

# WaterShed

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## The Ten Next Steps in Water Management

by Professor Peter Cullen

Water and salinity are issues of concern to many Australians. Governments, community groups and landholders have done much to address these issues. But despite these efforts we do not seem to be getting on top of these problems. New approaches are needed if we are realistic about overcoming these problems. What are the next steps required?

Following are ten simple strategies that would improve our rivers. They will not be easy to implement, especially given the competing pressures that are causing the present degradation. They all need to be further developed, but if implemented, would start to make a difference.

- **Efficiency Dividends:** All irrigators and irrigation companies should be required to return 3% of all water used each year as an efficiency dividend to the environment. This water could then be used to provide appropriate environmental flows.
- **Clawback of Water in Over-allocated Rivers:** Any river where more than 1/3 of the median flow is extracted is likely to be seriously damaged. In such catchments, there should be an annual claw-back of water for the environment until this level is reached or, a sustainable level of extraction is determined through sound research. Compensation should only be paid where there is a genuine legal right to this water.

- **Burden of Proof:** Any proposal to extract water from any river should be accompanied by studies demonstrating the impact that the extraction will have on downstream river health. The burden of proof should be on the proponent, and it should be accepted that a minimum of five years is needed for such studies, given the variability of rainfall in Australia.
- **Monitoring of River Health:** Ongoing catchment and river health audits, based on the Land and Water Audit, reporting every five years in the State of the Environment reports should be required. States should be funded to collect appropriate data in a standardised and co-ordinated form, this data should be made publicly available on the Web. Such monitoring could be used to demonstrate the outcomes of investments under the National Action Plan and the Natural Heritage Trust.
- **Protection of Undamaged Rivers:** A National system of heritage rivers should be established under the Environment Protection Biodiversity Conservation Act to ensure the few remaining undamaged rivers are protected. Funding is required to ensure they are effectively managed and monitored as long-term benchmarks.
- **Protecting Important Wetlands:** Effective management planning and funding is required to assess and protect nationally important wetlands and their catchments, if we are to meet our international obligations. This must include providing instrumentation and detailed regular monitoring of selected sites.
- **Better Technical Advice to Governments:** Provision of an expert body to provide ongoing strategic advice to the newly established Natural Resource Management Ministerial Council, and to oversee technical aspects of the National Action Plan and the Natural Heritage Trust. This requires a group of experts and some community leaders and should not be based on State representation. This group could also act as an “intelligent purchaser” of research into land and water issues.
- **Putting the Bits Together:** Governments must recognise that rivers cannot be managed in isolation from their catchments. Riparian areas, floodplains and wetlands are integral to river

health, and must be managed in an integrated way. The organisational structures should reflect this integration.

- **Regional Science:** Capital and recurrent funding should be provided to develop a number of regional freshwater ecology laboratories. Each laboratory must have scientific staff and staff to deliver the science to community groups. These laboratories will address issues such as river health, environmental flows, salinity impacts and the management of invasive species. They would also be responsible for some long-term reference sites of river condition.
- **Large-Scale Catchment Research:** Governments need to fund some large-scale ongoing catchment studies. These studies will enable us to identify and predict the ecological impacts of climate change, land use and alternative farming systems on streamflow and river health.

Australians want to see healthy rivers, not only to provide clean drinking water, but also to enjoy the recreational and intrinsic benefits that our rivers, lakes and wetlands offer. They want to protect and enjoy our unique biodiversity and they want our waterways to be managed for the benefit of all Australians.

We desperately need leadership in this area. We need to re-examine the institutional arrangements that have led to the current problems and try and develop more effective ones. We need to clarify rights, not just of those extracting water but the rights of those who live downstream. We have only just started.



*Professor Peter Cullen, Chief Executive of the CRC for Freshwater Ecology. Photo: M Ashkanasy, courtesy of Melbourne Water*