading requirements across the Basin during this project. The water registry system in South Australia is currently being updated and is using many of the methods developed for the NWMS.

Since the NWMS ceased, calls for a national trading platform have continued, primarily to support confidence that there is no duplication in bids to sell water access rights and to provide a single comprehensive view of the whole market. As online systems and mobile technologies have improved substantially since the NWMS was first considered, it may be appropriate to consider again the merits of a national platform or Basin-wide platform and whether it is best to be established by government or a non-government entity.

4.4. Private trade exchanges, brokers and consultants

There is a wide spectrum of businesses that provide services to water market participants, from water brokers through to portfolio advisors and trade exchanges.

Brokers provide advice and facilitate trades for a fee and often operate as part of another business, such as a real estate firm. They facilitate trades by matching volumes and prices on offers to purchase against offers to sell.

Water exchanges specialise in the systematic matching of buyers and sellers. Portfolio advisors help their clients, who tend to be large farming enterprises, develop strategies and manage their portfolio of assets. Some firms straddle the private and public sectors by providing market strategy advice to water entitlement holders and policy advice to governments.

Some of these organisations maintain their own trade databases, produce their own historical water market reports using own market indexes, and provide future market outlooks. It is important for water market participants to understand the nature of the information in these databases, as reported prices may not necessarily reflect actual or all transactions.

Given differences in water trade data, for example due to data cleansing approaches and market indexing definitions, it is possible for water price analyses to vary across private information systems compared to information in Basin State registers. Forward outlooks may differ too across organisations depending on the degree of their knowledge and the inclusion of factors affecting supply and demand.

In the larger southern MDB water markets, participants generally have access to a range of professional services including market data services, market advice and trade facilitation. In the smaller northern markets, participants have access to fewer services and rely on public information from State governments. While competition between service providers is likely to drive improvements in the quantity and quality of market information and services available to water users, the multiplicity of service providers and intermediaries may also give the impression that the market is too complicated and difficult to navigate.

The department is aware that some market participants have proposed the establishment of a central, user-friendly, national and complete system with accurate, real-time, information and services.

We encourage the ACCC to examine the value and feasibility of such a system given current and expected market conditions and past attempts to establish similar systems (as noted in the discussion in Case study 1 on the National Water Market System).

5. Water market issues

5.1. Market trends

Water market trends can be short term, within a single water year, or long term, extending over a number of water years. Trends occur in both supply and demand aspects of the market, with all trends affecting the price of entitlements and allocations to different degrees.

Historical data shows that water allocation prices are mainly driven by changes in water supply, and that the main factor influencing water supply in the MDB is rainfall and runoff into storages. Other factors influencing supply tend to be institutional, and include recovering water diverted to irrigation for the environment, more conservative allocation rules in some state water sharing plans, restrictions on interregional trade and easier access to carryover.

The demand for water delivery has altered since the early 2000s. This reflects changes in water use due to changes in crop types, including the mix between annual and permanent plantings and the expansion of irrigated crops in locations where the supply of water is subject to physical constraints. For example, there has been a significant increase in the volume of water used to irrigate almonds in the lower Murray in Victoria which is an area below the physical constraint of the Barmah choke.

Irrigators have expressed the view that the lack of information on the make-up of water in storage and the obligations on that water is reducing their ability to estimate future allocation levels, before they are announced.

A new water reporting project that was announced by the government on 2 September 2019 should provide a response to this concern and increase transparency on water availability. In this 'Near real-time water reporting' project, the government has allocated \$5 million to BOM to improve the timeliness and scope of information on water that is available in major MDB catchments. The regular reports will include information on the volume of: water committed for each major licence type; planned and held environmental water; conveyance and losses; and reserves for future years. The project will bring together data on water from a range of sources into a single dashboard format on the BOM website. Initially, reports will be available on a fortnightly basis covering the major catchments and will improve in frequency and coverage as the project is implemented.

The manner in which irrigators are able to meet their watering demands is changing. Allocations from entitlement holdings and the spot market for allocation water remain the most common sources of water. A number of broker driven products are increasingly being used by irrigators. Forward purchasing and the establishment of leasing agreements are increasingly common over periods of up to five years. Observing how continued low storage levels and available water affect these new products will become evident over the next few months.

