

# Murray Darling Basin

## *Plan to reallocate water to the environment*

Following floods and disasters, 2011 promises to be an interesting year for water planning in Australia. What is needed now is strong and even-handed political leadership to take greater account of rural communities and their social and economic needs, without losing the opportunity to use the scientific basis established to date to restore some of the damaged ecosystems. A powerful, yet controversial, act will empower this process in Australia's largest transboundary water basin.

Under the Australian constitution, responsibility for water management resides with the country's six state governments. Prior to 2007, the Australian federal government had a coordinating and leadership role, particularly in transboundary systems such as the Great Artesian Basin and the Murray Darling Basin (MDB). The latter system is Australia's most productive agricultural region, producing 36 per cent of the country's total value of irrigated production in 2008–09. Entitlements to divert surface water for consumptive use within the Basin now amount to 11,000 Giga-litres (Gl), more than one third of the Basin's runoff of 31,800 Gl per annum. As a consequence, the average flow out of the mouth of the Murray River has dropped to 41 per cent of historic flows.

This development has come at an environmental cost. The MDB contains some of the country's most diverse and rich natural ecosystems including a world heritage site and 30,000 wetlands (of which

16 are Ramsar listed) that provide habitat for 95 threatened fauna that are listed in the federal environmental legislation. Successive reports over 20 years had concluded that parts of the Basin, particularly in the rivers serving the irrigation districts of the southern basin, were in poor and declining environmental health. In the most recent report, 20 out of the Basin's 23 catchments were rated as being in 'poor' or 'very poor' health.

Between 2000 and 2010, much of eastern Australia experienced the most severe drought on record. The combination of drought and diversions meant that there has been no significant flow through the Murray River mouth since 2002. Some of the MDB's ecosystems, including its iconic estuarine lagoon, were tipped into near-terminal decline. The problem received widespread publicity resulting in strong public support, primarily in the cities, not just the protection of remaining sites but for restoration of the degraded ones.

Darling river with no water, Tilpa, New South Wales.



*“Water politics is controversial by nature”*

Photo: Arthur Mostead and Murray Darling Basin Authority

Kings Billabong, Victoria, impacted by salinity and sulfidic sediments.

The four state governments in the MDB had attempted to redress the over-allocation of water over many years but with little result. In 2007, the federal government decided to intervene because of the public concern. It based the intervention on its international environmental obligations which required it to maintain habitat for migratory waterbirds and protect the Ramsar sites. It also had an obligation to protect other environmental assets under the national environmental legislation. The resulting Water Act of 2007, amongst other things, established the Murray Darling Basin Authority (MDBA) with responsibility to draw up a water allocation and water quality plan for the Basin that would be binding on the state governments. It is governed by a six member Board of independent experts drawn from academia, industry and the community. The Chair of the Board was an experienced senior public servant. The MDBA commenced work in 2009 and was required to develop the Basin Plan by 2011.

The primary purpose of the plan was to establish a Sustainable Diversion Limit (SDL) to determine the volume of water needed to protect the MDB assets.

The SDL establishes a cap on the water that can be extracted from all surface and groundwater systems within the MDB if the environment is to be maintained sustainably. The starting point for establishing the SDL was the environment’s water needs, based on best available scientific evidence; social and economic requirements were then considered in establishing the final SDL. This was a paradigm shift from past water plans which had started from the position of determining how much water could be clawed back from current water users.

There were already a number of state and federal schemes in operation to return water to the environment, through both purchase of water from willing sellers (primarily irrigators) and through upgrades to irrigation infrastructure, but they were seen to be too small to achieve the level of environmental recovery that the general public was demanding. It was clear during the development of the MDB Plan that, to protect and recover degraded ecosystems, there would need to be a large reduction in water used for production. Consequently, the irrigation industry, local authorities and some state governments were wary about the merits of the MDB Plan, particularly

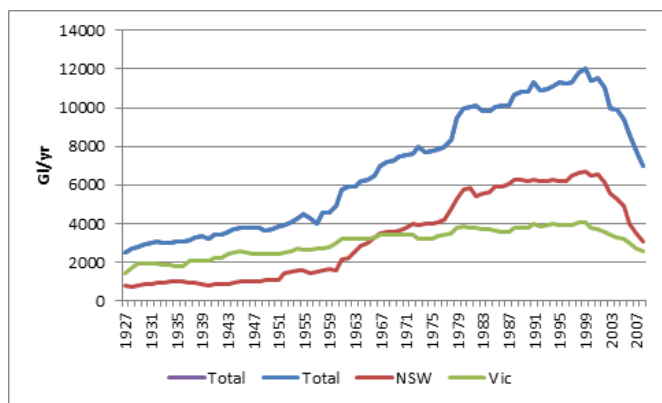
because the Plan’s environmental benefits were less tangible than its impacts.

