



Vision for a Framework under the NWI for Protecting High Conservation Value Freshwater Areas in Australia

EXECUTIVE SUMMARY

Conservation organisations have proposed establishing a national system for protecting high conservation value freshwater areas for several years. More recently government and international bodies have proposed high conservation value area networks. Despite the level of interest and commitment evident from the number of proposals, there is no agreed framework for an Australian high conservation value system or even any widespread common understanding of what such a system would consist of. This paper outlines the necessary components of a system for protecting high conservation value areas while responding to some common questions regarding the definition of high conservation value areas, the objective of a high conservation value areas system, and the need for and benefits of protecting high conservation value areas.

What is a high conservation value area?

A high conservation value area would be an area recognised for its particular value that was specifically managed to maintain, protect or improve those particular values. The area can take many forms and be designated according to a range of values including environmental, scientific, cultural (indigenous and non-indigenous), heritage, and social values. Such an area would be managed in a variety of ways, depending on the values present, and management could occur on site or throughout the catchment.

Particular types of high conservation value freshwater area could be based on the IUCN definition of “protected area” - “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means” (IUCN 1994) – to freshwater aquatic ecosystems. Depending on how the management regime was designed, such designation would be more or less formal and involve a combination of government and local management.

Why do we need to identify and protect high conservation value areas?

- To fill a gap in Australia’s approach to freshwater biodiversity conservation
- To fulfil national commitments, in particular a mechanism for implementing the requirement in the National Water Initiative to ‘identify and acknowledge surface and groundwater systems of high conservation values, and manage these systems to protect and enhance those values’ (s25 x)
- To fulfil international commitments under the Convention on Biological Diversity and Ramsar Convention

- To recognise local stewardship and foster opportunities for community involvement in rivers conservation
- To provide tangible illustrations of the value of rivers to Australian communities and attract investment in valuable areas

What are the components of a national high conservation value areas framework?

- A framework for identifying, classifying and prioritising areas to protect in a comprehensive, adequate and representative system
- A system for assigning appropriate levels of protection at appropriate scales
- A mechanism for involving the public in nominating and managing sites

What difference can high conservation value areas make on the ground?

- See below for examples from the Paroo River and the Gwydir River.

Introduction

Conservation organisations have proposed establishing a system for identifying and protecting high conservation value areas for several years. In 2002 the Australian Conservation Foundation and the Inland Rivers Network published a paper entitled “Establishing Freshwater Aquatic Reserves in New South Wales.” In 2003 the Wentworth Group of Concerned Scientists proposed a national river classification system comparable to the national reserve system. In 2004 a conference convened by IRN and WWF Australia recommended that the Council of Australian Governments negotiate an agreement to develop a national framework for protecting freshwater ecosystems of high conservation value.

More recently government and international bodies have proposed high conservation value area networks. The Queensland Government announced a Wild Rivers Policy in 2004 and is currently translating that policy commitment into legislation. The National Reserve System Taskforce has recommended that freshwater ecosystems be incorporated within the National Reserve System.

The National Water Initiative includes a commitment to identify freshwater ecosystems of high conservation values and manage these systems to protect those values (NWI s 25x)). The 3rd World Conservation Congress held by the International Union for the Conservation of Nature (IUCN) passed a resolution recommending that all member states establish high conservation value area networks.

Despite the level of interest and commitment evident from the number of proposals, there is no agreed framework for an Australian high conservation value areas system or even any widespread common understanding of what such a system would consist of. In our view, the proliferation of proposals, each using slightly different terminology and applying to a slightly different scale, is indicative of both widespread support for the concept of a high conservation value areas network and the need for a central institution, or a collective such as CoAG, to promote the development of a flexible *national* framework.

We believe that the final form of such a framework should be the result of wide-ranging discussions including a variety of stakeholders. However, it is currently possible to identify the necessary components of a protected areas framework using proposals for freshwater protected areas, existing examples of such areas, and comparisons to terrestrial and marine protected areas. This paper outlines these components while responding to some common questions regarding the definition of high conservation value areas, the objective of a national system for protecting high conservation value areas, the need for and benefits of identifying and protecting high conservation value areas.

