
Findings and recommendations

Water use in the Murray-Darling Basin

FINDING 2.1

Current planning arrangements tend to assign a more than proportional cut to environmental water during dry periods. With climate change expected to increase the prevalence of dry conditions (particularly in the southern parts of the Basin), the environmental consequences of this could become increasingly significant. Accordingly, the prospect of climate change adds to the imperative to adjust the balance between environmental and consumptive uses of water in the Basin.

Development of water markets

FINDING 3.1

Water markets are well developed and active in the southern-connected Basin, but not in parts of the northern Basin, where entitlements are generally rules based rather than storage based.

FINDING 3.2

Market intermediaries, including brokers and exchanges, have developed alongside the market to facilitate increased trade.

Allocating environmental water

FINDING 4.1

Water recovered in the northern Basin can result in infrequent, but at times significant, environmental benefits for the southern parts of the Basin, given hydrological constraints. Water recovery within the northern catchments that are often disconnected should be driven primarily by environmental priorities within those catchments. Conversely, the southern Basin — including the Murrumbidgee, the Murray and the Goulburn rivers — is highly interconnected, allowing considerable flexibility in sourcing and delivering water for environmental purposes throughout these valleys.

FINDING 4.2

Decisions on allocating water between competing uses in the Basin should be based on good science. But the values the community attaches to alternative uses are also crucial in achieving the best outcomes for Australia. Difficult tradeoffs are required between different environmental outcomes, and between environmental and consumptive outcomes.

Recovering water through non-market means

FINDING 6.1

The Commission's interpretation of the Water Act 2007 (Cwlth) is that it requires the Murray-Darling Basin Authority to determine environmental watering needs based on scientific information, but precludes consideration of economic and social costs in deciding the extent to which these needs should be met. This means that the overall proportion of water allocated to the environment is to be determined without explicitly taking into account the Australian community's environmental preferences, the opportunity cost of foregone irrigation or the role of other inputs such as land management. There is a risk that this approach will impose unnecessarily high social and economic costs.

RECOMMENDATION 6.1

The Murray-Darling Basin Authority should set sustainable diversion limits (SDLs) in a way that balances environmental, social and economic tradeoffs. This approach would appear to be consistent with the objects of the Water Act 2007 (Cwlth), but may not be consistent with the specific provisions defining how SDLs are to be set. If it is inconsistent, the Water Act should be amended.

RECOMMENDATION 6.2

Some new information on how to improve environmental outcomes from watering will inevitably become available after the Basin Plan is made. To enable such information to be fully utilised, the Murray-Darling Basin Authority should ensure that the Basin Plan is sufficiently flexible to allow the Commonwealth Environmental Water Holder to trade water allocations and entitlements in ways that improve overall environmental outcomes.

FINDING 6.2

Considerable uncertainty exists about the application of the risk assignment provisions set out in the Water Act 2007 (Cwlth) in respect of compensation that might be payable to irrigators upon the implementation of the Basin Plan. This is impeding the ability of irrigators to plan for the future and is affecting the efficient conduct of the buyback.

RECOMMENDATION 6.3

All Basin jurisdictions should clarify how the risk assignment provisions in the Water Act 2007 (Cwlth) will apply to the reductions in water availability that are likely under the Basin Plan. This should occur as soon as possible.

FINDING 6.3

Purchasing water products from willing sellers is generally the most effective and efficient means of acquiring water, where governments are liable for the cost of recovering water for the environment.

FINDING 6.4

Funding irrigation infrastructure upgrades is generally not a cost-effective way for governments to recover water for the environment.

FINDING 6.5

Rather than having a \$5.8 billion program focused predominately on infrastructure upgrades, it would have been more effective and efficient to:

- use the sustainable diversion limits from the Basin Plan to determine the targets for reallocation in each catchment*
- use the buyback program as the sole means of easing the transition to those targets*

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- *consider establishing a much smaller program to assist irrigators and related communities adjust to a future with less water, through the most effective means available (not just subsidies for irrigation infrastructure).*

RECOMMENDATION 6.4

Rigorous approval processes should be applied to all projects under the Sustainable Rural Water Use and Infrastructure (SRWUI) program. In particular, projects should only be approved where:

- *properly conducted cost–benefit analysis shows there to be net benefits*
- *government contributions are commensurate with public benefits (excluding private benefits to irrigators).*

Applying such approval processes is likely to result in the SRWUI program’s budget being underspent. This money should be reallocated to Restoring the Balance or to other government priorities.

Designing a portfolio of water products to meet environmental watering needs

FINDING 7.1

Purchasing seasonal allocations offers a transparent, flexible and low-cost means of addressing urgent, short-term environmental watering needs. Where practical, this product should be included in the portfolio of water products.

FINDING 7.2

Purchasing water entitlements in unregulated systems can provide environmental managers with different environmental watering possibilities to holding storage-backed entitlements. Although less reliable, holding entitlements in unregulated systems can help managers to restore environmental flows in river systems. However, their effectiveness and efficiency can be compromised by complexities involved in shepherding environmental water downstream. These third-party effects may need to be addressed through negotiating with groups of irrigators, or through administrative changes to environmental flow rules.

