

Managing water flows in the Murray-Darling Basin: a rebalance will benefit us all

By EDO NSW Policy and Law Reform Solicitor Dr Emma Carmody

29 August 2016

Between 2007 and 2016, the focus of laws and policies on the Murray-Darling Basin has shifted from restoring the health of the Basin to mitigating the socio-economic costs that may be linked to environmental water recovery. This refocus not only threatens the survival of the Basin's water resources and water-dependent ecosystems, it ignores the link between sustainable water 'take' for human use and the long-term viability of Basin communities.

This blog looks at environmental water recovery in the Murray-Darling Basin and examines recent changes in Basin laws and policies. It concludes that a rebalancing needs to happen soon if we are to protect this precious river system.

The Water Act

The *Water Act 2007* was passed at the height of the millennium drought with a view to restoring health to the ailing Murray-Darling river system. The system, which includes 16 internationally listed wetlands, had become severely degraded following decades of unsustainable water use, principally for irrigating farms. While the Act is a complex piece of legislation, its core function is to reinstate an 'environmentally sustainable level of take' (ESLT) under the Basin Plan.





Emma at the International River Symposium, September 2015

The Basin Plan

The Murray-Darling Basin Plan, which became law in late 2012, aims to improve water management in the Basin. Its key strategy for reinstating an ESLT is to reduce the amount of water taken from the system for human consumption. This water is then returned to the environment.

Under the Plan, water take across the Basin must be decreased by 2,750 gigalitres per year (GL/year) from 2019. But this target is not enough: based on the Authority's own modelling, this figure will still deprive many ecosystems – including world-renowned Ramsar wetlands – of the water they need to survive into the future.

Importantly, the Basin Plan also allows the 2,750GL figure to be adjusted up or down (within a 5 percent limit), if certain conditions are met. This 'adjustment mechanism' was provided for in an amendment to the Water Act in 2012.

'Down' water

The Basin Plan allows the 2,750GL figure to be reduced if Basin states deliver water-saving infrastructure projects or change their water delivery rules. The rationale is that such projects and rule changes will allow the same environmental outcomes (as under the 2,750GL scenario) to be achieved with less water. Any Murray-Darling water 'saved' through these concessions can then be diverted for agriculture.

This is a controversial idea. Some conservation groups and scientists question whether you can truly achieve the same environmental outcomes with less water. Furthermore, the Murray Lower Darling Rivers Indigenous Nations has expressed concern that there has not been an assessment of the impact of supply measures on cultural flows and activities.

At this stage, it looks like these projects and rule changes will allow the reduction figure to be rounded down to around 2,100 GL/year.

'Up' water

The Australian Government is required to acquire 450GL of Murray-Darling water entitlements by supporting on-farm 'efficiency measures' (irrigation upgrades that reduce water loss). The Government is responsible both for funding these efficiency measures and for purchasing the water that is saved, which will then be added to the pool of environmental water.

The idea is that the saved water can be delivered to the environment without reducing irrigators' productivity. It appears to be a win for both farmers and the environment.

However, while returning extra water to the environment is vital, no one knows if there will be sufficient uptake among irrigators to enable the Government to purchase the

required amount of water. Furthermore, the Water Act and Basin Plan do not require the Government to acquire licences in those areas where environmental water is needed most, or to purchase high-security licences that guarantee water in most years. It has also been argued that these water savings will be incapable of delivering the flood events that are actually needed to keep the river system healthy.

A refocus away from environmental protection

With the benefit of hindsight, we can see that amendments to the Water Act and compromises in the Basin Plan were the beginning of a trend. This trend has seen sustainable outcomes compromised in order to mitigate the socio-economic impacts that may be associated with increased environmental water.

Further developments that reflect this change in direction include:

- A 1500GL limit being placed on the voluntary sale of water entitlements to the Government, which is the most cost-effective and environmentally sound method of increasing environmental water. Voluntary buybacks have been replaced by the efficiency measures, outlined above.
- The Northern Basin Review process, which may result in an amendment to the Basin Plan that reduces water recovery for the environment in the northern part of the system.
- Amendments to the Commonwealth Environmental Water Holder's (CEWH) functions to include spending on undefined natural resource management (NRM) actions. The CEWH is the agency responsible for purchasing and managing environmental water licenses. It is arguable that it should focus on water recovery and delivery, and that NRM actions should be left to other agencies.
- The possible 'offsetting' of environmental water with NRM actions. These actions could be a 'substitute' for returning water to the environment. Many scientists and conservationists question the validity of this approach.

Climate change

Of further concern is the fact that the Basin Plan does not overtly address the threats posed by climate change. While it is true that allocations will continue to vary from year to year in response to prevailing conditions, major concerns remain about how the burden of reductions in water availability will be shared between consumers and the environment. Indeed, some scientists argue that additional environmental water must be recovered now in order to restore degraded ecosystems and to increase their resilience in the face of increasingly long dry spells.

Rebalancing the Murray-Darling

The Water Act requires environmental, social and economic factors to be taken into account when determining how much water to return to the environment under the Basin Plan. However, it is arguable that ongoing efforts to mitigate socio-economic

impacts may compromise the environmental outcomes prescribed by the Act. This is unfortunate for the plants, animals and ecosystems that rely on Murray-Darling water – and for the communities that depend on this incredible natural resource.

On a positive note, the Basin Plan – like any legislative instrument – can be amended. As such, it is possible that a decision can be made to return more water to the environment. This may offer hope to those who work to defend the vital Murray-Darling system. But if the science is anything to go by, time is not on our side. A rebalancing of our management of this precious river system needs to happen before it's too late.

A longer version of this article will appear in the spring edition of Bridging, the newsletter of the Peter Cullen Trust. Emma is a fellow of the Trust.

See also Emma's follow up blog:

[Complementary measures: is carp herpes really a substitute for water in the Murray-Darling?](#), 2 February 2017.