What is a high conservation value area?

The concept of a high conservation value area could be described through the application of the well-known definition of “protected area” to freshwater aquatic ecosystems.

Australia’s National Reserve System uses the IUCN definition of protected area: “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.”

Although this definition does not explicitly apply to freshwater ecosystems (“land and/or sea”), it is easily adapted to freshwater ecosystems ranging from rivers to mound springs to

wetlands to lakes. In fact, as a result of the resolution on high conservation value areas just passed by the World Conservation Congress (Bangkok, November 2004), IUCN is committed to adapting its guidance on protected areas to freshwater ecosystems.

However one point to note is that, for freshwater areas, management would often need to be on a much broader scale and not simply provided *in-situ*.

Why do we need a national system for identifying and protecting high conservation value areas?

- *To fill a gap in Australia's approach to freshwater biodiversity conservation*

There are several basic approaches to biodiversity conservation. One can focus on protection of individual species, for example by developing and implementing recovery plans for a threatened fish species. One can focus on regulating activities that have an impact on biodiversity, for example by restricting water use to preserve terminal wetlands. One can focus on habitat rehabilitation, for example by re-snagging streams.

Or one can focus on protecting reasonably intact areas and rehabilitating degraded areas that retain significant conservation value. Protected areas have been the core of terrestrial biodiversity conservation efforts for over one hundred years, serving as refuges for threatened species, biodiversity banks to recolonise degraded environments, reference sites for scientific studies, and sites for low-impact recreation and natural history education. More recently protected areas have become an important part of marine biodiversity conservation.

However, protected areas networks have not been widely established for freshwater ecosystems. Freshwater conservation efforts in Australia have focussed on species protection, regulatory processes, and habitat rehabilitation, as in the examples above. Protected areas can supplement those approaches and integrate them with heightened effectiveness through focus on a discrete place. Australia's freshwater conservation programs and its protected areas systems are incomplete without a high conservation value areas network.

- *To fulfil national commitments*

National Water Initiative

In June 2004, the Intergovernmental Agreement on a National Water Initiative was signed by the Commonwealth of Australia and the Governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and Northern Territory. The Government of Tasmania has since also signed the NWI in June 2005.

As part of the NWI, the Parties agree that their water access entitlements and planning frameworks will:

“identify and acknowledge surface and groundwater systems of high conservation values, and manage these systems to protect and enhance those values” (s25x)

Other Commitments

The Australian Government and State and Territory Governments have endorsed the goal of a comprehensive, adequate and representative system of reserves in Australia. This goal does not distinguish between terrestrial, marine or freshwater reserves, but currently

Australia's progress toward this goal is made via the National Reserve System, the Regional Forest Agreement and the National Representative System of Marine Protected Areas.

There is no component for high conservation value freshwater areas. However, in the draft paper "Directions for the National Reserve System – A Partnership Approach," the National Reserve System Taskforce recognised this gap and recommended that an approach to ensure freshwater ecosystems are appropriately incorporated within the NRS be finalised in 2004.

Although no such approach has been finalised, we agree with the Taskforce that a system for protecting high conservation value areas must be developed for Australia to continue its progress toward the goal of a genuinely comprehensive, adequate and representative system of reserves.

- *Why a National Framework?*

From a biophysical perspective, ecosystems do not respect state or territory borders. Rather, aquatic systems are linear so management in one state should be consistent with management in another. Many of our most iconic systems are interstate (Eyre Basin, Murray River, Paroo River, Darling River etc) and a national framework could simplify the *ad hoc* arrangements that currently govern these although biophysical inventories can of course be done on a state by state basis..

Consistency across the whole nation can better be assured under a national framework – avoiding a rail gauges problem so to speak – which could easily occur when looking at place-based protection of aquatic ecosystems. The National Reserve System provides an example of a broadly established national framework that serves a precedent and from which useful lessons could be learned.

