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The Secretary
Senate Standing Committee on Rural and Regional Affairs and Transport
Parliament House
Canberra ACT 2600

Thank you for the opportunity to comment on the implications of water management for the long-term sustainable management of the Murray Darling Basin system.

I write as a riparian landholder and stock and domestic water user in the headwaters of the Condamine catchment in Queensland, and as someone who has been involved in the MDB Ministerial Council's Community Advisory Committee (CAC) for more than 4 years. As part of my CAC commitments, I currently sit on the Living Murray Community Reference Group and Native Fish Strategy Implementation Working Group. As a former WWF(Aus) project officer, I have developed a good understanding of the Ramsar Convention and the issues facing Ramsar wetlands and managers in the MDB. I have also been involved in numerous water and floodplain planning processes in the northern MDB, a member of various catchment management organisations in Queensland and an environmental flows advisory committee in the Gwydir valley of north west NSW.

This submission includes detailed comments on ToRs c) and f) and brief comments on most others.

a) the adequacy of current whole-of -basin governance arrangements under the Intergovernmental Agreement;
Much of the blame for the current state of the MDB lies with the federal system in which States' economic and political interests have always been more important than the health of the basin itself. Different legislative and policy approaches (and even language!) have led to fragmented management and operational arrangements. Furthermore, *within* jurisdictions, there are varying processes and approaches for different stakeholder groups. It is hardly surprising that the result is inconsistent – and inequitable – outcomes. This issue is discussed further, with particular reference to the energy resources sector, under ToR (f)

Basin governance arrangements have never been well co-ordinated or integrated, particularly with respect to funding for NLP and NHT programs. Because funding arrangements have involved the States, rather than the MDBC, investments have been made that actually undermine important and expensive programs such as the Basin Salinity Management Strategy, Native Fish Strategy, Risks to Shared Water Resources, and the National Action Plan for Salinity and Water Quality to name a few. It is to be hoped that the new arrangements will be much better integrated with the National Water Initiative and Caring for our Country program.

b) the adequacy of current arrangements in relation to the implementation of the Basin Plan and water sharing arrangements;

The Water Act 2007 directs the MDB Authority to prepare a Basin-wide Plan within 2 years. Given the complexity of the task this seems an unrealistic time-line, especially if the community is to be consulted on the Draft.

I believe it is feasible and desirable to get the foundation principles right and for the community to agree to these within 2 years. However, this should not slow down the water purchase program to return water to over-allocated river systems.

The more detailed aspects of the Basin-wide Plan should be developed thereafter and in consultation with the regional communities who will have to live with the Plan as implemented at a regional or catchment scale.

c) long-term prospects for the management of Ramsar wetlands including the supply of adequate environmental flows;

As a Contracting Party to the Ramsar Convention, the Australian Government is required to meet four obligations.

Obligation 1: Designation of at least one site that meets Ramsar criteria to the Convention and the maintenance of the ecological character of listed Ramsar sites through conservation and wise use.

Progress and commitment to meeting Ramsar obligation 1

Australia has listed 64 wetlands of international importance. Latest assessments indicate 22 have ch changed in ecological character or have the potential to change (DEH 2002). There are 15 Ramsar sites c sites covering almost 500,000 hectares in the Murray Darling Basin and 5 are icon sites under The Living Murray (TLM).

Many of Australia's Ramsar sites are in National Parks [eg. Kakadu, Cobourg Peninsular (NT), Currawinya, Bowling Green Bay (Qld) the Coorong, Coongie Lakes (SA), Hattah-Kulkyne Lakes (Vic) etc] with responsibility for on-ground management devolved to state environment and conservation agencies. The environment portfolio has until recently had a low ranking within most state cabinets, meaning limited funding for national parks for terrestrial management oas well as for Ramsar sites and nationally important wetlands.

Terminal wetlands downstream of irrigation areas have undergone major hydrologic changes and conditions of prolonged, almost permanent drought now exist, a clear indication that 'wise use' is not being achieved. Three (of 4) terminal wetland Ramsar sites in the northern MDB (ie. Narran Lakes, Macquarie Marshes and the Gwydir wetlands) are on the brink of ecological collapse, as are other nationally important wetlands such as the Great Cumbung Swamp and Lowbidgee Floodplain.

