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Committee Secretary
Senate Rural and Regional Affairs and Transport Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

**Inquiry into water management in the Coorong and Lower
Lakes**

The following comments are tendered in relation to the specified Terms of Reference of this Inquiry.

- 1. On 27 August 2008, the Senate referred water management in the Coorong and Lower Lakes for inquiry and report by 30 September 2008.**
- a. the volume of water which could be provided into the Murray-Darling system to replenish the Lower Lakes and Coorong;**

While I am unable to comment on what water "could" be delivered, I can offer comment on the issue of what water should be provided. In 2006, Dr Kerri Muller and I (with assistance from an expert panel) prepared the Ecological Character Description of this site; a detailed description and assessment of its condition (available through this link <http://www.environment.sa.gov.au/biodiversity/wetlands.html#ramsar>). Our conclusion then was that as a first step (or target) for recovery of the site the aim should be to provide sufficient water to keep the mouth of the Murray River open without dredging. The estimate is that that would require around 750-1,000 GL/year delivered at the average rate of 2,000 ML/day. This is an important first step to recovery, as it will help to start flushing out of the system the several years of accumulated salt and silt. Water provided over and above this critical baseline flow can then be used to rejuvenate the system, especially the highly saline Coorong lagoons. In particular, more ecologically-based operation of the barrages will provide better environmental outcomes without comprising drinking water and irrigator needs.

Since the 2006 report referred to above, the situation has worsened significantly, with water levels falling in the lakes and exposing acid sulfate soils. Expert view is that if the lakes fall to lower than 0.8 metres below sea level then there is a serious risk of major and widespread acidification. This so-called 'tipping point' must be avoided if there is to be any hope of seeing the site recovered. Depending on rainfall (both locally and in the Basin), and how hot the spring-summer period is, the estimate is that this may require in the order of 300-400 gegalitres of water to keep the lakes above this critical

level. If this can be achieved, then the targets should be to raise the water level in the lakes back to sea level in 2009, and then 0.3 metres above sea level in 2010. Note that even at this level the barrages are not operational; this occurs only once water level reaches 0.35 metres above sea level. Should the drought break and more water is available, then more intricate manipulations of levels and flows can be applied sooner to hasten the recovery processes.

If this 300-400 gigalitres of water cannot be secured for the spring-summer of 2008-9 then as a last ditch effort to prevent ecological collapse in the lakes it may be necessary to consider using sea water to keep water levels above the critical threshold. It is important that this option only be used if there are reasonable to good flows coming down the Murray so that the sea water stays localised near the barrages, and is diluted by River Murray water.

As part of the Coorong and Lakes rescue package it is important to safeguard the in-flows from the Mount Lofty Ranges (estimated at around 100 GL/year) and to cap groundwater extraction from the same area. While relatively little water, it is an important contribution to the lakes and these areas contain the EPBC Act-listed Fleurieu Peninsula swamps (critically endangered), the Mount Lofty Ranges Southern Emu-wren (endangered) and also support several threatened native fish species.

The other possible source of some water is from the South-east region of South Australia. The Upper South-East Drainage Scheme collects water via a system of deep drains and then stores this in Morella Basin. From here, regulated releases into the Southern Lagoon are possible via Salt Creek. While the quality of this water is an issue, it is less saline than that in the South Lagoon at present and so may be part of hastening the recovery of this part of the system. Since 2000, there have been several releases of drainage water into the South lagoon (ranging from 4,400 – 10,669 ML). Historically, the Coorong received significant inflows from this region before more than 90% of the wetlands were drained. Careful examination of what might be possible to re-instate these flows (even partially) may be worth investigation for the long-term management of this site.

b. options for sourcing and delivering this water, including:

i. possible incentive and compensation schemes for current water holders who participate in a once-off voluntary contribution of water to this national emergency,

One suggestion here is to ask all irrigators across the Basin to voluntarily surrender a small percentage of their allocations (1 or 2 % perhaps) in perpetuity, as a form of 'river and community health' donation. This should be tax deductible as are a range of 'landcare' activities already.