Experience, in other areas of NRM management in Australia, suggest that the ability to coordinate and leverage financial resources is increased a national framework.

- *To fulfil international commitments*

Australia is a signatory to the Convention on Biological Diversity (CBD) which requires countries to establish a system of protected areas to conserve biodiversity; develop guidelines for the selection, establishment and management of protected areas; and promote the protection of ecosystems, natural habitats and the maintenance of viable population of species. Australia's National Reserve System is designed to fulfil this commitment.

Decision VII/2 of the 7th Meeting of the Conference of the Parties to the Convention on Biological Diversity (Kuala Lumpur 2004) extends the CBD by adopting a goal of establishing and maintaining comprehensive, adequate and representative systems of protected inland water ecosystems.

Resolution CGR3.RES039 of the 3rd IUCN World Conservation Congress (Bangkok 2004) recommends that all States establish protected areas representative of all freshwater ecosystems.

Developing and implementing a national framework for high conservation value areas would place Australia on the cutting edge of the developing international commitment to establish high conservation value areas systems.

- *To recognise local stewardship and foster opportunities for community involvement in rivers conservation*

Freshwater conservation can be difficult for the public to understand and participate in for a variety of reasons. Water management is notoriously technical and even when stakeholder committees are involved, only a handful of community representatives can be involved directly. When conservation gains are achieved, as in the recovery of native fish populations or the replication of temporal flow variations, the results are often difficult for the trained eye to see and impossible to see for the average person interested in aquatic conservation, in part because the important changes take place underwater.

Processes for nominating, designating and managing protected areas can be designed to attract broad community involvement. In Australia there are currently public nomination processes for National Heritage listing and Wilderness listing, models that could be extended to a heritage rivers system. The national parks system in New South Wales relies on volunteer help and groups like the “Friends of the Colo” in Wollemi National Park to help with weed eradication, biodiversity surveys, and staffing visitors centres. The Canadian Heritage Rivers System rests on public involvement from start to finish. Community organisations often take a leading role in assembling nominations and continue their involvement through management planning and implementing projects to enhance the conservation values of Canadian Heritage Rivers. In sum, high conservation value areas offer unparalleled opportunities for community involvement in aquatic conservation.

The designation of high conservation value areas can recognise local stewardship that has occurred and the official recognition of a local asset can highlight its importance to the wider community. The range of management options available for these areas also provides opportunities for further local involvement in protecting the area and its values.

- *To provide tangible illustrations of the value of rivers to Australian communities and attract investment in valuable areas*

Protected areas have long been one of the most tangible illustrations of how we as a society value our terrestrial and marine ecosystems, and they have the potential to serve the same purpose for freshwater ecosystems. The mere fact of designation can draw additional attention to the values of an iconic place, as with Uluru-Kata Tjuta National Park or the Great Barrier Reef Marine Park. Education has always been an important aspect of protected areas management, and educational signage, ranger-led nature discovery tours and visitor information displays fit easily within a protected areas concept in a way they do not with species-based management or water use regulation. Protected areas can also be managed to provide low-impact recreational opportunities, involving the very broadest sector of the public in the benefits of conservation.

The designation of a high conservation value, protected area not only provides an incentive for the investment of local resources, but it can also assist communities gain funding for better protection of their areas. Investment in regional and rural areas can have a range of positive impacts within communities as well as within the high conservation value area.

What are the components of a national high conservation value freshwater areas framework?

- *A framework for identifying, classifying and prioritising areas for protection in a comprehensive, adequate and representative system*

The first step in developing a CAR system is to build an inventory of the freshwater areas that could be candidates for protection and a system for prioritising candidates.

This is done for the National Reserve System through the Interim Biogeographic Regionalisation for Australia (IBRA), which provides a broad-level break up of the Australian landmass into eighty biogeographic regions. Priorities for protection within the system are established by assessing gaps in the system with reference to IBRA and developing strategies for filling those gaps.

