



Australian Government



MURRAY-DARLING
BASIN AUTHORITY

Groundwater

Groundwater is the water that sits beneath the earth's surface. It is stored in fractured rocks, porous rocks and soils called aquifers or groundwater systems. Groundwater can be connected to surface water, which includes the water in our rivers and wetlands.

Groundwater is important for ecosystems in caves. It also provides the water source and pressure for springs and supports rivers and wetlands. Many groundwater dependent ecosystems are also significant cultural places for First Nations.

In the past, the complexity and importance of groundwater has not been well recognised in water management. The connection between groundwater and surface water has not been well understood, which has led to the inadequate management of this precious and finite resource. This has resulted in issues associated with access and water quality.

The sustainable use of groundwater is vital to ensuring the health of the Murray-Darling Basin. Groundwater in the Basin is used for drinking water, agriculture, industries and for the environment.

Sustainable management

It is possible to better measure and manage groundwater sustainably and the Basin Plan provides a framework to facilitate this.

For the first time, under the Basin Plan, Basin-wide limits have been set on the amount of groundwater that can be taken from the Basin.

These limits are called sustainable diversion limits.

To make sure groundwater use is within the sustainable limits over the long-term, Basin state governments have rules about how and when groundwater can be taken. They monitor and report on how much groundwater is being used each year.

Key facts

Management of groundwater is important to preserve and improve water quality and to support management of surface water.



Water existing **below ground level** is called groundwater.



Groundwater and surface water are connected and must be jointly managed for river health and the health of the Basin.



Sustainable diversion limits set the limit of groundwater that can be used.



There will be 19 **water resource plans** to manage groundwater resources in the Basin.



Some rivers and river ecosystems in the Basin fully or partly **rely on groundwater to survive**.

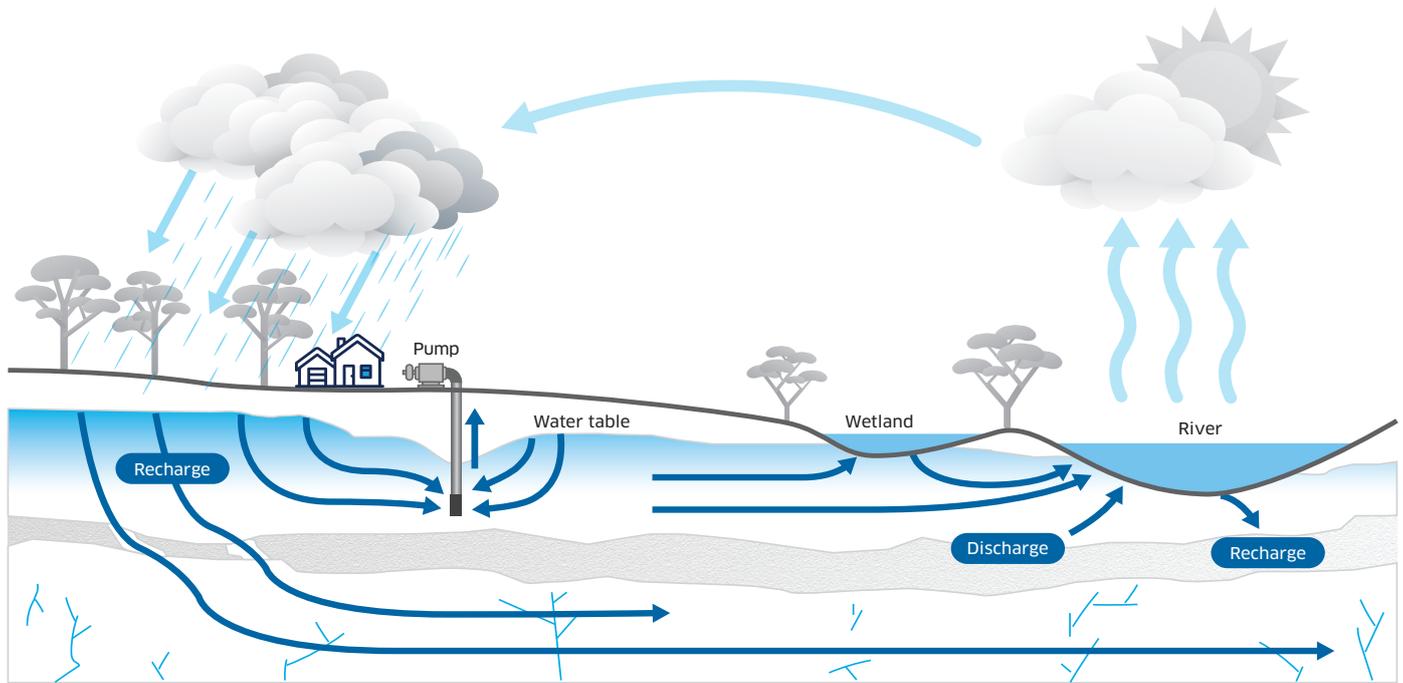


Some communities in the Basin rely on groundwater reserves for **drinking water**.



Groundwater is often used to **maintain water supply and keep fish and aquatic animals alive in times of drought**.

Recharging groundwater takes time



In some systems groundwater may flow quickly over days or weeks, in other systems flow may be very slow, taking decades or longer to move through. Basin states understand individual aquifer properties and manage areas differently to suit.

Maintaining groundwater health

The Murray-Darling Basin Authority (MDBA) works with Basin state governments to monitor and manage the Basin's groundwater resources to make sure they are healthy and productive.

Groundwater resource monitoring looks at changes in the water level or pressure in a groundwater resource. This tells us:

- the amount of water that can be sustainably taken from groundwater systems
- the amount of water flowing into (recharging) groundwater systems.

The MDBA also monitors salinity levels in some groundwater systems, as the flow of saline groundwater poses a serious risk to the health of the environment, including our trees, grasslands, rivers and wetlands.

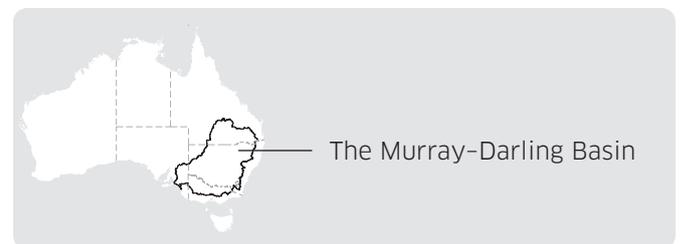
Under the Basin Plan, Basin state and territory governments will manage both surface water and groundwater resources through water resource plans.

Unlike surface water, **groundwater resources can take longer to recharge – or refill with water – when water is taken. This may be weeks, months, years or even hundreds of years in some systems.**

This means groundwater resources need to be managed for the long term to ensure the amount of water taken is sustainable.

Groundwater and surface water, like rivers and wetlands, can be highly connected and need coordinated management. When groundwater is highly connected to surface water, it can provide permanent pools for fish and other aquatic animals. This is very important when there are shortages in surface water.

Groundwater services the environment in a number of ways. Some plants are completely dependent on groundwater for their needs. River red gums are an iconic species with their deep roots that access groundwater.



Connect with us.

The MDBA has offices in Adelaide, Albury-Wodonga, Canberra, Goondiwindi, Griffith, Mildura, Murray-Bridge, Toowoomba, and regional engagement officers around the Basin.

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