

Executive Summary

The Murray-Darling Basin is without doubt one of the most important river systems in Australia. It contains 11 per cent of Australia's population and generates agricultural production worth \$15 billion per annum (in gross value terms). This represents 40 per cent of Australia's total agricultural production and 65 per cent of Australia's irrigated farms.¹

The Basin is also home to many of Australia's key riverine environmental sites. The ongoing health of the river system is essential for sustaining these important water-dependent ecosystems and the ecosystem services they provide; the long-term agricultural productivity of the Basin; as well as the regional and rural communities which depend on a healthy river for their livelihoods.

Over several decades the health of the Basin system has deteriorated through a combination of increased water extraction (especially in the 1970s, 1980s and early 1990s) and the many years of drought until 2010 (the millennium drought).

The increased rainfall of recent years has given some reprieve to the potentially devastating environmental, agricultural and social consequences of the millennium drought. However the inevitability of future droughts (which may be even more severe) requires the implementation of a Basin Plan which effectively manages the social, economic and environmental risks facing the Basin system to ensure a sustainable and productive future for the Basin. It is with this in mind that the committee welcomes the tabling of the Basin Plan in Parliament late last year. The committee commends the work of the Australian government, the Basin states and the MDBA for one of the most significant water reforms in Australia's history.

Because of the need to balance a range of competing interests, the Basin Plan strikes a necessary yet imperfect compromise. Over the course of the committee's inquiry, much of the evidence received highlighted concerns with the various iterations of Basin Plan. The committee's second interim report of October 2012 discussed many of these issues prior to the presentation of the final Basin Plan to Parliament in November 2012. However, some issues with the final Basin Plan remain. While the committee is mindful that this report will not change the substance of the Basin Plan, it considers that the evidence received and recommendations made in this report and previous reports make a significant contribution to the ongoing public debate about the management of the Murray-Darling Basin. It also urges the government to consider the report's recommendations as part of the adaptive management framework that will be used to implement the Basin Plan.

The key findings of this report are as follows:

1 ABS, *Completing the Picture - Environmental Accounting in Practice*, 4628.0.55.001, May 2012, p. 66.

Surface water

The committee remains concerned about how the 2750 GL/y reduction in the environmentally sustainable level of take (ESLT) was determined by the Murray-Darling Basin Authority (MDBA). While the committee acknowledges the additional modelling of reduction scenarios that occurred just prior to the release of the final Basin Plan, this modelling could have been produced in a more timely manner and covered additional reduction scenarios.

Furthermore, the committee considers that future pressures on water resources due to the projected range of climate change impacts and run-off interceptions predictions should have been more thoroughly considered in the modelling and that more research in these areas is needed. In addition, despite the volumes of information released about surface water, the MDBA needs to improve how key information is presented to stakeholders and the Australian public. The committee expects that these issues will be the subject of further government-funded research and will also be key considerations for the MDBA in its adaptive management processes.

Groundwater

The committee remains concerned with how the proposed extraction limits on groundwater have increased significantly since the Guide and subsequently changed across various iterations of the Basin Plan. The committee is of the view that the reasons for such changes have not been adequately explained. Furthermore, the committee is concerned with the limitations in knowledge about groundwater and surface water connectivity and that the Basin Plan does not apply a more precautionary approach where these knowledge gaps exist. While the committee acknowledges the steps taken by the MDBA to update information about groundwater in the Basin, it considers that further research in surface water and groundwater connectivity should be a high priority.

Infrastructure investment, environmental works and measures and constraints management

The committee welcomes the use of environmental works and measures and other water infrastructure projects to improve water efficiency in the Basin. It also supports the target that environmental works and measures to contribute as much as 650 GL/y of the 2750 GL/y reduction in take through the application of the adjustment mechanism. The committee urges the government to assist Basin states in reaching this target and to keep Basin stakeholders informed of the progress, as the committee is concerned of the uncertainty created of any shortfall in the 650 GL/y being made up by water entitlement buybacks.

The committee welcomes the consideration of constraints removal in the Basin system to return an additional 450 GL/y to the environment. However, the committee is concerned about the potential consequences that this may have on landholders and communities in certain parts of the Basin. The committee acknowledges the requirement of the MDBA for consultation when proposing constraints removal and it encourages the MDBA to do so in a manner that is comprehensive, timely and that fully addresses stakeholder feedback.

Water trading

The committee considers that the over-allocation of water entitlements in the Basin in previous decades is a major source of the current water scarcity problems faced in the Basin. The committee recognises that the development of diversion limits under the Basin Plan addresses this issue.

The committee remains concerned that there is limited information about the extent of sleeper and dozer water licences in the Basin and how their activation and trade may impact on the management of water resources in the Murray-Darling Basin.

The committee also remains concerned about the conduct of the government buyback program of water entitlements. In particular, its inquiry found that a number of stakeholders and rural communities had felt increased cost pressures resulting from the ‘Swiss cheese’ effect caused by non-strategic buybacks creating gaps in water delivery and that many sellers of water entitlements sold entitlements under financial distress. Although the majority of water buybacks have been completed, the committee urges the government to address these two issues when conducting the remaining buybacks.

Types of water entitlements

The committee was concerned about how the different types of water entitlements were addressed in the modelling used to develop the Basin Plan. While it was acknowledged by relevant government officials that the use of different types of water entitlements (or reliability types) could have a significant impact on the water resources outcomes achieved in the Basin, the committee was not provided with convincing evidence that this issue was adequately addressed. The committee also heard evidence that raised concerns about the value for money of the buyback scheme due to different water entitlement types. In this regard the committee took evidence about the Twynam water purchase and the proposed Nimmie-Caira irrigation area buyback.

Socio-economic impacts and stakeholder engagement

The committee heard evidence about the limitations of the socio-economic modelling of the Basin Plan. It also took evidence from rural communities and stakeholders that stated that social and economic consequences of the Basin Plan would be serious for many rural communities. In addition, the committee heard of some significant gaps in the conduct of the government’s consultation process over the Basin Plan despite the high number of consultation meetings that were conducted. The committee also heard that while the MDBA has embraced the concept of ‘localism’ in its future work on the Basin Plan there was confusion among stakeholders about how this concept would apply in practice.

Future research

Finally, the committee found that research and development (R&D) was essential to the ongoing implementation of the Basin Plan and solving many of the issues facing the Basin system. In particular, the committee considers that R&D should be improved in five key areas:

- possibilities for improved water efficiency through crop use such as non-paddy rice;
- future changes in water interception due to changing farm practices;
- surface water and groundwater connectivity;
- soil use and management; and
- improved water efficiency from infrastructure projects.

The committee considers that R&D should be fully and explicitly integrated into the MDBA's adaptive management approach to the Basin Plan.