



Australian Government



# Water markets in the Murray-Darling Basin



*July 2015*



1. Lateral-move irrigation infrastructure on a cotton farm near Narrabri, NSW

## Introduction

The Murray–Darling Basin is one of the most important food and fibre regions in Australia. It produces one third of Australia's food supply and exports to the world. Agriculture dominates land use in the Basin, with farmland making up 90 million of the Basin's 106 million hectares. This represents around 40% of Australia's farms and 70% of Australia's irrigated land.

It is also home to one of the most mature water markets in the world. Water trading in the Basin is responsible for 95% (by volume) of Australia's water market activity.

*The average water market turnover in the last decade is nearly \$2 billion per year.*

The Basin is not a single water market. While a number of markets have developed in the northern Basin, an integrated and far bigger market exists in the southern Basin. The Murray, Murrumbidgee and Goulburn rivers dominate the south. In addition to these rivers, thousands of kilometres of channels and pressurised pipes supply water to farms, enabling water to move to where it is needed.

The interaction between these distribution systems, the weirs and storages, water property rights and various water trade rules underpin the water market.

The extremely variable inflows in the southern-connected Basin created the demand for a market that allows irrigators to purchase water from willing sellers. The development of the market has been further driven by the different demands for water; from ongoing annual requirements for permanent plantings such as grapes and citrus trees, to annual crops such as rice, wheat and vegetables which have greater year-to-year variability.

*In 2012-13, around 6,058 GL of water allocation was traded in the southern-connected Basin. This was 98% of trade in water allocation in Australia.*

The northern Basin has more variability in water reliability than the southern Basin. This variability coupled with a large number of unregulated or single storage rivers and the limited connectivity between water systems, has led to the development of smaller water markets in the northern Basin than those in the south.



## Water allocation

The amount of water that can be allocated to users in a year varies according to rainfall, inflows into storages and how the Basin states manage water in storage.

At the start of each water year (1 July), each Basin state makes water allocation announcements based on seasonal availability.

In regulated river systems, allocations are reviewed throughout the year. If water conditions and storage levels improve, the allocation can be increased if it is less than 100%.

Seasonal flows are the basis for allocations in unregulated systems. Once predetermined flow conditions are met, water may be taken. Extraction of water is limited by placing restrictions on maximum daily extraction, and the timing of extractions.

2. Modern, solar-powered channel regulator near Cobram, VIC

## About the water markets

Water markets are particularly valuable where different users have to manage the water demands of annual crops and permanent plantings. This is because it allows water to flow to where it can be used most productively.

*Water trading has become a vital business tool for many irrigators in providing flexibility in responding to variable water availability.*

The water markets in the Murray–Darling Basin are based on a ‘cap and trade’ system where the cap represents the total pool of water available for consumptive use.

Available water is distributed to users via water rights administered by the Basin States. There are two main types of rights traded in the Basin—entitlements and allocations:

- Water access entitlements\* are ongoing shares of the total amount of water available in a system.
- Water allocations# are the actual amount of water available under water access entitlements in a given season.

There are two types of trade in the Basin, permanent and temporary:

- Permanent trade is the trade of water entitlements, known as entitlement trade.
- Temporary trade is the trade of water allocations, known as allocation trade.

User demand and the supply of water are the market drivers. Users determine whether they need to buy or sell their water at a particular time. The price of water differs across regions, type of water rights and time. The market price is a reflection of these demand and supply factors.

