

The Murray Darling Basin Plan

The 'Just Add Water' Approach is failing communities and the environment – Multiple Measures Approaches Needed

Background to Plan

The Murray-Darling Basin Plan (MDB Plan) was developed to improve the health of rivers and floodplains by acquiring water for the environment, at a cost of \$13 billion to the Australian taxpayer. The MDB Plan is based on the results of the 'Benchmark Model', an inundation model which assumes if you inundate an area of floodplain for a set period of time, you will restore the health of that system. However, that is an assumption which does not take into account the fact that the system is now a heavily modified landscape, regulated, host to a number of introduced species such as carp, and devoid of much natural riparian vegetation and native species.

Figure 1 (below) displays the thinking behind the Basin Plan and that 'natural' type inundation of the floodplain is key to restoring river and wetland health. Water recovered from human use, mainly food production, is used for environmental flows to try and improve the health of the Basin's rivers, wetlands, floodplains, plant and animal habitats.

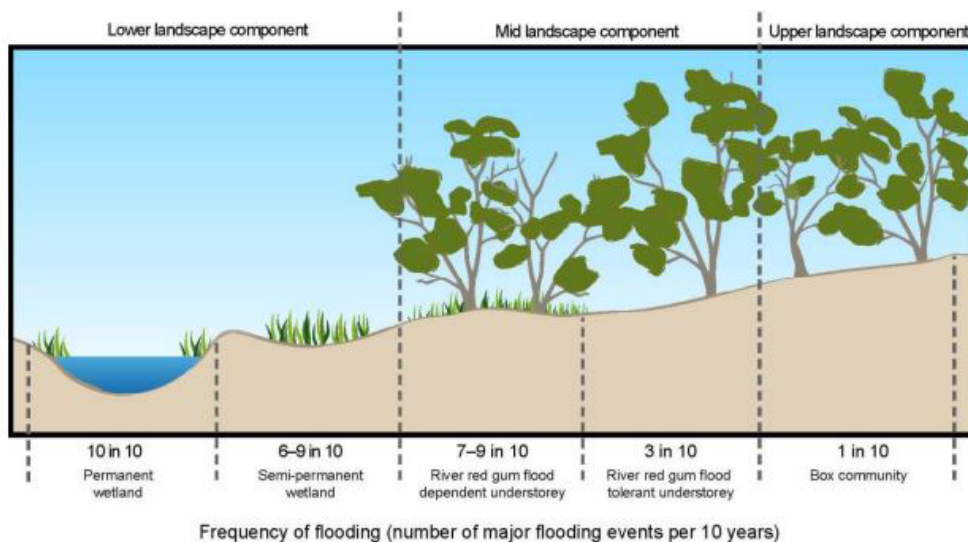


Figure 1 - Flooding requirements of selected vegetation communities for Murray Darling Based lowland forests (Source: based on Ecological Associates 2006).

MDB Plan – The 'Just Add Water' Approach is Inadequate

Despite overwhelming evidence that the inundation modelling (Benchmark Model) used is based on flawed assumptions, is inaccurate and doesn't represent the ecological reality of the Basin, this model still underpins the entire implementation of the MDB Plan. In addition, the modelled amounts of water are unable to be delivered due to physical constraints and unacceptable consequences for local communities and their environment. A new way forward is needed.

Degradation of the natural environment – A combination of factors

River regulation and landscape modification has brought much prosperity, food security and recreational use to Australia. This has come at a significant cost to the natural environment. A combination of factors has led to the decline of both physical and biological conditions within our rivers and wetlands. Finding a balance for a healthy modified environment will require addressing each of these factors and proposing ways forward to tackle them at multiple levels. Environmental water is needed but it must be used in conjunction with a number of measures to be effective.