To date, the Commonwealth has had little power to compel the states to maintain the ecological character of Ramsar sites through conservation and wise use, particularly addressing over-allocation and the provision of appropriate environmental water.

Obligation 2: Promotion of the wise use of all wetlands within Australia through national land use planning, conservation and management.

Progress and commitment to meeting Ramsar obligation 2.

With state and regional planning and funding delivery models, it has been difficult for the Australian Government to ensure consistent land use planning, conservation policies and management actions are occurring for Australian wetlands. Similarly, with adequate environmental water being implicit in 'wise use' principles but water being a State responsibility, the Australian Government has been poorly positioned to address this obligation.

At COP4 (1990), *Guidelines for the Implementation of the Wise Use Concept* were adopted,

including the "establishment of actions on a site-specific basis such as legal protection mechanisms and habitat restoration" as one of five categories of national action. Furthermore, irrespective of whether or not a national wetland policy had been developed, COP agreed to identify the issues which require the most urgent attention and take action on one or more of those issues.

In Australia it *should* follow that the return of water to wetlands, through purchase or otherwise, would be a key action required where a wetland's ecological character is at risk through river regulation and over-extraction. It is acknowledged that more than $1 billion has been invested and that Ramsar wetlands have benefited from increased environmental flows under TLM, but much more water is needed to achieve outcomes at Chowilla-Lindsay-Walpolla, the Coorong, Lower Lakes & the Murray Mouth, and at Ramsar sites in the northern MDB.

From1990 to date, inflows to terminal wetland systems north of the Murray valley have decreased dramatically with catastrophic impacts on wetland vegetation and wildlife and significant changes in ecological character.

Although Ramsar wetlands are specifically mentioned in relevant Catchment Action Plans (or equivalent), strategies and actions to achieve on-ground benefits are hampered by limited environmental water.

Obligation 3: Promotion of training in wetland research, management and wise use

Progress and commitment to meeting Ramsar obligation 3.

This obligation is partly addressed by 5 strategies in the Commonwealth Wetlands Policy Implementation Plan.

Obligation 4: To consult with other Contracting Parties about the implementation of the Convention.

Progress and commitment to meeting Ramsar obligation 4.

Article 5 of the Ramsar Convention deals with international cooperation. Contracting Parties have agreed to consult with other Contracting Parties about implementation of the Convention, especially in regard to trans-frontier wetlands, shared water systems, and shared species. Transfrontier wetlands and shared water systems are not relevant to Australia's international relationships – but are very relevant to inter-state relationships.

Representatives of the Australian Government provide regular reports and attend COP meetings. Amendments to both CAMBA and JAMBA were agreed to in 2006, and a migratory birds agreement was negotiated between Australia and the Republic of Korea in 2007. These are all positive achievements.

Current Wetlands Policy Framework

At the Ramsar COP 6, (Brisbane 1996), the Australian Government agreed on how it would deliver commitments to wetland conservation and wise use. Establishing national wetland policies and plans was fundamental to this. Other measures included reviewing and harmonizing the framework of laws and financial instruments affecting wetlands; and integrating wetlands into the sustainable development process.

The (then) Australian Department of Environment and Heritage (Biodiversity Group) developed the Commonwealth Wetland Policy in 1997. It "provides strategies to ensure that the activities of the Commonwealth Government promote the conservation, ecologically sustainable use and enhancement, where possible, of wetlands functions. The Policy forms an essential platform for the development of a national framework of wetland policies and strategies."

The Implementation Plan for the Commonwealth Wetlands Policy includes time-lines, responsibilities for defined actions and performance indicators. The Plan was developed in 1999 to ensure "actions are addressed in an effective manner and within appropriate time-frames." It includes strategies and priority actions covering 6 major areas:

1. Managing wetlands on Commonwealth lands and waters (Linked to Ramsar obligation 2 above)

   Comment: The Commonwealth is well placed to manage wetlands on territory within its jurisdiction such as defence force areas and off-shore reefs and islands.