IBRA is not directly applicable to a potential high conservation value areas network, as many aquatic systems cut across biogeographic regions developed according to terrestrial criteria. However, one expert who was involved in developing IBRA has suggested that appropriate bioregional criteria could be developed for Australian freshwater ecosystems, perhaps using native fish assemblages as a starting point (Tait *in press*).

Another potential model for the system is Tasmania's Conservation of Freshwater Ecosystem Values (CFEV) Project. This project is an audit of the naturalness (N), representativeness (R) and distinctiveness (D) (NRD) of each freshwater ecosystem type in Tasmania. A NRD assessment is conducted on all rivers, lakes, wetlands, estuaries, saltmarshes, and karst systems. The N, R and D scores are used, via expert rules, to derive assessments of conservation value, and assess state conservation management priorities for freshwater dependent ecosystems.

Canada has developed a system that includes both natural and cultural heritage values. "A Framework for the Natural Values of Canadian Heritage Rivers" is a planning document for the system that establishes hydrological, physiographical, morphological and biotic criteria for assessment. "A Cultural Framework for Canadian Heritage Rivers" does much the same thing for cultural values including water transport, riparian settlement history, and European and indigenous spiritual values.

- *A system for assigning appropriate levels of protection at appropriate scales*

A comprehensive freshwater areas network will also include different levels of protection and different spatial scales. For example, the Wentworth Group has suggested a level of protection at the Commonwealth level, e.g. an Australian Heritage Rivers System that could be complemented by protection of streams of state-wide significance at the state level.

In addition, there are several proposed and existing classification schemes that could be adapted to a national freshwater framework that is flexible and recognises that different values will result in the use of different management tools and levels of protection.

The IUCN protected area management categories are well-known. IRN and ACF have previously suggested a system that would include classifications based on IUCN Category II (National Park: Protected area managed mainly for ecosystem conservation and recreation), Category IV (Habitat/Species Management Area: Protected Area managed

mainly for conservation through management intervention), and Category VI (Managed Resource Protected Areas: Protected Area managed mainly for the sustainable use of natural ecosystems) (IRN and ACF 2002). As discussed above, such categories would cover a range of freshwater systems, including rivers, wetlands, anabranches, ephemeral lake systems, floodplains etc.

Within this classification scheme, the strictest classification (Category II) would be reserved for relatively intact ecosystems, at catchment scale where possible. Management actions would largely be designed to maintain existing ecological values, e.g. prohibitions on new diversions or impoundments, restrictions on vegetation and land use management affecting the aquatic ecosystem, retain wetland and floodplain connectivity with river channel, restrictions on use such as angling or boating restrictions.

A next tier would apply to freshwater systems with important conservation values that are in need of some rehabilitation. Management actions within this classification could include prohibitions or restrictions, for example on boating, but many management activities would focus on rehabilitation: re-snagging, thermal pollution mitigation, riparian revegetation, erosion control, greater connectivity of wetlands and/or floodplains with the river channel, minimising/mitigating land use impacts.

The final classification would apply to significantly altered waterways where the goal is to prioritise nature conservation, conservation of cultural heritage, and provision of compatible recreational opportunities. Within this category, both the prohibitions and rehabilitation actions may apply, and may be supplemented with projects with a special emphasis on sustainable recreation and conserving cultural heritage.

The Queensland Conservation Council (QCC) has proposed a slightly different classification for Queensland's Wild Rivers Policy: Wild and Natural Rivers, which have almost all of their natural and or cultural values intact and demonstrate high ecological integrity at a catchment scale; Rivers of Regional Significance, which are rivers that present significant conservation or cultural values at a regional scale; and Heritage Rivers, which are rivers that retain rich social heritage value despite having suffered from degrading pressures over time. In QCC's proposal, a set of prohibited activities, including new water extractions, prohibitions on new dams, and restrictions on floodplain developments, apply to all three categories.

The existing Victorian Heritage Rivers program has two categories, Heritage River and Natural Catchment Areas. Neither category is defined in the Victorian Heritage Rivers Act except by reference to the areas included in the category, but it appears that Heritage Rivers are restricted to the river channel itself plus riparian land immediately adjacent, whereas Natural Catchment Areas can include land throughout the catchment. New impoundments and water diversions are prohibited in Heritage Rivers unless the Governor in Council approves its construction. New water diversions, new impoundments, and a variety of land and water management activities are strictly prohibited in Natural Catchment Areas.

