# Fact sheet 7: Great Artesian Basin Economic Report


## Background

The GAB is one of the largest underground freshwater reservoirs in the world. It is one of the few major artesian basins in the world that have not been over exploited. It underlies approximately 22% of Australia – an area of more than 1.7 million square kilometres, beneath arid and semi-arid parts of Queensland, New South Wales, South Australia and the Northern Territory. The GAB is Australia's largest and most important groundwater resource.

Water extracted from the GAB is the only reliable water source for communities, industries and landholders in the arid and semi-arid parts underlain by the Basin. Water from the GAB has shaped much of the natural and cultural history of central Australia. Without GAB water, economic development and social infrastructure in many GAB regions would not have been able to occur and could not continue into the future.

In contrast to other major water resources in this country there is very little accurate timely information about the quantities of water extracted from the GAB, what the water is used for, and the economic, social and environmental values that accrue from using the water.

Robust knowledge of the quantity and value of resources and the likely return on investment enables governments, industries and communities to develop effective policies and make sound decisions that achieve the best outcomes from GAB water supplies.

In 2016 government jurisdictions with responsibilities for the GAB, on advice from the Great Artesian Basin Coordinating Committee (GABCC), commissioned a report on current and future water use and users in the GAB, and the value of industries or sectors dependent on Basin water.

## Report Summary

The report 'Economic output of groundwater dependent sectors in the Great Artesian Basin', by Frontier Economics, provides improved understanding of economic activity within the GAB to:

- inform development of a new Strategic Management Plan (SMP) for the GAB
- assist the GABCC to provide more informed advice to GAB governments; and
- assist the development of policies, funding options and incentives for continued renewal and replacement of GAB water infrastructure.

The report is available at: http://agriculture.gov.au/water/national/great-artesian-basin/economic-output-groundwater-dependent-sectors-great-artesian-basin

The report highlights two significant economic values:

- annual contribution to economic production and activity dependent on GAB water; and
- the significant level of both private and public investment in GAB water delivery infrastructure, and the replacement value that represents the likely investment required to maintain artesian pressures and water savings over time.

Beyond the economic uses of water in the Basin, the report also notes other significant values, including groundwater-dependent sites in need of protection, unique environmental values, and the need to sustain Aboriginal cultural values.

### Economic production and activity

It is estimated that GAB water is essential to at least $12.8 billion of production annually, underpinning much of the economic activity and employment across the regions, adding economic value to land and minerals.

High economic value industries and activities dependent on GAB water include:

- *stock* (pastoral and intensive) - $4.7 billion in value, comprising more than 14 million beef cattle ($4 billion annually) and more than 11 million sheep and lambs ($600 million annually)
- *mining* - output $6.4 billion annually
- *gas production* - coal seam gas in the Surat Basin $1.7 billion in 2014-15 and likely to increase further
- *tourism* at GAB springs and areas using artesian water in mineral spas, about $725 million annually
- *irrigated agriculture* – as a supplement to surface water for fodder and horticultural production in some areas (about $58 million annually)
- *urban water* – supplying more than 120 towns and settlements, valued at $43 million annually.

### Investment

Significant public and private funds have been invested in developing and protecting the GAB water resource to support and sustain its economic, social and environmental values.

At the time of the report, the Great Artesian Basin Sustainability Initiative (GABSI) had, since 1999, provided $230 million for capping, piping, tanks and troughs, resulting in annual water savings of 204,527 Megalitres.

Based on the total number of bores across the GAB (34,591), the expected replacement cost of all bores and associated water distribution systems was up to $15 billion dollars.

### Future challenges

The GAB Economic Report has provided very valuable information to use in preparation of the draft SMP 2017 and meets some immediate needs for information. However, the scope and robustness of the report limits its usefulness. New or expanded industries in the GAB will increase demand for water, and will pose challenges for effective long term management to maintain artesian pressures. As user demand, industry activity and management practices for GAB water develop further, there is a clear need for generation of, and access to, updated information.

The draft SMP 2018-2033 emphasises the need for robust information to provide evidence for decision-making. Implementation of the final SMP will need to include action to continue generating timely and well-founded information about the use and values supported by GAB water extraction.

## Also available:

The GABCC has worked with State and Territory GAB jurisdictions to develop more comprehensive data on the number of bores across the GAB and their likely replacement value.

A fact sheet is available: www.gabcc.gov.au/publications.

The *draft Strategic Management Plan 2018-2033* is available at: www.gabcc.gov.au/basin-management/strategic-management-plan.