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Senate Rural and Regional Affairs and Transport Committee
Department of the Senate
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Dear Committee members,

Thank you for the opportunity to submit to the inquiry into the provisions of the *Water Bill 2008*.

Our submission will concentrate largely on addressing:

- the adequacy of current whole-of-basin governance arrangements under the Intergovernmental Agreement;
- the adequacy of current arrangements in relation to the implementation of the Basin Plan and water sharing arrangements;
- long-term prospects for the management of Ramsar wetlands including the supply of adequate environmental flows;
- the adequacy of existing state and territory water and natural resource management legislation and enforcement arrangements; and
- the impacts of climate change on the likely future availability of water

Recommendations:

- The Government should adopt ACF and IRN's "National Wetlands Initiative"
- This should include the provision of environmental allocations targeted to specific wetlands, such as the Macquarie Marshes and the development of a comprehensive freshwater protected area network.
- The recommendations of the Wentworth Group of Scientists with regard to capping water diversions must be implemented. In the very best case scenario for the year 2030, cuts to the cap of 27% are needed, and under the worst-case scenario (of climate change and a shift to a lower pre-1950s rainfall pattern), reductions in the CAP of 83% would be required.
- There should be mandatory indigenous and environment NGO representation on the MDBA board.
- The National Water Initiative framework should be amended to include provision for cultural water to be allocated to Traditional Owners.
- We support the Australian Network of Environmental Defenders Offices recommendation that the definition of "Critical Human Water Needs" should

be amended to make reference to long-term environmental outcomes *and* water for Indigenous cultural purposes.

- Water reform and rescue of the Murray Darling Basin must be complemented by swift and decisive climate change mitigation and by significant investment in climate change adaptation for natural systems. The committee should recommend that greenhouse gas emissions begin to fall in Australia within this term of Government – from 2010 onwards – to begin tackling the problem.
- Improved protection and management of floodplain vegetation, including the River Red Gum State Forests of NSW and Red Gum forests and Ramsar wetlands on private land, must also complement water reform. These forests are subject to ongoing industrial logging and the removal of excessive quantities of timber that have not been reduced to account for reduced growth rates in the forests as a result of lack of water.

Introduction

The CSIRO (2008) provide the following summary of the overall impacts of river regulation and over-allocation on wetlands and floodplain forests along the Murray River:

“For the major wetlands and floodplain forests along the Murray River, water resource development in the Murray region and in the upstream contributing regions has approximately doubled the average period between significant inundation events (to at least three and a half years). Flood volumes have also been greatly reduced such that the average annual flood volume is now less than a quarter, and in some cases only a fifth, of the volume under without-development conditions.”

According to the Wentworth Group of Scientists (2008) to achieve a healthy southern connected river system in the Murray, volume of water that will have to be recovered as *additional* environmental flows in the whole Murray-Darling Basin is between 2,116 GL and 4,350 GL per annum.

Therefore, current environmental flows are markedly deficient across the river system and are inadequate to prevent serious ecological degradation. The report indicates that the cap on volumes of diversions for consumptive uses in the Murray-Darling Basin must be substantially reduced to save the river system and associated wetlands. In the very best case scenario for the year 2030, cuts to the cap of 27% are needed, and under the worst-case scenario (of climate change and a shift to a lower pre-1950s rainfall pattern), reductions in the CAP of 83% would be required. The Wentworth Group of Scientists conclude that 4,000GL of cap equivalent water needs to be recovered each year to have a ‘*good chance of securing river health*’.

The overall target for water recovery through The Living Murray first step program, commenced in 2004, is an average of 500 GL of water per year returned to the Murray River to improve the health of six designated icon sites, by 30 June 2009 (MDBC 2005). This falls drastically short of the volume of environmental water needed. Furthermore, to date the Living Murray program has only achieved water recovery of 133 GL per year, despite the program now being in its final stages (MDBC 2008). A further 403.7 GL has been identified in projects that are ready to be implemented, but which may not reach completion (MDBC 2008).

The framework

Of the millions of dollars to be spent on the Murray-Darling rescue, the major percentage will go on upgrading, repairing or maintaining ageing infrastructure. Only a minor proportion will be spent on water buy-backs, yet it is overwhelmingly clear that major issue is over-commitment to water extraction of both surface and groundwater.

One of the major flaws in the current approach is the failure to link environmental water volumes to specific wetlands. This problem would be addressed by the proposals put forward by ACF and IRN. Currently, only the Barmah-Millewa forest receives a specific Environment Water Allocation targeted to that site and this approach has demonstrated benefit in that wetland. A similar approach must be taken for all sixteen Ramsar sites in the Murray-Darling Basin.

NSW framework

The Murray Darling Basin Plan overlaps with Catchment Action Plans for several Catchment Management Areas in NSW. Like the Commonwealth initiative, NSW action on river restoration, complementary management of floodplain vegetation and provision of environmental water is weighted towards future years, and not enough water is being delivered in the short term.