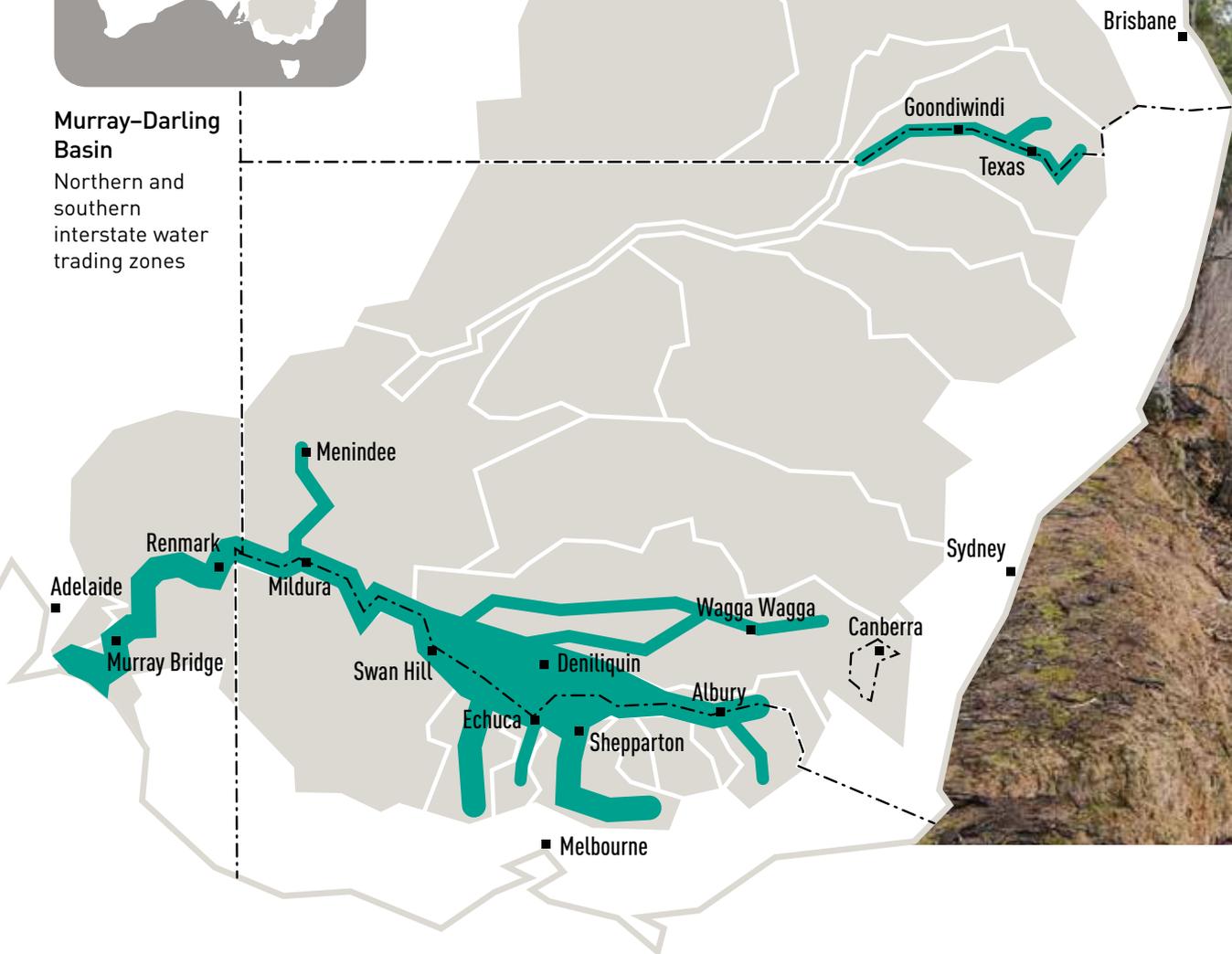
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\* In NSW, Victoria and SA they are called water entitlements, in Queensland they are allocations.

# In NSW, Victoria and SA they are called allocations, in Queensland they are seasonal allocations.



**Murray-Darling Basin**  
Northern and southern interstate water trading zones



## Interstate trade

Water users within South Australia, Victoria and New South Wales and the Queensland/New South Wales Border Rivers are able to trade water across State boundaries and between valleys. This has occurred since the early 2000's through a collective agreement between the State governments and the former Murray-Darling Basin Commission and now the MDBA.