2. Implementing Commonwealth policies and legislation and delivering Commonwealth programs. (Linked to obligation 2 above)

   Comment: The inclusion of a Ramsar trigger in the *Environment Protection and Biodiversity Conservation Act 1999* has failed to address the cumulative impacts of new irrigation developments and to prevent new developments upstream from impacting on Ramsar sites. This indicates that Strategy 2.1 "ensuring this Policy and other related Commonwealth policies and strategies are implemented in a co-ordinated manner" and the response to it – "to undertake reviews of relevant Commonwealth legislation, policies and strategies" has not been adequate.

   The 2006-07 Australian National Audit Office report into the Conservation and Protection of National Threatened Species and Ecological Communities identifies Wetlands of International Significance as one of 7 matters of national environmental significance (MNES) that can trigger the EPBC Act. However, the audit is tightly focussed on listed threatened species and ecological communities as these receive the greatest number of referrals. The document notes that few referrals are made from the agricultural industry sector (2.8% [46 of 1,630] of referrals to June 2006). Not only does the Act not adequately protect Ramsar wetlands, the process of assessing the efficacy of that Act also fails to consider Ramsar sites – only the threatened species or ecological communities that may be present at such sites. The Report found that the protection of threatened species and ecological communities is constrained by inadequate monitoring and poor targetting of funding for national conservation priorities.

   DEWHA's predecessor was apparently aware of its lack of capacity to meet its statutory obligations (ie to ensure compliance with and investigate breaches of the EPBC Act.) Increased resources are essential if improvement is to occur.

   The Commonwealth Wetlands Policy 'encourages' the completion of state wetland policies. All states have done or are developing wetlands policies, programs or strategies, some as part of biodiversity plans/policies.

   The Implementation Plan's Performance Indicators include 'methodologies for establishing environmental flows includes wetland requirements' and 'number of Ramsar sites with management plans in place.' While such things can be monitored or measured, they have proven ineffective in protecting, maintaining and/or restoring ecological values.

   The Commonweatlh manages programs such as NHT, Bushcare, Rivercare etc that benefit wetlands. However, with regional delivery models, the investment in and efficacy of wetland projects varies.

3. Involving the Australian people in wetlands management. (No clear link to Ramsar obligations)

   Comment: Strategy 3 of the Commonwealth Wetlands Policy Implementation Plan is focused on increasing understanding of wetland values, community empowerment and supporting conservation and wise use.

   Educational materials include websites, newsletters, interpretative signage, State of Environment reporting etc. Community empowerment is to be achieved through dissemination of wetlands R&D and other information exchange, involvement in Waterwatch activities, and promotion of case studies.

   Encouraging wise use and conservation of wetlands recognises the value of incorporating indigenous knowledge in educational materials and management plans. Where it occurs, the employment of indigenous facilitators at TLM icon sites is to be applauded.

   Supporting mechanisms include provision of 'wise use' information to local governments, industry and landholders; encouraging private sponsorship of Waterwatch, and reviewing incentive schemes. While these activities (and the development of educational materials as above) are worthwhile, more needs to be done to ensure greater involvement in on-ground works that results in improved wetland health.

4. Working in partnership with state/territory and local governments. (No clear link to Ramsar

obligations)

This strategy encourages partnerships and promotes and supports local government and private landholder efforts in wetlands conservation. Local governments are encouraged (but not required) to develop wetlands-specific local policies consistent with State policy and wise use guidelines.

Performance indicators include the number of completed state wetland policies and management plans for Ramsar sites; number of new Ramsar nominations; methodologies for establishing environmental flows includes wetland requirements; and evidence of agreed approaches for addressing cross-border wetland issues.

None of these performance indicators provide any indication of how well wetland condition and health is maintained or improved, nor how wetland management has been integrated into the sustainable development process.

5. Ensuring a sound scientific basis for policy and management. (linked to Ramsar obligation 3 above.)

   Strategy 5 deals with monitoring activities; strategic and co-ordinated wetlands research and development; linkages to other R&D programs and adoption of new research results. Publication of wetlands research findings is among actions designed to encourage the understanding and application of new research.