Catchment Action Plan targets for the wetlands and riverine state-wide targets are:

- For the Murrumbidgee,
 - By 2016 protect and enhance 1500km of stream bank using native riparian vegetation for bank stabilization and runoff filtration.
 - By 2016 improve condition in a minimum of 30% (approximately 400 hectares) of the Murrumbidgee River floodplain billabongs that can be inundated at a flow of 35,000 megalitres per day at Wagga Wagga.
 - By 2016 maintain the extent and improve the ecological character of 1,800 hectares of wetlands (including those wetlands listed as Ramsar or of international importance) that are not included in WMT8.
 - By 2016 implement an integrated water management plan in the Lowbidgee that restores and maintains wetlands of the floodplain and sustainably uses consumptive water
- For the Murray:
 - By 2016 an additional 750km of riparian corridor are actively managed.
 - By 2016, an additional 20 wetlands which cover a variety of geomorphic types and distribution are actively managed.
- For the Lachlan:
 - By 2016, manage 8 nationally significant wetlands and 5 regionally significant wetlands for improved biodiversity conservation.

The NSW State Plan targets are also relevant, though it seems unlikely at this stage that targets around water, wetlands and riparian vegetation will be met.

Ramsar sites

ACF and IRN have made the case that Australia needs to update our approach to Ramsar. The 16 Ramsar sites in the Murray-Darling Basin cover more than 500,000 hectares, but most are in decline. Five of these are designated as icon sites under The Living Murray. Several Murray-Darling Basin Ramsar sites, including the

Coorong, Barmah-Millewa Forests, Macquarie Marshes, Gwydir Wetlands, and Narran Lakes, have seen changes in their ecological character since listing. Given the dramatic nature of these changes, environment groups have recommended that the Australian Government consider listing these sites on the Montreux Record as Ramsar wetlands in danger.

Our submission concentrates on the Central Murray Forests Ramsar site. We support the recommendations put forward by the Australian Conservation Foundation and Inland Rivers Network for the Coorong and other Ramsar sites in the Murray Darling Basin. In particular, we support their call for:

a National Wetlands Initiative, which would include a set of integrated actions in three areas: (1) recovering water for wetlands; (2) improving Ramsar and protected areas designation and management; and (3) integrating wetlands protection within broader environmental legislation including the Water Act 2007 and the Environmental Protection and Biodiversity Conservation (EPBC) Act. (IRN & ACF 2008)

Central Murray Forests.

The Central Murray State Forests Ramsar site consists of three forest groups: the Millewa, Koondrook-Pericoota and Werai groups. Two of these, the Millewa and Koondrook-Pericoota, are Living Murray significant ecological assets, but none are receiving the volumes or frequency of flooding that are required to maintain their ecological health. In addition, all three are being logged at demonstrably unsustainable levels using silvicultural techniques that steadily degrade the habitat values of these internationally significant forest-wetlands.

The primary activities undertaken in the NSW Central Murray State Forests Ramsar site include commercial logging (and associated activities such as roading), commercial firewood harvesting, grazing, domestic firewood collection, apiculture, and dispersive (and largely unregulated) recreation. Some 1,353 ha of the site are approved for patch-clearfelling each year, which means total vegetation removal (or gapping). In addition to the impacts of the general logging regime, FNSW are now frequently targeting stressed, dead or dying stands for so-called 'salvage' logging in the form of patch-clearfelling (which they refer to as 'Australian Group Selection'). This involves patches of up to 0.8 hectares being cleared of all vegetation.¹

The volume of timber and firewood extracted from the Central Murray Forests Ramsar site has not been adjusted downwards to account for the dramatically reduced growth rates that are a result of lack of water. There is an urgent need for complementary management of the forests and a significant reduction in the area available for logging and the quantity of timber removed, to ensure that the return of environmental and cultural water to the forests – should the national water initiative deliver the required water – provides sustainable environmental benefits.

The three forest groups that make up the Central Murray Ramsar site are subject to different degrees of water and logging pressure and enjoy different degrees of rescue effort. For example, there is no specific Environment Water Allocation for the Koondrook-Perricoota forest, and to date there has been no substantial recovered water under The Living Murray Initiative delivered to the site, despite the dire state of the health of the Forest (MDBC 20007b). There has been a very minor 1GL use of

¹ This has temporarily – until July next year – been reduced to .4 of a hectare under the terms of a legal settlement between NPA and Forests NSW.

Adaptive Environment Water to water Pollack Swamp in the north-west of the forest via private infrastructure on two occasions (MDBC 2007b). As noted by MDBC (2007b), 'in the absence of any recovered water or Environmental Water Allocations for the Koondrook-Perricoota Forest, attainment of the ecological objectives will rely on the occurrence of seasonal flows arising from storage spills or unregulated tributaries'. However, it is apparent that sufficient flows from these sources are highly unlikely given the current river regulation.

