



The Future of Catchment Management

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Catchment management into the future is challenged with the task of integrating water resource use of rivers and groundwater systems with natural resource management of the ecological and biophysical functioning of the whole catchment. Currently the water and natural resource management planning and actions in the catchment are usually conducted under parallel and disconnected management processes.

All Australian states and territories have planning processes for:

- the management and sharing of surface water and groundwater resources through regulation and investment. The resultant plans that are variously called water sharing plans, water management plans or water allocation plans and are usually statutory in nature.
- the maintenance and improvement in the condition of land and water resources and ecosystems through investment incentives and regulation particularly of vegetation management. These plans that are referred to as catchment management plans, catchment action plans or natural resource management plans and are usually non statutory¹.

Future catchment management will need to evolve so as to first align and then work towards the integration of the planning of these activities. This could provide the institutional frame for water resource use for irrigated agriculture, mining, urban communities and industry while maintaining water flow in these ecological systems consistent with healthy and sustainable biodiversity and ecosystem function.

In NSW the *Water Management Act 2000* was designed to create a 'new era' of water management. Based on an extensive review of community water use the Act was designed to protect, enhance and restore water sources and their associated ecosystems through environmental water management plans. The focus of the Act to date has been primarily on the development of water sharing plans with currently only one environmental water management plan finalised for the Macquarie Marshes.

The National Water Commission recognised the need for a closer relationship and funded a project to explore the benefits and barriers to the alignment of Catchment Action Plans (CAPs) and Water Sharing Plans. The Natural Resources Commission in partnership with NSW Department of Environment, Climate Change and Water, NSW Department of Planning and the Hunter Central Rivers CMA trialed a process through which both plans could be based on a common values and risks assessment of aquatic assets.

The project found that within current resources and without any changes to institutional structures a strong alignment of the plans was possible resulting in considerable benefit to Natural Resource Management (NRM) in the region through reduced duplication and better co-ordination. The process of aligning the plans has been further tested in the development of the upgraded CAP pilots and will be encouraged in the development of all CAPs.

It is expected that this alignment will be particularly important to the future Basin plan for the Murray-Darling. Catchment ecosystems such as wetlands and flood plain forests are the ecological engine room for the river and groundwater systems.

¹ *Alignment of water planning and catchment planning* by Mark Hamstead. Final draft of a Waterlines Occasional Paper. This work has been undertaken on behalf of the National Water Commission

The river systems, cannot in most instances, be maintained in ecological health when the stream or groundwater is disconnected from the vegetation which is the primary producer for the river ecosystems.

The next step will be to connect these planning processes to the land use planning mechanisms within urban and peri-urban development. These disconnected planning mechanisms all overlap in the provisions relating to the maintenance or improvement in the condition of freshwater aquatic ecosystems within rivers, aquifers, wetlands, estuaries and near shore marine environments.

To address the fundamental problem in water resource tradeoffs between bulk users, the environment and urban consumption it is critical that catchment management evolve to integrate the statutory and non-statutory planning mechanisms. This will ensure water resource use and natural resource management are effectively aligned and integrated with each other and also with the land use planning for urban and peri-urban planning.

This may require institutional change to bring these types of plans into one combined process. For our societies which are confronted by very high climate variability and the anticipated impacts of climate change it is critical that future catchment management be reformed.