Although the Water Act required the MDB Plan to be based on best available scientific understanding of environmental water needs, scientific knowledge cannot determine the acceptable level of risk for environmental assets. That is, whether a particular ecosystem warrants a high degree of protection, and hence more water, or a low level of protection with less water is a decision that is ultimately a social rather than a scientific judgement.

The Guide to the MDB Plan was released in August 2010 to help interest groups and the general public understand the content of the Plan. The guide contained the proposed decisions on water allocation and effectively acted as a plain English version of the draft plan which would be released for formal public consultation some months later. The scientific studies established that between 3,000 and 7,600 GL needed to be recovered from current diversions in order to maintain the environmental assets of the MDB. As the socio economic impact above 4,000 GL was deemed too great, three scenarios were proposed between 3,000 – 4,000 GL with the higher bound meet-

# policy solutions

## MURRAY DARLING RIVER BASIN



Basin surface water use: five year rolling average. The graph shows the steady growth in surface water extractions until 1999 when the severe drought occurred. Source: Guide to Proposed Basin Plan.

ing the environmental needs all of the time (moderate risk) and the lower bound meeting them part of the time (higher risk). These re-allocations meant that between 22 per cent and 29 per cent of current entitlements would need to be returned to the environment.

The guide was intended to help stakeholders understand the scientific underpinnings of the plan and the proposed policy judgements before formalised consultation occurred on the legal version of the plan, and so the MDBA undertook extensive consultations following the release of the guide. These consultations did not run smoothly. There was significant public backlash in rural areas, resulting in angry meetings, public demonstrations and even public burnings of the guide. Within days, the federal government announced an enquiry in an attempt to calm the high emotions evident in rural communities.

There are a number of reasons for the strong reaction to the plan. First, after 15

years of continuous water reform, there was a sense of fatigue amongst the rural water users. This sense was exacerbated by the economic and social fragility of rural communities after 10 years of drought. The MDBA had based the guide primarily on scientific assessments (as it was required to do) and this gave the impression that irrigation water needs were of secondary importance. The social and economic

costs of the plan were very real to these communities, while the environmental benefits were much less apparent.

Despite more than 20 years of study, scientists and environmental economists were unable to quantify the environmental benefits that would arise from the 3,000 – 4,000 Gl of extra environmental water. In addition, the environmental advocates wilted in the face of the vigorous rural opposition.

The result was a loop-sided public debate with the negative impacts of the proposed policy taking centre stage without the environmental benefits being highlighted.

The guide had been released after a Federal election in August 2010. The election resulted in a hung Parliament. The ruling Labour party was able to form a minority government with the assistance of four independents, three of whom had rural constituencies, and one Green party

member. The political climate had changed. The upshot was that the rural sector had a voice and power again. A new Minister of Water was appointed and he argued that the plan should optimize social, economic and environmental water requirements (a triple bottom line outcome). He also made it clear that a way needed to be found to re-engage the community and to place greater emphasis on moderating the socio-economic impact of water reallocations. The Chair of the board subsequently resigned in December 2010, publicly stating that the Water Act did not allow for a triple bottom line outcome. A new Chair has now been appointed.

The path forward is not yet clear. On the original timeline, the plan was to be tabled in parliament in 2011. This now seems unachievable and it is likely to be tabled in 2012. Given the environmental basis of the legislation and the scientific studies underpinning the quantity of water needing to be returned to the rivers, it is difficult to avoid reallocating significant quantities of water from production to the environment. Yet any attempt to modify the Water Act to reduce the emphasis on the environment would be opposed by the Green Party which will control the Senate from July 2011.

Richard Davis has had an extensive career in water and environmental research with CSIRO, Australia, specialising in environmental flows, water quality, catchment management and decision support systems. He has also worked for the World Bank. He is currently a consultant.

### Further reading

*Guide to the proposed Basin Plan.* Murray Darling Basin Authority (2010).

*Sustainable Rivers Audit-SRA Report 1: A report on the ecological health of rivers in the Murray-Darling Basin, 2004-2007.* Murray Darling Basin Commission (2008).