In recovering water for the environment, the Australian Government should develop a portfolio of water products, and not focus solely on entitlements. Other products (such as seasonal allocations, leases on entitlements, options contracts and contracts for environmental services) have advantages in specific contexts and should be considered.

Mechanics of the buyback

FINDING 8.1

Where active markets for water entitlements exist, acquiring water entitlements directly from those markets is likely to be more efficient than utilising a tender.

FINDING 8.2

Allowing irrigators to bid several combinations of entitlements and prices as part of a single bid could improve the efficiency of the tender.

FINDING 8.3

The efficiency of the conveyancing process could be improved by:

- exchanging conditional contracts of sale before the due diligence process commences*
- assessing the current due diligence process for potential duplication with current state approval processes and removing the sources of duplication*
- the Department of the Environment, Water, Heritage and the Arts notifying tender participants of any delays in the process and the reasons for the delays.*

FINDING 8.4

Using the buyback to address indirect objectives (such as achieving distributional goals, system rationalisation or reducing the salinity impacts of water use) is likely to compromise the scheme. Other more direct instruments would generally achieve those objectives at lower cost.

FINDING 8.5

Adopting a rapid pace in the buyback of water entitlements before environmental needs are clearly identified could reduce the program's effectiveness and increase its cost to the community. It is likely that the buyback has proceeded at a faster than optimal pace to date.

Governance and institutional issues

RECOMMENDATION 9.1

In the short term, while the portfolio of water entitlements is being established, the Commonwealth Environmental Water Holder should be allocated an appropriate budget to purchase additional water products that best meet its immediate environmental objectives.

FINDING 9.1

Transparency and accountability in environmental water recovery under the Restoring the Balance (RTB) program would be improved by:

- *the Murray-Darling Basin Environmental Water Recovery Report including a summary of all existing provisions for environmental water by catchment. The summary should include environmental water set aside under state water sharing plans as rules-based flows and water entitlements, as well as environmental water entitlements recovered through government-funded water recovery programs.*
- *the Department of the Environment, Water, Heritage and the Arts clarifying how RTB water recovery targets in a catchment take into account environmental water to be recovered under the Sustainable Rural Water Use and Infrastructure program, and rules-based environmental water provisions in state water sharing plans.*

FINDING 9.2

Holdings of environmental water and the management of those holdings in the Murray-Darling Basin are fragmented between various state and local environmental water managers and the Commonwealth Environmental Water Holder (CEWH). Some institutional arrangements for coordinating the CEWH's environmental watering activities with other environmental water managers have been implemented. However, mechanisms for the full coordination of environmental water management are still evolving.

Recovering water is not always sufficient to achieve desired environmental outcomes in the Basin. Other inputs, such as capital works to manage and direct environmental flows, and changes to land management practices, may also be required. Yet the Basin Plan, and the Australian Government's buyback and infrastructure programs, focus solely on recovering water. Better systems are needed to coordinate the mix of water purchases with other actions and inputs to achieve the desired environmental outcomes.

Where an effective and accountable local environmental water manager exists, and there are no significant spillovers from water use, the Commonwealth Environmental Water Holder should enter into an agreement that:

- ***delegates use of an appropriate quantity of its environmental water to that manager***
- ***requires the manager to coordinate the use of Commonwealth water with other actions and inputs that best achieve agreed outcomes.***

Overcoming impediments

Restrictions on water trade in Victoria and New South Wales have the potential to impair the effectiveness and efficiency of the buyback:

- *Victoria's agreement to allow some exemptions to a 4 per cent limit on out-of-area trade of water entitlements is an improvement. But because the extra purchases can only occur from specified areas, the constraints decrease the cost effectiveness of the buyback, and increase adjustment problems for some regions.*
- *New South Wales' agreement to lift a blanket embargo on sales to the Commonwealth and replace this with annual volumetric caps is less distortionary than the Victorian restrictions, but it does limit options for conducting a faster buyback, should this be deemed necessary.*

RECOMMENDATION 10.1

The 4 per cent limit on out-of-area trade of water entitlements should be eliminated as soon as possible, rather than phased out by 2014 as currently scheduled. Limits on the amount of entitlements that can be sold to the Commonwealth through the buyback should also be eliminated.

FINDING 10.2

Irrigation infrastructure operators can reduce the risk that geographically-dispersed sales into the buyback will harm the competitiveness of their irrigation area by moving to more cost-reflective pricing for water delivery.

RECOMMENDATION 10.2

The National Water Commission should conduct a study into ways of expanding the ability of water users to carryover water, while adequately managing third-party impacts. This study should examine the suitability of capacity sharing, ‘spillable water accounts’ and other arrangements across different regions.

Concluding comments

FINDING 11.1

Without even implementing the Basin Plan, the amount of water that is likely to be recovered for the environment through existing programs is substantial. It will likely exceed the lower bounds of what some commentators — such as the Wentworth Group — have called for in terms of minimum flows necessary to achieve a moderate probability of achieving a healthy river system.