Functioning markets respond to changing supply and demand pressures. In this inquiry, the ACCC may be able to clarify some of the current trends and pressures affecting the market.

5.2. Market participants

In recent years the number and diversity of market participants has expanded and now includes farmers, irrigators, brokers, water exchanges, water utilities, government agencies and investment management firms.

Water brokers bring buyers and sellers together, reduce search costs, improve information flows and assist in obtaining regulatory approvals. Brokers' services have diversified and have contributed to the development of new options for irrigators to obtain water and manage risk. Water brokers are subject to the CCA and the Australian Consumer Law which states that they must not engage in misleading, deceptive or unconscionable conduct, among other things.

The 2014 Independent Review of the Water Act considered irrigators' concerns regarding brokers and recommended self-regulation in the first instance. The Review panel recommended regulation by government should be considered if effective self-regulation by the industry did not eventuate. This inquiry provides a timely opportunity to assess brokers' efforts to self-regulate and whether government regulation should be further considered. Consideration should be given to the costs and benefits of regulation.

Currently, water exchanges operate as trading platforms matching buyers and sellers through an automated process or bulletin board. A number of stakeholders have identified the potential benefits of establishing a single, central platform water exchange which could display all water sales and leases without duplication of sales across a number of sites. However, our past experience with designing a National Water Market System (see Case study 1 above), indicates that the feasibility and governance of a central platform across the Basin states may not be easily resolved.

A critical requirement for an effective platform is that sale transactions must be undertaken between the seller and the relevant state register, as water rights are issued by the relevant state or territory government agency.

Water trading by investment firms who are not irrigators has been an item of concern among rural communities and irrigators in recent months. This investment can take a number of forms:

- Purchasing of entitlements to meet a company's planned future demands
- Holding of entitlements with the intent of selling the associated allocations on the allocation spot market
- Long-term leasing annual allocations over a number of years
- Purchasing annual allocation with the intent of selling later in a water year
- Carrying-over allocations into the next water year with the intention of selling.

It should be noted that many of these practices are also employed by irrigators to manage their own irrigation water supply needs.

5.3. Carryover arrangements

Any entity with a water entitlement with carryover provisions, including irrigators, investors and the CEWH, may exercise carryover options on the entitlements they own to allow more efficient management of their holdings. Carryover provisions are different in each state and widely differ in structure, policy and regulation between states and between the northern and southern regions of the MDB. In recent years there has been an increase in the use of carryover across the Basin and greater access to carryover since the provisions were introduced in Victoria in 2007 (during the Millennium drought) and updated in 2012.

The effect of increasing access to carryover on supply is complex. Easier access to carryover has contributed to a significant increase in the volume of water carried over. The long term expectation is that carryover arrangements smooth out annual variations in irrigation water availability and moderate allocation prices.

In 2018 ABARES modelled the effect of current carryover rules assuming a repeat of historical climate in the southern MDB. The results showed that allocation prices were slightly higher in the lead up to drought, as water users increased their carryover reserves, and significantly lower during the peak of the drought, especially during 2006–07 and 2007–08, as users ran down their reserves⁷.

Currently, there is no central repository that provides information to view or compare carryover rights, operations, policies and charges. Taken together with the increase in carryover volumes, irrigators, who may own entitlements from a number of sources, have indicated that they have some difficulty in making realistic forecasts about possible allocation announcements and associated planting decisions.

⁷ ABARES 2018 'Future scenarios for the southern Murray–Darling Basin water market'

The department welcomes ACCC's analysis of carryover arrangements, including the potential for establishing a common source of information on carryover rules, availability and holdings.

5.4. Constraints on trade

Several trade restrictions in the southern Basin reflect physical constraints in the system. Basin states, with the oversight of the MDBA, administer these restrictions to minimise adverse environmental impacts and impacts on third parties. We encourage the ACCC to examine these causes and effects of trade restrictions, including quantifications of effects, particularly on groups of users (e.g. types of irrigators), and measures to improve the administration of restrictions to minimise third-party impacts.

5.5. Transparency in water markets

It is widely understood that markets operate effectively when participants have access to complete, accurate and timely information when making decisions in the market. These decisions and transactions benefit individuals and ultimately the regional and national economy.

