

Jenny Smith
1 West Street
Wentworth Falls
Phone: 02 4757 4807
email:
bagend@mania.com.au

**Committee Secretary
Standing Committee on Environment and Heritage
Parliament of Australia**

2 August 1999

RE: INQUIRY INTO CATCHMENT MANAGEMENT

Please find following a submission to the above inquiry.

I have had a great deal of experience in the development and implementation of catchment management in New South Wales, and have been involved with catchment issues for many years.

I was involved with the formation and operation of the Hawkesbury-Nepean Catchment Management Trust and am currently a Trustee.

I hope my comments are useful, would be very pleased to assist the inquiry if appropriate.

Jenny Smith

The value of a catchment approach to the management of the environment

Since European settlement land uses have significantly altered the state of land and water in Australia. This altered state is resulting in natural hydrological processes causing rapid geomorphological change and raising concern about issues such as excessive erosion and siltation, riverbank collapse, polluted runoff and changed surface and groundwater flows. These changes are also having an impact on the state and nature of terrestrial and aquatic vegetation, which is largely dependent on geomorphological regimes, as well as themselves influencing those regimes.

As hydrological regimes are peculiar to their water catchments, those catchments are the most logical and efficient basis for monitoring, managing and sustaining land and water resources and the health of the ecosystems that rely on them.

Planning and management of land use and water resources needs to have a catchment approach in order to limit and monitor impacts on the catchment systems. Without a whole-of-catchment focus it is not possible to estimate and monitor the consequences of different local government management policies and practices, nor is it likely that ecological sustainability can be achieved.

Best practice methods of addressing environmental degradation in catchments and achieving environmental sustainability

To date effort for reducing the impact on the environment has relied on the adoption of 'best management practice'. While this approach has been helpful in reducing the impact from individual activities, it does not ensure outcomes that are environmentally sustainable.

While land-uses are intensifying, it is the total load and cumulative effect as well as localised impact that need to be watched and limited, in order to achieve environmental sustainability. This is a difficult task, made more difficult by:

- ◇ Inappropriate jurisdictional boundaries,
- ◇ A lack of ecological benchmark data and commonly supported indicators of ecological sustainability
- ◇ Insufficient understanding of in-stream dynamics
- ◇ The lack of an effective mechanism to make standards for environmental impact reflect the natural dynamics of environmental conditions

There is as yet no process that will satisfactorily assess cumulative impact so that consent authorities (particularly local governments) are able to demonstrate to the satisfaction of a Land and Environment Court that a particular development is effectively 'the straw that will break the camel's back'. This means that the incremental effect of more and more activities (even if they all adopt best management practice) will almost inevitably be unsustainable.

The data and processes to make these assessments need to be developed and implemented on a catchment basis.

Institutional arrangements, jurisdictional boundaries and catchment management

Under current institutional boundaries, it is often difficult to detect and deal with the sources of degradation caused by geomorphic action as they may lie beyond the area of jurisdiction. Even more challenging to existing institutional boundaries is estimating and limiting cumulative impacts within catchment systems.

Planning on a state or local level has until recently paid little attention to these natural forces. The results are that land uses have been approved, even encouraged, that have proven very costly to the environment and at the end of the day, costly to the public for remediation or costly in terms of lost community amenities and options.

Jurisdictional boundaries for land managers have had little relevance to the resource they are expected to manage. This has been highlighted by attempts to implement stormwater management programs.

Stormwater was formally recognised as a major environmental issue in NSW in the early 1990s. Departmental responsibility for developing a stormwater management program was given to the NSW Environment Protection Authority. The EPA has had a predominantly urban and point-source focus, while the Department of Land and Water Conservation has traditionally focused on rural diffuse sources of pollution. This has resulted in the EPA stormwater strategy effectively only addressing urban runoff.

Stormwater management plans were to be developed by local government on a catchment basis, but many councils on the fringes of Sydney have catchments or parts of catchments that encompass urban, peri-urban and rural land uses. These councils have found it impractical to have plans that only deal with urban runoff.