   Performance indicators include completion of a national wetlands inventory (Directory of Important Wetlands of Australia); documentation of trends in wetland health and use of an agreed monitoring protocol in wetlands managment decisions.

   The linkages to other R&D programs appear to be robust and integration with research activities under eg the Shorebird Action Plan are to be commended.

   Weeds and other processes threatening to wetlands are identified under this strategy and linked to NHT programs. The current regional delivery funding model is an impediment to effective, coordinated and integrated action.

6. International actions. (linked to obligation 4)

   Contracting Parties have agreed to consult with other Contracting Parties about the implementation of the Convention. Representatives of the Australian Government provide regular reports and attend COP meetings.

Conclusions:

Australia's approach to Ramsar listing (ie. Mostly to nominate freshwater assets within National Park) has been somewhat passive.

To date the Australian Government has failed to meet some of its key Ramsar obligations, partly due to the separation of powers between the State and Federal Governments, and partly because water management and land use planning is not well-integrated at state and local levels.

Legislation has proven largely ineffective. In spite of a Ramsar trigger, the EPBC Act is powerless to deal with the cumulative impacts of over-allocation - the *key* cause of decline. Issues such as floodplain harvesting and floodplain development also need to be dealt with if Ramsar obligations are to be fulfilled.

Maintaining ecological character and ensuring the 'wise use' of wetlands includes taking action on and managing issues that affect wetlands, which logically includes the delivery of increased environmental flows particularly to Ramsar and nationally important wetlands in the Murray Darling Basin. The 'wise-use' principles are not well integrated into either policy or programs.

In several areas, the Commonwealth Wetlands Policy needs revising and amending to shift its current focus on outputs (eg. Management plans), to one of positive ecological outcomes for significant wetlands.

d) the risks to the basin posed by unregulated water interception activities and water theft;
The State of the Darling Interim Hydrology Report (Webb McKewon and Associates Pty Ltd

March 2007) states that there is scope for increased use of surface water in unregulated streams covered by Qld Water Resource Plans and NSW Water Sharing Plans, as well as growth in overland flow and runoff harvesting.

Overland flow and runoff harvesting *already* represent a significant proportion of the water extracted from the northern rivers . This has already had serious impacts on nationally and internationally significant wetlands, particularly those at the end of their respective systems and reduced the number of days when wetlands in the Barwon-Darling connect with their parent river. Floods events are less frequent, the floods themselves smaller, and periods of low flow have increased, as has the time between weir drown-outs. All this has had an enormous impact on fish and waterbird populations, and river and floodplain health. "Growth" in overland flow take is unacceptable while significant ecological damage is not addressed.

Water theft is a serious problem in some catchments and can be expected to increase if supplies become scarcer and water itself more valuable (likely under climate change scenarios). Consistent, rigorously enforced licence conditions - including metering - are needed to ensure water is taken only when and where it is legally permitted.

The current penalties for breaching license conditions are totally inadequate and unscrupulous landholders regard them as merely another (affordable and tax deductible) input cost. Landholders affected by water theft believe penalties should be much more severe and many support reducing entitlements and/or access conditions as more effective deterrents and penalties.

e) the ability of the Commonwealth to bind state and territory governments to meet their obligations under the National Water Initiative;
No comment.

f) the adequacy of existing state and territory water and natural resource management legislation and enforcement arrangements;
As previously mentioned, there is a serious problem with different treatment of various stakeholders that results in perverse environmental outcomes and a waste of taxpayers money and community investment in the development and implementation of on-ground NRM projects.

Mining and energy resources companies do not have a strong history of engaging with CMAs / regional NRM bodies yet their activities have significant implications for accredited NRM plans, particularly the achievement of targets endorsed by State and Commonwealth Governments.

Applications for mining, coal seam gas and petroleum exploration permits is accelerating in the northern MDB (and elsewhere). Many developments are designated 'projects of state significance' and receive special treatment under State Planning Policies (eg. For the protection of high quality agricultural land), and state legislation (eg. Queensland's Vegetation Management Act 1999.) The corporations are allowed to undertake activities such as broad scale clearing that other landholders are not permitted to do. Much development occurred during a policy vacuum and there is no requirement to comply with new regulations – particularly those covering the management of associated water- retrospectively.