Similarly, there is no Environmental Water Allocation or water management plan in place for Werai Forest, on the Edwards River. A trial watering event was conducted in 2001, during which 4,000 ML was directed onto approximately 130 hectares of wetland dominated by Common Reeds (*Phragmites australis*) in the eastern part of the forest. This was designed to improve knowledge of commence to flow requirements for the block (NSW MWWG 2001). However, since then there is no evidence to suggest that there has been any further watering event for the forest.

Lastly, the Millewa block, whilst being in a somewhat better ecological condition than both Koondrook-Perricoota and Werai due to some positive management action, is still experiencing substantial declines in ecosystem health. According to MDBC (2007a), 43% of the site was showing signs of severe stress in April 2007 with obvious decline in the health of River Red Gum and some deaths.

There is a 100GL/year high security environmental water entitlement for the Barmah-Millewa forest, plus a 50GL low security entitlement which is provided in years where the irrigation water allocation in Victoria exceeds 130% (MDBC 2007c). Victorian water allocations have not exceeded 100% for nearly 10 years. These water entitlements can be accrued in a storage kitty up to a maximum of 700GL, and can also be 'borrowed' for consumptive purposes by NSW State Governments in dry times (MDBC 2007c). During the last 10 years there have been three long, medium-sized flood events in Barmah-Millewa, which inundated 50% of the forest – two natural floods and one environmental watering event. The environmental watering event occurred in 2005/6 and used 513 GL of the Barmah-Millewa Environmental Water Allocation (which had been carried over for several years) on the back of rain-induced natural flows (MDBC 2007c). This resulted in a very substantial bird-breeding event and improved the health of River Red Gum across 55% of the Barmah-Millewa area – however there have since been substantial declines in tree health as referenced above

Indigenous water

Indigenous Traditional Owner groups within the region are the original owners of all lands and waters along the Murray, Murrumbidgee and Lachlan rivers and have never relinquished their custodial right to protect and preserve their country. The rivers and forests of the region are rich in relics, artifacts and places of cultural significance, and are also of outstanding importance for contemporary cultural economies. NPA acknowledges the unique knowledge and skills that Traditional Owners bring to natural resource issues in the region, and their rights and interests in land in the region.

To this end, NPA supports proposals from the Murray Lower Darling Rivers Indigenous Nations with regard to indigenous water rights and cultural flows.

There are social, cultural economic and environmental reasons why indigenous nations in the Murray Darling Basin should be given access to and control of water entitlements both as indigenous water rights (which can provide economic outcomes)

and as cultural flows for the maintenance of important cultural sites, landscapes for cultural practice and feeding plants and animals of cultural significance. These allocations would differ significantly from environmental water allocations because they would be controlled by indigenous people, and would be used according to cultural priorities.

Within the Murray Darling Basin, indigenous peoples currently hold less than 0.2% of land, despite comprising approximately 4% of the Basin's population, and despite land reforms such as the *NSW Aboriginal Land Rights Act 1983* and *Native Title Act 1993*.

According to MLDRIN, "cultural Flows" are water entitlements that are legally and beneficially owned by the Indigenous Nations of a sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of those Indigenous Nations.

It is crucial that such water be owned and controlled by Traditional Owner nations and it is a major of the current framework that it does not provide for cultural water of this kind.

In addition, we support the proposal by the Australian Network of Environmental Defenders Offices that "the definition of "Critical Human Water Needs" should be amended to make reference to long term environmental outcomes and water for Indigenous cultural purposes." And that the Water Bill "should clarify that membership of the various governing bodies involved in the development of the Basin Plan must contain an even distribution of individuals with expertise in environmental, social, Indigenous and economic fields."

Climate Change

Climate change is happening but mitigation is not.

CSIRO (2007) provide a moderate climate change scenario for the Murray region, in which the Ramsar site is located, which predicts a warming of 1.5°C and an 8% decrease in rainfall by 2030.

It is predicted that climate change will have a substantial impact on rainfall and streamflow in the Murray Darling Basin by 2030, which will place substantial strain on the catchment's water resources. CSIRO (2008) predict that under a dry extreme climate scenario, average surface water availability would fall by 41% in the Murray region. They also predict that under the 'best estimate' of 2030 climate, average annual flood volumes would be in the range of 8 to 12 percent of the natural (pre-European) volumes.

Climate mitigation in Australia is happening too cautiously and too slowly, and must be accelerated if the Murray-Darling rescue is to work. The Senate Committee should include in their recommendations, a requirement that emissions begin to fall in Australia within this term of Government – from 2010 onwards – to begin tackling the problem.

Australia must also go to the Poznan and Copenhagen climate talks advocating the deepest possible cuts to greenhouse emissions. At the very least, that all Annex 1 countries adopt a 40% 2020 target -- the upper end of the range suggested in Bonn.

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