From my interactions with irrigators over the past few years I believe this may be seen as a more palatable approach to take rather than the current shot-gun approach to buying out water licences and properties. Such a scheme is being considered by the recently established not-for-profit RiverSmart Australia (www.riversmart.net.au). To gain confidence from water licence holders, any water donated in this way would be managed by a community-based Board. There is deep suspicion and lack of trust that water being acquired by government at present will be managed in a transparent way with decisions about how, when and why such waters are provided continuing to be

controlled by State interests and not those of the broader community and their rivers.

An alternative, or perhaps complimentary, approach is to offer direct technical and financial (cost-sharing) support for irrigators in moving toward improved water use efficiency on-farm, or collectively, depending on the circumstances. An example is the case of 11 irrigators around the Yatco Lagoon in the Riverland of South Australia.

The Yatco Wetland Landcare Group was formed in 2007 to take forward their own community initiative to be able to source (better quality and more reliable) water direct from the River Murray. This will allow the lagoon to be returned to a semi-natural wetting and drying regime; thus reducing evaporative losses and saving an average of 2 GL every 3 years for the River Murray. Yatco lagoon, the irrigators and the community of Moorook have been winners under this project, which has gained local sponsorship from Banrock Station Wines and Nippy's Fruit Juice. In September 2007 it was announced by the Federal Member for this electorate that the group (the Hon Patrick Secker) was to receive a grant of \$3.3m under the National Plan for Water Security to finance the infrastructure changes needed for this initiative to proceed and the water savings to be realised. Replication of this approach, modified to suit circumstances, could yield significant water savings while also providing strong environmental and social benefits.

- ii. **alternative options for the acquisition of sufficient water, likely transmission losses and the most efficient and effective strategies to manage the delivery of this water,**

See above.

- iii. **Commonwealth powers to obtain and deliver water and possible legislative or regulative impediments, and**

Not qualified to comment.

- iv. **assessment of the potential contribution of bringing forward irrigation infrastructure spending under the Council of Australian Governments agreement to deliver water to save the Coorong and Lower Lakes;**

Not qualified to comment.

- c. **the impact of any water buybacks on rural and regional communities and Adelaide including compensation and structural adjustment; and**

Not qualified to comment.

- d. **any other related matters.**

Nothing further to add.

2. The implications for the long-term sustainable management of the Murray Darling Basin system for inquiry and report by 4 December 2008, with particular reference to:

a. the adequacy of current whole-of -basin governance arrangements under the Intergovernmental Agreement;

See below.

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

Institutional issues have contributed to the current situation being experienced across the Basin. The Murray-Darling Basin Agreement and Ministerial Council have not been able to regulate water use and sharing appropriately. State interests have dominated, and the Commonwealth has done insufficient to correct this situation despite repeated warnings from the scientific community and landholders of the looming problems.

Significantly, at the Federal level it appears there has been a failure to harmonise programs and policy between the Murray-Darling Basin Commission (MDBC) and the national programs rolling out funds for natural resource management (NRM). Programs such as the Natural Heritage Trust, National Action Plan for Salinity and Water Quality, National Landcare Program and the National Water Initiative's elements, have not been sufficiently integrated in their delivery, and the relationship between them the MDBC's Basin Plan is unclear. It makes a mockery of the term 'integrated natural resource management' to allow these programs to continue operating in virtual isolation, largely as a consequence of history and institutional arrangements.

When this same situation is replicated at State level, and made worse by more government agencies being involved, it is little wonder the Catchment Management Authorities are struggling and landholders are frustrated and deeply suspicious of government initiatives.

The Commonwealth government has several ways it can improve this situation. Use the leverage it has through funding NRM activities to bring about change, particularly in relation to water use and allocations and the management of Ramsar sites in particular (see below for more on this point). Reduce the number of Federal funding 'doorways' so that funds being distributed for NRM are unambiguously about promoting sustainability outcomes. Review all water sharing plans and instruments for the Basin's river valley's as at present these are in general predicated on the false assumption that healthy rivers are possible without there being an appropriate baseline environmental allocation. Commence water accounting for the Basin that reports on water held in all storages (public and private), not only those under MDBC control.