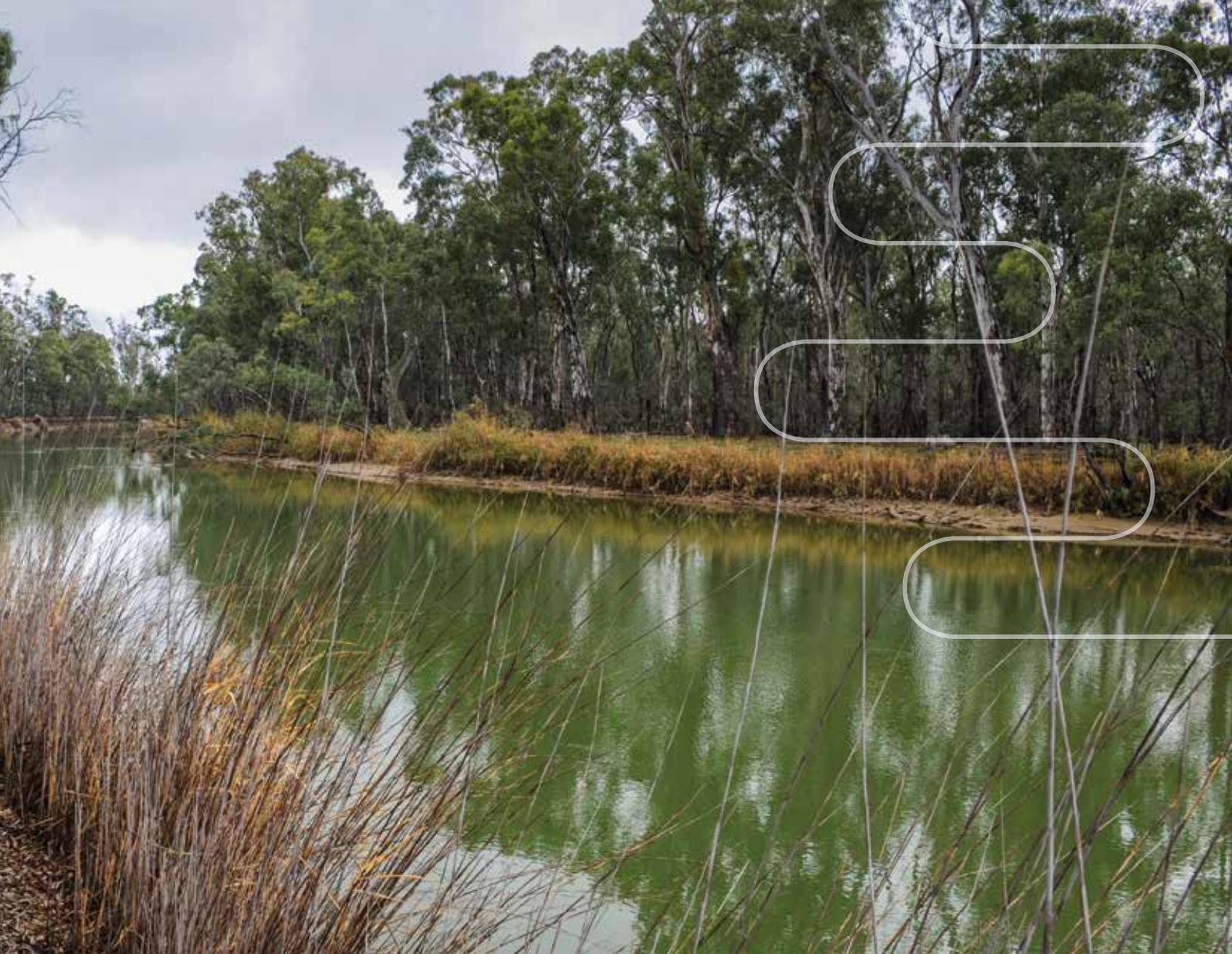
In addition to the application and enforcement of the water trade rules, the MDBA's role in the water market is to coordinate trade of water entitlements and allocations between states and valleys within the Murray-Darling Basin.

Interstate water trading has allowed:

- irrigators to source water from a broader range of users
- for the development of different water management options

A significant physical influence on the operation of interstate trade is the Barmah Choke on the River Murray.





3. Looking across the Murray River near Picnic Point, NSW

## The Barmah Choke

The Barmah Choke is a naturally occurring narrow stretch of the River Murray that begins downstream of Cobram, Victoria and ends upstream of Echuca, Victoria, running through the Barmah–Millewa Forest. The Choke restricts the flow of the River Murray to just over 10,000 megalitres per day. This is the lowest flow in any stretch of the Murray. It presents a challenge for river management, primarily because it limits the delivery of irrigation water during periods of peak demand, generally in spring and summer.

Trade can freely occur across the Choke under certain conditions. Sometimes a combination of factors will mean that demand will exceed the ability to deliver water through the Choke.

These factors include water availability and allocations, and high demand due to climatic conditions. When this occurs, it is necessary to restrict trade at the Choke to protect water delivery to existing entitlement holders.