In addition to such designation, it would be necessary to include clauses in relevant legislation that recognises the need to control certain activities in relation to such areas, and the development of local and or state legislative instruments to ensure that management encompasses all relevant activities and threats.

- *A mechanism for involving the public in nominating and managing sites*

As discussed above, protected areas offer a tremendous opportunity for involving communities in conservation. Nowhere is this more so than in nominating sites for protection, where communities can define what they value about a place, work with technical experts to devise plans for maintaining and enhancing those values, and articulate the ongoing value of protection for this and future generations.

The Canadian Heritage Rivers System rests on extensive public involvement at every stage of the process. Extensive guidance is available to community groups to help structure their involvement. At the earliest stage, a proponent of designation is encouraged to evaluate their river against national and provincial guidelines and involve other stakeholders in the nomination. Once it's been determined that the river may qualify, the proponent can get financial assistance from the Canadian Heritage Rivers Board for conducting the research needed to prepare a nomination. After the river has been nominated, community involvement continues through management planning and monitoring, with some financial assistance available through the Board.

There are analogous, though perhaps less detailed examples of community nomination processes in Australia. Community groups can nominate sites for inclusion on the National Heritage List. The New South Wales Wilderness Act authorises any person to submit a wilderness proposal to the Director of National Parks and Wildlife for assessment.

- ***What difference can high conservation value areas make on the ground?***

High conservation value areas can perform the same functions as terrestrial or marine protected areas. They can provide the responsible management agency with authority to control activities within the bounds of the area: managing access, recreational activities ranging from angling to boating and consumptive uses. They can provide the management agency with additional authority, whether formal (statutory) or informal, to influence off-site impacts through involvement in off-site planning and resource allocation processes. They can act as a locus for rehabilitation activities of different types and a magnet for effective investment of rehabilitation funds.

Management actions will differ considerably between different protective classifications. In general, management for relatively intact systems will focus on protection and the prevention of damaging acts; management for degraded systems will focus on rehabilitation. The two examples below, both based on actual proposals for protection, illustrate the difference.

1. The Queensland Conservation Council has proposed that the Queensland section of the Paroo River be given the most stringent protection available under their Wild Rivers proposal: Wild and Natural Rivers. Under this classification, additional water extractions, new dams and weirs, flow control activities such as de-snagging, exotic fish stocking, and intensive agriculture are prohibited within the catchment. Floodplain developments, vegetation clearing, mining and forestry are restricted.

This protective classification will strengthen and formalise a level of existing protection through the Inter-government Agreement for the Paroo River between New South Wales and Queensland. That agreement establishes a process for the two states to consider water and catchment issues cross-border but does not provide the specific restrictions in the QCC proposal. In addition, formal designation as a protected area also would boost the potential for signage and other educational material.

2. The Murray-Darling Basin Commission Native Fish Strategy, in its Investment Plan 2003-2006, has proposed a set of “demonstration reaches,” which are integrated habitat rehabilitation projects designed to show the benefits for native fish when all the necessary river-rehabilitation works are integrated and focussed in one place. The objectives of the demonstration reach program are similar to those discussed in this paper for high conservation value areas: to show by example the need for river rehabilitation to address the full range of issues, to show the extent of benefits that can be achieved by integrated programs, to enhance community awareness and support, and to focus the attention of funding agencies and boost scientific knowledge of rivers and fish.

The Investment Plan includes costed proposals for ten demonstration reaches throughout the Murray-Darling Basin. For example, the \$10 million proposal for the Gwydir River and Gingham Watercourse includes projects to re-sag habitat; improve regulator operation; provide fish passage; control willow, water hyacinth, and carp; and a communications program. Expected benefits include increase in number and diversity of native fish, improved wetland and floodplain habitat values, and greater control over environmental flow releases to inundate wetlands.