In the Queensland section of the MDB (QMDB) alone the extent of existing mining & petroleum exploration permits and applications for permits exceeds 7 million hectares. The offset process for removal of native vegetation results in a 50% nett loss of vegetation cover and may include 'endangered' and 'of concern' regional ecosystems. This means continued habitat fragmentation and loss of biodiversity – matters that NRM groups are trying to address through their regional plans. The failure to meet native vegetation and biodiversity targets in endorsed NRM plans will

undermine community and NRM groups' considerable efforts and have much to do with the activities of the mining sector.

Millions of tonnes of salt have already been mobilised in the QMDB, and the expansion of the industry will see very high levels of saline water in the landscape. Evaporation ponds (for the disposal of saline associated water) currently cover > 2,000 hectares with potential for many times that. The QMDB is already an area of high salinity risk and hazard and includes the largest salinity site in Qld – more than 10,000 ha.

Permits have already been granted to divert more than 650 kilometres of streams in the Condamine-Balonne, Maranoa and Border Rivers catchments. The modification of river flows (caused by stream diversions) and floodplain flows (caused by levy banks diverting overland flows) leads to environmental damage including erosion on floodplains, stream bank slumping and changed overland flow patterns.

NSW has granted exploration leases covering all coal seams in the Namoi catchment. Agriculture in the valley relies heavily on groundwater and landholders and the CMA have concerns about risks to the groundwater resource including damage to local aquifers. Similarly, in Queensland, QDNR&W and CSIRO staff have investigated ground-surface water interactions in the Condamine catchment and refuse to rule out the possibility of negative impacts to aquifers.

Risks to NRM assets are neither well understood nor quantified and there is no agreed framework for sharing the costs. CMAs / NRM groups seek 'sensible risk management approaches' including:

i. The possible pollution/ sedimentation of water ways (rivers, creeks & wetlands) from erosion off mine sites and spoil heaps; and leakage and over-topping of settling ponds or evaporation ponds. Some evaporation ponds are located as close as 10 metres from surface water streams.

ii. Ground–surface water cross-contamination and inter-aquifer leakage (including aquifers associated with the Great Artesian Basin.) Some areas are known to have a high degree of interaction and experts will not rule out cross contamination.

iii. Intersection of ground water in open cut coal mines and coal seam gas sites has the potential to disrupt stock and domestic supplies and agricultural production in groundwater dependent areas.

iv. Few evaporation ponds have membrane liners and are highly likely to leak due to the interaction of the concentrated salts and clay. If so, there will be very large areas of toxic sites in the future.

v. Pollution and disposal issues: salts, hydrocarbons, toluene etc. and other contaminants in "associated" water.

vi. "Associated" (or waste) water is potentially an important new source of water for town water and industrial supplies but generally requires treatment and the disposal of a significant volume of brine. Future developments involving permanent infrastructure may become reliant on a temporary water source.

In my experience, the mining sector is reluctant to invest in catchment planning processes and projects nor contribute to on-ground activities. Furthermore, there is anecdotal evidence that the trend towards 'fly-in, fly out' employment arrangements is beginning to manifest in adverse social outcomes as some staff have no sense of belonging to the local community so no sense of obligation to community members. While this is not strictly speaking an NRM issue, it does have implications for social sustainability in an increasing number of northern MDB communities.

g) the impacts of climate change on the likely future availability of water

Water scarcity will drive up both the value of water and investment in water use efficiency. With weather events predicted to become more extreme, production systems need to become more flexible and opportunistic to take advantage of abundant water when it is available.

This suggests that permanent plantings will be increasingly at risk and a strategic approach needs to be taken as soon as possible to restructuring communities dependent on such crops. Alternative products need to be developed to ensure the long-term viability of regional communities. I believe a framework needs to be developed for the provision of ecosystem services to achieve this. It is essential that local communities be involved in the process..

Thank you once again for the opportunity to comment.

Yours sincerely,