

# **Managing the managers managing people: Lessons for recreation and water management in protected areas.**

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*(This paper draws on three papers prepared either jointly by or involving one of the above mentioned authors – See references at end of text)*

Many of Australia's critical urban water resources are located within protected areas, originally reserved for their timber production, recreation and aesthetic values. Later, these areas were also recognised for their conservation value and as reliable, potable water supplies.

This paper presents a case study of water source protection planning in urban water catchments and impoundments in the south west of Western Australia and the impacts on recreation and tourism access in protected areas. Inland water catchments in the Southwest of Western Australia have historically been, and are currently, popular resources for public recreation. Recreation includes a broad range of leisure, pastime and entertainment activities ranging from passive through to active pursuits that vary in their character and potential for environmental impacts.

The pressure on Western Australia's (WA) water resources is severe owing to an increasing population and associated demand for high quality, low cost water coupled with a drying climate. Compounding this, recent urban water supply contamination events in Australia has heightened concerns about sustainability of urban water supplies and elevated the importance of water protection planning. This has prompted alteration of water management regimes in WA to increase the perceived security and quality of drinking water in the region. This has been at the expense of recreation activities in catchments.

The management of water for water supply alone is driven by an Australian national policy dominated by volumetric access to water and controlled by entrenched water (property) rights. Consequently, water policies aimed at provision of safe drinking water exclude or severely limit human access to water catchments, and so are in direct conflict with recreation and tourism interests. Exclusion of recreation is based on a precautionary approach without a strong basis of scientific knowledge. Lack of research has also limited understanding of the socio-cultural values of in-stream uses of water. As a result insufficient attention has been given to such uses in water resource decision-making.

The main WA water agency, the Department of Water (DoW) has extensive powers to proclaim catchment areas and to implement control measures to safeguard water resources. This includes

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controlling the form and extent of recreation in water catchments through the preparation of Drinking Water Source Protection Plans for public drinking water source areas (PDWSAs) and the associated gazettal of water catchments to achieve water quality objectives. However, the wider management function of catchment areas is vested with the Department of Environment and Conservation (DEC) for the management of State forest, national park and other reserves lands. Questions have arisen over the primacy of legislative provisions relating to the management of water resources. This is especially when the policy and planning objectives for protecting water quality conflict with social and economic objectives for recreation and tourism in public catchment areas.

The DoW has taken a “risk avoidance” stance based on the precautionary principle where any level and type of recreation is considered a risk to water quality. Thus, the preferred option for DoW is to exclude all recreation to reduce the perceived risk of water contamination from such activities. A significant limitation in this argument is the lack of dedicated research and substantiated evidence regarding how various types of recreation affects water quality generally and as it relates to southwest WA specifically. DEC, on the other hand, takes a “risk management” stance, holding the position that recreation activities can be adequately managed within these areas through research, suitable planning, design and management of recreational activities and sites.

The transition from the current threat-based approach to water catchment planning to a values based approach will require a paradigm shift in water catchment policy. New forms of governance are required for an increasingly complex, uncertain and rapidly changing world, where adaptation and flexibility are paramount to problem solving. Climate change, global health epidemics and the rapidly changing world economy are just a few examples of the need to develop flexibility in decision-making systems including strengthening mechanisms such as adaptive management and social learning principles. Unless there is a systematic process whereby the policies of each agency (park management and water agencies respectively) and associated organs of the State concerned with water and land-use management can be integrated, implementation measures undertaken may be ineffective, duplicating or conflicting, resulting in a loss of social and economic opportunity. Building the capacity and skills necessary to achieve more effective agency-agency relationships and agency-community relationships will be a crucial factor in the development of collaboration, and are critical for co-management arrangements where a balance between social and environmental outcomes can be achieved.

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