The restriction means that trade downstream of the Choke may only occur when there is sufficient matching trade capacity available in the opposite direction which is called 'back trade'. The MDBA is responsible for keeping track of this balance of trade. Further information is available at [www.mdba.gov.au](http://www.mdba.gov.au)

## A partnered approach

Water markets in the Basin continue to mature. The development of water markets has a long history of collaboration between users, water service providers, Irrigation Infrastructure Operators (IIOs), Basin states and the MDBA.

There are a number of sets of rules regulating water trade in the Basin including:

- Basin Plan water trade rules.
- The Australian Competition and Consumer Commission (ACCC) water market and charge rules
- Basin State trade rules
- IIO rules within irrigation networks

These rules all operate together to ensure the continued development and operation of the water markets in the Basin.

### Basin Plan water trading rules

The Basin Plan water trading rules that came into effect on 1 July 2014 as part of the Basin Plan 2012, introduce a common framework for water trade, which aims to allow the water market to operate more effectively. They deal with various aspects of the trading of both surface water and groundwater rights in the Basin, including the:

- entitlements and allocations, irrigation and delivery rights
- removal of barriers to trading water
- provision of information to enable trading to take place.

For most individuals, it is business as usual under these rules, but there are two key requirements to note:

- It is compulsory to report the price of a trade. This is done as part of normal state trading processes.
- You must not trade if you are aware of details about a water announcement that is not yet public.

The MDBA have developed a series of guidelines to assist individuals and organisations to understand their obligations under the Basin Plan rules. The guidelines are available at [www.mdba.gov.au](http://www.mdba.gov.au)

The Basin Plan water trading rules complement the various existing rules. In the event of inconsistencies between the two sets of rules, the Basin Plan water trading rules apply.

### The ACCC water market and charge rules

The ACCC has monitoring, enforcement, advisory and, in some cases price setting roles, for the water market rules and water charge rules made by the Commonwealth Water Minister under the Water Act.

The ACCC is responsible for:

- regulating the charging practices of IIOs on certain matters
- reducing barriers to trade
- improving irrigators' access to markets
- ensuring greater price transparency.

More information on these rules is available at [www.accc.gov.au/regulated-infrastructure/water](http://www.accc.gov.au/regulated-infrastructure/water)

### Basin state trade rules

Basin states are responsible for:

- determining water allocations
- developing policies and procedures for trade
- monitoring water use
- developing water resource plans that set the rules for sharing water between users and the environment
- day-to-day trade operations such as trade applications and approvals.

## IIO rules within irrigation networks

The IIOs oversee their trading rules within their irrigation network. These rules ensure the operation, maintenance and accounting of trades that occur within their networks. An IIO owns or operates water service infrastructure for delivering water for the primary purpose of irrigation. Goulburn-Murray Water, Murrumbidgee Irrigation Limited, Central Irrigation Trust and Narromine Irrigation are all examples of IIOs.

## Compliance

The MDBA is responsible for regulating and enforcing the Basin Plan water trading rules.

If you think there has been an instance where the rules have not been complied with, you can contact us with your concerns. Instances where a breach of the water trading rules may have occurred might include:

- an irrigation operator has unreasonably restricted a trade of water within the network
- a state approval authority has not provided reasons for the refusal of a trade
- a water announcement has not been made generally available to the public

Concerns can be raised via:

- email to [watermarkets@mdba.gov.au](mailto:watermarkets@mdba.gov.au)
- mail to the MDBA GPO Box 1801, Canberra 2601
- [www.mdba.gov.au](http://www.mdba.gov.au)

*4. Farmer inspecting drip irrigation system and soil moisture monitors on his grape farm near Lake Brolga, VIC.*





## Making market information more accessible

As part of improving access to market information, our website has access to Basin state trading rules and irrigation infrastructure operator water trading rules. This brings all the relevant information on the operation of the water market in the Basin together in the one place.

The guidelines and information on the range of water market products are available at [www.mdba.gov.au](http://www.mdba.gov.au)



5. Centre-pivot irrigation system on a wheat farm near Hay, NSW

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The provisions in the *Water Act 2007* and the *Basin Plan 2012* govern the water trading rules. All decisions regarding the water trading rules need to be made with reference to these laws. This publication is intended as guidance only and does not constitute legal advice. Users should seek their own legal advice where appropriate. Decisions in relation to the water trading rules will be based on the aforementioned laws. Reasonable care has been taken in the compilation of this publication, however the Murray-Darling Basin Authority does not guarantee or warrant the accuracy, or completeness, or currency of its contents and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of or reliance on this publication.



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