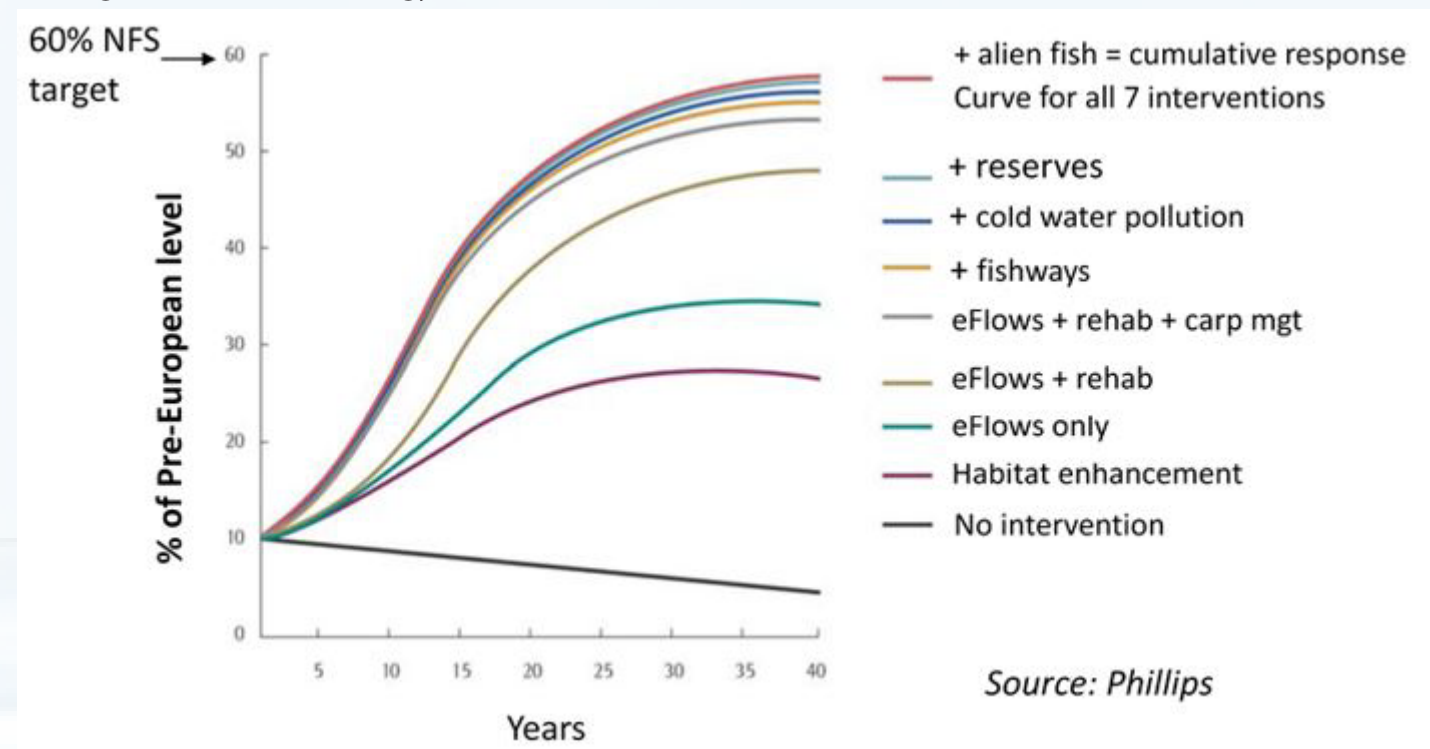
So how can we have a healthy environment and ensure that water can be managed for the production of our food requirements?

Native Fish need Multiple Measures to reach recovery targets

As early as 2001 an expert panel convened to assess the best methods for restoring native fish communities, with a target of returning native fish communities to 60 per cent of their pre-European levels. They compared the success of single restoration approaches vs a multiple measures intervention approach where interventions were undertaken together (Figure 2).

The Expert Panel concluded that there was good evidence to support that with all seven strategic interventions undertaken in an integrated way their target was achievable, and most of it could be achieved within 40 years. They also noted that the constraints to such an approach were financial rather than a lack of understanding about how to fix the problem. An equal investment in all interventions was needed.

Figure 2 highlights the fact that if a water only approach is taken returning environmental flows to the system without the other interventions, fish populations would only reach half way to the target set. Although these are only modelled intervention response curves, there is good evidence from around the world that multiple measure approaches are effective. This multiple measures style approach is not new and formed the basis of the original Native Fish Strategy, now defunct due to lack of investment.



More recently a multitude of different ways forward have been proposed that could significantly improve the ecological health of the basin and help in meeting the ecological objectives set out in the Basin Plan without devastating rural communities as the current MDB Plan does. These approaches could positively impact local communities most impacted by the current MDB Plan by providing employment opportunities as opposed to remotely run water operations, which benefits centralised government and large city based academic institutions. Both approaches involve implementing multiple measures to achieve environmental outcomes.

Way forward and future

The word integrated is integral in relation to meeting the targets we want for our river and wetland systems. Single measure approaches fail to address multi-faceted challenges and the MDB Plan's 'Just Add Water' approach will continue to fail until it embraces a fully resourced multiple measures approach. We have the knowledge, tools, and programs (such as the Native Fish Recovery Strategy) to proceed with a multiple measures approach to the MDB Plan, it only takes political will and appropriate resources.

1. Stop further acquisition of water entitlements for the environment until we have a stakeholder agreed way forward to deliver the water already recovered and show success with water now owned by the state and Commonwealth governments
2. Invest the remaining MDB Plan funds into an evidence-based, multiple measures approach using a suite of interventions not just aimed at water recovery to achieving the desired environmental outcomes – healthy ecosystems in unison with a triple bottom line.
3. Fully fund the Native Fish Recovery Strategy and employ local communities to implement on-ground activities within it.