In addition, local government boundaries do not follow catchment boundaries. In the Hawkesbury-Nepean catchment for example, there are 23 local council areas all of which encompass parts of the catchment, but many include parts of adjoining catchments. An interesting case for testing the logic and practicality of local government boundaries, is the issue of the water supply for Goulburn City, where the City's water supply catchments and storages are located in the adjoining Mulwarre Shire. Mulwarre is unsympathetic to restricting land uses in their council area in order to protect Goulburn's water catchments, resulting in disputes over development and land management in these areas.

The NSW Catchment Management Act facilitated the establishment of Catchment Management Committees or Trusts to coordinate, facilitate and encourage natural resource management on a total catchment basis (i.e. Total Catchment Management or TCM)

TCM has had a focus on community involvement. It has attempted to foster a partnership of government and the community in caring for their environment. Community in this sense includes the private sector and government includes state and local levels.

The catchment approach does not integrate comfortably with the existing state-wide roles of the government agencies. Although TCM has been adopted as a whole-of-government policy, there are no complementary statutes in other legislation to direct or encourage government agencies to be influenced by TCM bodies. The ability of TCM to influence and coordinate the management of natural resources is dependent on natural resource decision makers and practitioners being receptive to being influenced and coordinated! Instead, government agencies have tended to adopt their own catchment approaches which has lead to a perceived, and in some cases real, duplication of effort.

How a catchment approach might work

Catchments ideally need to have a catchment organisation embracing a broad range of expertise, that can monitor and report on the state of the catchment, provide a forum for establishing community environmental values and advocate needed action to government.

The catchment organisation should also be responsible for establishing the sustainability indicators for their catchment using nationally developed guidelines that would be implemented by each state. A network of community catchment care groups who work closely with local government and local communities could report to the catchment organisation on the health of their local areas using the agreed catchment-wide monitoring methodology.

Reports from the catchment organisation to Government and public should outline:

1. The state of management in the catchment. This would be based on local government State of the Environment Reports, which would need to be compiled on catchment bases and state government reports of their activities in the catchment. It would comment on the adoption of best management practice and success in putting in place measures to limit environmental impact. This report could also indicate the level of natural resource/environment management investment in the catchment.
2. The state of the catchment. This would comment on the success of measures to deliver ecological sustainability. This report would measure results against the sustainability indicators.
3. The state of the creeks and rivers. This would be attached to the State of the Catchment Report and be the ultimate measure of the State of the Catchment Management Report. It would measure the health of the catchments river and creek systems against the agreed sustainability indicators.

***An option for
resourcing and
implementing
catchment
sustainability***

Catchment organisations should be of a regional scale, autonomous and could be resourced from a general catchment levy.

However, where major transfers of resources into and out of catchments are caused by planning and resource allocation (such as large scale movements of people, water, natural vegetation, wastes, and sand and soil), significant environmental imbalances in the catchment beyond the boundaries of any one local government area may result. In these cases it should be appropriate for additional funding or services to be allocated to the catchment and targeted to those issues. A catchment focus is needed in order to track and monitor the utilisation and transfer of resources or pressures within a catchment or from one catchment to another, and to redress the consequent imbalances.

The functions of these catchment organisations would vary according to the institutional arrangements in the region and the nature of the management challenges. Urban catchments are far more complex due to the density of populations and their community's detachment both physically and mentally from the natural systems that underpin their quality of life.

All catchment organisations need to identify the environmental values of the catchment, establish the indicators to sustain those values and work towards those outcomes by education, monitoring, advocacy and bringing together the many natural resource planners, regulators and managers to work collaboratively and efficiently to achieve them.

Sustainability indicators need to underpin planning, assessment, regulation and management at all levels. In degraded areas where costs of remediation to achieve these values are high, special funding may be required or timeframes extended. Priorities for natural resource management funding could be advocated by the catchment organisation to a state body for determination on the basis of state priorities. The same process, but using national priorities could also allocate national funding.

