

WaterShed

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A National System of Heritage Rivers

by Professor Peter Cullen

The conservation of biodiversity is a major issue of public concern, and there has been a lot of effort to protect biodiversity in both terrestrial and marine ecosystems. Much less effort has been invested in the area of freshwater conservation.

Most States appear to be moving towards a broader concept of water planning where they no longer look simplistically upon rivers as systems where the critical issue is how much water can be reliably removed. It is now appreciated that a certain amount of water must be retained if we are to have healthy rivers. The activity over environmental allocations has been to address this issue. The underlying reason is the wish to maintain the plants and animals that live in our rivers and on our river-floodplain systems.

It seems that each jurisdiction in its water planning is identifying rivers of conservation value, and they are protecting them from further development. The Paroo River and Coopers Ck in Qld and the Ovens River in Victoria are examples. Other important and relatively undamaged rivers worthy of attention include the east Alligator in NT, the Clarence in NSW and the Fitzroy in WA.

The trouble with this current State approach is that it leaves the designated rivers vulnerable to pressure with a change of Government or some other factors. I believe we need a National System of Heritage River Reserves that allows present levels of usage to continue, but protects designated rivers from further development.

THE PROTECTION REQUIRED

The threatening processes that we should seek to limit in these designated heritage rivers would include:

- Any further licenses to extract water
- Any further weirs or structures
- Any existing weirs should have a priority for fish passages
- Any de-snagging or other “river protection” activity
- Any further drainage of existing wetlands
- Any further levees that stop floodplain inundation
- Any stocking with non-native fish

We should also seek to limit commercial and recreational fishing and prevent further clearing of riparian vegetation.

The States have identified some of these high conservation value rivers and recognized the importance of protecting them from development. However the current protection is of a limited nature, and in revisions of these plans the pressures to “develop” these water resources to provide for agriculture, urban and mining uses will increase as water becomes scarce and the price of it continues to escalate. Pressures on Ministers in these situations can be intense, and so a system of designation in perpetuity, such as we have developed for National Parks and Nature Reserves seems an essential step to long term protection of these systems.

The present approach in the Murray-Darling Basin to capping water extraction and water trading does not necessarily give the protection that is needed for these undamaged rivers. Water could be traded in and out of valleys within the rules of the cap and allow development that could destroy these remaining undamaged rivers. Outside the Basin we do not even have the constraints of a Cap to restrict pressures.

In return for designation that gives longer term protection landholders and managers could be given access to funding for the actions identified such as fish ladders and riparian works.

Catchment management agencies need to be encouraged to take a more comprehensive approach and manage flow regimes, structures, riparian zones,

catchment conditions, fish populations and biological invasions. The National Heritage River Reserve System could provide both a model and funding to encourage this management approach.

These ideas obviously focus on whole catchments. Some are, however, appropriate for reaches of rivers where upstream protection is not possible. This requires an understanding of the ecological and biodiversity values, and the threatening processes that may need to be restricted, eg. recreational fishing. Surveys have shown that in some rivers, 25% of the cod species (Trout cod and Murray cod) had damage to their mouth parts from fishing hooks. This is obviously a major threatening process in some areas.

Much of our present energy is devoted to trying to restore severely degraded river systems. It is important that we identify river systems that are in good condition and prevent further degradation.

There are three clear reasons for this. One is to meet our international biodiversity obligations. Another is to provide benchmark reference areas so we can assess the extent to which managed rivers have departed from their natural state. We also need long term reference sites if we are to understand the impacts of climate variability in this country. The third reason is to provide “seeding” sources to help re-colonise downstream areas. Rivers are linear systems that are seeded with biological material from intact upstream reaches and this is essential to maintain downstream river health. The need for connectivity both upstream, downstream and from the stream to the floodplain is now recognised.

The States have established processes for identifying such rivers. What we now need is a formal system of designation that provides ongoing protection for these rivers. The IUCN has categories of protected areas that allow existing use to be maintained, such categories would be appropriate for these rivers.