In the Basin water markets, participants have raised a range of issues and attributed the causes to the lack of market transparency. Their concerns have included:

- Too much water is owned by non-irrigators, corporate institutions and foreign persons and they are disrupting agricultural production
- Allegations of unconscionable behaviour by brokers, intermediaries and investors
- Speculators are manipulating market prices and products

The ACCC may wish to consider areas of limited transparency and what market participants and governments could do to address these areas in the immediate and long-term. It may also wish to consider recent efforts to improve water market, such as the case study below.

Case study 2: Business Research Industry Innovation Challenge

The Department secured funding for a project to improve the reliability and transparency of water markets information in the first round of Department of Industry's Business Research and Innovation Initiative (BRII) program. The program provided funding of up to \$1.1 million in two stages; \$100,000 for feasibility and \$1 million for proof of concept. An assessment is made at the end of the feasibility stage to determine whether a proposal should continue to be developed in the proof of concept stage.

At the time, the Department described some of the issues with market information in these terms:

- There are dispersed information systems relating to entitlements and allocation trade (including prices) and water availability. This information is in:
 - public state systems: authoritative but incomplete (e.g. irrigation rights not captured) and not real time
 - private commercial systems (e.g. water brokers and water exchanges): more user-friendly than public systems, but incomplete – only include data for trades in which they are involved
 - systems by irrigation infrastructure operators: only include information relating to their areas of operation and not available to the public and therefore there is less scrutiny on its quality. Prices from some of these trades are less reliable, which undermines confidence in the market
- Market participants, particularly farmers, complain that it is too difficult for them to navigate the myriad of systems, regulations and rules. They have to seek expert advice from water brokers and therefore incur additional costs in doing so

- Market participants expressed concerns about potential market manipulation as many of the rural water platforms offer brokerage services, and trade on their own as investors
- The information in systems is never up to date because there are varied delays between transactions and registration. Because of these delays transfer prices do not reflect current market prices
- Data is of variable quality. There are many transactions with unrealistically high or low prices, which is evidence of limited data quality control
- There are no identifiers for environmental transfers
- Concerns that activity by some market participants, e.g. investors, and particularly foreign investors with no connection to land, are distorting the market and driving prices to unaffordable levels; leading to suggestions that there should be restrictions on market participation
- Concerns among irrigators about potential misconduct and calls for regulation of intermediaries

The Department worked in partnership with four proponents in the feasibility stage but only one proposal progressed to the proof of concept stage. This proposal, by Marsden Jacob Associates, resulted in the launch of an app, Waterflow, in 2019 that displays in 'real time' water availability and water trade (allocations and entitlements) information in state registers, participating brokers and intermediaries, and BOM websites. While the app can quickly aggregate data, it cannot correct inaccuracies in the underlying data; this is not a shortcoming of the app but of public trade registers and databases.

Brokers continue to report prices of buy and sell offers and trades; however, stakeholders have indicated some distrust in their prices, as there is a belief that brokers can work the system to drive prices up to their advantage.

A central water-trading platform may be able to address the majority of concerns with existing information systems. Such a platform would not only systematically match buy and sell offers, without human intervention, but also provide genuine real-time trade information to water traders.

The Department notes that other stakeholders are interested in the potential feasibility of using blockchain technology to enhance water registers and reporting. Some proponents to the BRIL Challenge raised potential applications for block chain, though these proposals were ultimately unsuccessful. The technology relies in replication of information in a distributed network for integrity and continuous update.

We encourage the ACCC to consider the potential for a centralised trading platform, or better interoperability between existing platforms and state registers, including through the use of blockchain technology.

The department has had a number of contracts with consulting firms for the provision of historical market information and analysis. The department publishes some of this information on its website. This information informs internal water acquisition activities. Over time, some stakeholders have come to rely on such information for processes of their own.

MJA's Waterflow app is relatively new and it will take some time for it to achieve substantial market penetration. As noted above, there are inherent issues with the data that no mobile app can address. The MDBA's price reporting audit released earlier this year identified specific issues with some of this data and recommended a series of steps that could be taken to address these issues. The Australian Government has asked Basin states to expedite their implementation of these recommendations, including taking 'no regrets' actions to enhance water market information ahead of the ACCC's final report.

We welcome the ACCC's analysis of options to address these issues.