

Scientists offer qualified support for the Murray-Darling Basin Plan

The *Guide to the Basin Plan*, released by the Murray-Darling Basin Authority in October 2010, has attracted criticism, mainly for its social and economic implications.

As environmental scientists, we are concerned that discussions so far have been dominated by concern about negative, short-term impacts. There has been little consideration of the long-term benefits of a healthy river system.

The costs of 'doing nothing' would be unacceptable to everyone. Instead, the Basin Plan will offer a historic, nation-building opportunity to correct past mistakes and plan for the future. It would enable us to maintain a healthy economy while protecting our natural heritage. It is about securing long-term prosperity.

In this statement, we highlight some key points of scientific consensus:

- The proposals to reduce annual extractions by 3000-4000 GL are a minimal requirement for ecosystem health. They would bring significant benefits, but ecosystem recovery would increase in proportion to the quantity of water available to the environment, and the proposals fall well short of the 7600 GL target that has been nominated for long-term sustainability. The Guide does not clearly describe outcomes from these flow scenarios; this should be addressed, with assistance from the wider science community.
- The central issue is the combined long-term welfare of the environment and the human communities that it supports. The costs and benefits of re-adjustment would be shared among all Australians. Benefits include improved 'goods and services', such as more reliable water supplies, better quality water for irrigation, flooding for grazing, improved fishing and new opportunities for tourism.
- The scientific evidence for the poor ecological condition of rivers and wetlands in the Basin is unequivocal. Regulation and extractions have changed patterns of flow, affected ecological processes, threatened native fauna and flora and favoured alien species. Increased tree dieback, salinization, acid sulfate soils and recurrent algal blooms are further evidence of degradation. In hydrological terms, median flows to the sea now are reduced by 71 percent of natural flows, and by as much as 89-96 percent in dry periods. Daily flows out to sea are zero for 40 percent of the time, compared to one per cent under natural conditions.
- *Wetlands of International Importance* (Ramsar wetlands) throughout the Basin are deteriorating. Australia is having difficulty complying with its own legislation, and with its obligations under the international Ramsar Convention.
- The Guide makes insufficient allowances for the likely impacts of climate change. It acknowledges that the Basin may be 10 percent drier than now under a median 2030 scenario, yet allows for only a 3 percent reduction in the current extraction limit. A realistic allowance is needed, with explicit advice about the requirements for water-sharing plans.

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1st December 2010