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

Across the Murray-Darling Basin there are 17 Ramsar wetlands with a total area of approximately 637,090 hectares. An audit of their condition and management arrangements will show that several are in poor to very poor health and seriously under-resourced for the management responsibilities Australia has for places listed as internationally important. Stand out examples include the Macquarie Marshes, Narran Lakes, the Lower Gwydir

wetlands, Fivebough-Tuckerbil Swamps and all sites along the Murray River (namely, the Barmah and Millewa Forests, Gunbower Forest, Hattah-Kulkyne Lakes, The Riverland/Chowilla floodplain and the Coorong and Lower Lakes) with the exception of the Banrock Station site. The Murray River sites (again excluding Banrock Station) are also so-called 'icon' sites under the *Living Murray Initiative*, about which I will say more below.

Historically, Australia has not afforded Ramsar wetlands the same status and resourcing for management as it does World Heritage sites. Unlike World Heritage properties, Ramsar wetlands are not the subject of Commonwealth-State agreements for management and cost-sharing and this has seen them at the mercy of State government whims. The EPBC Act was supposed to help in this regard but this has not proven to be the case. While the Commonwealth is presently funding ecological benchmarking of each Ramsar site, including (it is hoped) specification of their water needs, this is yet to see any significant changes on the ground.

Two major missed opportunities for improving the management of Ramsar sites was through the Commonwealth-State bilateral agreements negotiated under the Natural Heritage Trust, and the funding agreements with the regional Catchment Management Authorities. These were silent or weak on how these sites would be treated through this funding program; an error it is hoped the new Government through the *Caring for our Country* program will address. It should be possible to use these bilaterals to lock in certain performance standards for keeping these sites healthy and for providing them with priority water delivery.

As noted above, under the *Living Murray Initiative* (LMI) five of the six icons are Ramsar sites. For each site, environmental management plans have been prepared under LMI and for some these are about to be revised. At the same time, Commonwealth funds are also financing the development, or revision, of existing site or Ramsar management plans, thus duplicating effort and providing confusion over how these two plans for the same area relate to one another. Harmonisation of these processes is needed urgently. Likewise, there needs to be one area of the Federal government that has lead responsibility for Ramsar site issues. For Ramsar sites in the Murray-Darling Basin this is currently unclear, largely as a consequence of the *Living Murray Initiative*.

In the specific case of the Coorong and Lakes Ramsar site there is an urgent need to rationalise institutional arrangements. Those directly involved include the River Murray Environmental Manager function assigned to the South Australian MDB NRM Board, the Department for Water, Land and Biodiversity Conservation (responsible for the LMI and its environmental management plan) and the Department for Environment and Heritage (responsible for Ramsar management plan). With such division of roles and responsibilities for the same area it's not easy to know where the buck stops.

One a more general note, and building on my earlier comments about the lack of resourcing and national leadership on the management of Ramsar areas, there are many 'skeletons in the cupboard' that should be rectified after many years of being in the 'too hard basket'. Examples (but there are more) include the Coongie lakes site of South Australia and three sites in Tasmania where private lands were included in Ramsar site declarations in the 1980s with no consultations. Management planning for these sites, it is understood, is at an impasse and has been for several years. A review of Ramsar site management across the country is needed to ensure problems such as these are fixed and

all sites are gaining the level of management intervention and resourcing they warrant.

d. the risks to the basin posed by unregulated water interception activities and water theft;

Not qualified to comment.

e. the ability of the Commonwealth to bind state and territory governments to meet their obligations under the National Water Initiative;

Not qualified to comment.

f. the adequacy of existing state and territory water and natural resource management legislation and enforcement arrangements; and

See comments above under b. and c.

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

Not qualified to comment.

* **About the author.** From 1985-1997 Dr Bill Phillips worked for the Federal Environment Portfolio in various capacities, notably becoming director of the National Wetlands Program when it was established in 1994. Dr Phillips attended the triennial global Ramsar Convention meetings as part of the official Australian delegations in 1987, 1990, 1993 and 1996. Then, from 1997-2000, he was Deputy Secretary General of the Ramsar Convention and attended the global conferences in 1999, and again in 2002. In 2006 he was leader of a team that documented the ecological character of the Coorong and Lakes. More recently he has coordinated the drafting of a new plan of management for the Coorong and Lakes Ramsar site which is currently undergoing consultations within government. Dr Phillips has recently established RiverSmart Australia, as a new way to progress community-based and initiated management of water and rivers, hand-in-hand with promoting sustainable farming practices.