



**Conservation Council  
of South Australia Inc**

**Submission to the  
Senate Inquiry into  
Water Management in the  
Coorong & Lower Lakes.**

**19 September 2008**

**Conservation Council of SA Inc  
CCSA  
1/157 Franklin St  
Adelaide  
SA 5000**

**p: (08) 8223 5155**

**f: (08) 8232 4782**

**e: [general@ccsa.asn.au](mailto:general@ccsa.asn.au)**

**[www.ccsa.asn.au](http://www.ccsa.asn.au)**



## Table of Contents

Terms of Reference	ii
Executive Summary	1
Introduction	2
CCSA's Water Policy Principles	3
Principle 1 – A Healthy River Comes First	3
Principle 2 - Respect Environmental Limits	3
Principle 3 - Wean Adelaide off the Murray	3
Principle 4 - Immediate Federal Action	3
Principle 6 - Utilising Alternative Water Resources	3
Principle 7 - Demand Management	3
Principle 8 - Audit Engineering Solutions across a Triple Bottom Line	3
Principle 9 - Culture and Equity Considerations	4
Discussion	5
Short-term Recommendations:	6
Long-term Recommendations	7
Conclusion	8

## Terms of Reference

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;
  - 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,
    - ii. alternative options for the acquisition of sufficient water,
    - iii. likely transmission losses and the most efficient and effective strategies to manage the delivery of this water,
    - iv. Commonwealth powers to obtain and deliver water and possible legislative or regulative impediments, and
    - v. 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;
  - c. the impact of any water buybacks on rural and regional communities and Adelaide including compensation and structural adjustment; and
  - d. any other related matters.
  
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;
  - b. the adequacy of current arrangements in relation to the implementation of the Basin Plan and water sharing arrangements;
  - c. long-term prospects for the management of Ramsar wetlands including the supply of adequate environmental flows;
  - d. the risks to the basin posed by unregulated water interception activities and water theft;
  - e. the ability of the Commonwealth to bind state and territory governments to meet their obligations under the National Water Initiative;
  - f. the adequacy of existing state and territory water and natural resource management legislation and enforcement arrangements; and
  - g. the impacts of climate change on the likely future availability of water

In conjunction with these references the Committee will also consider Emergency Water (Murray-Darling Basin Rescue) Bill 2008 for inquiry and report by 30 September 2008.

## **Executive Summary**

The Conservation Council of South Australia is the peak environment and conservation body in South Australia. It represents over 50 member groups and has had a long standing interest in the health and wellbeing of the State's ecosystems and biodiversity.

For many years CCSA maintained a dedicated campaign to restore the health of the River Murray and has been disappointed to see state of the Murray Darling Basin (MDB) continue to decline while there was much talk of improving the situation.

CCSA believes that as a first principle, the management of the entire Murray Darling basin must be predicated upon utilising the best available science (inc. the CSIRO) to guide our actions and to ensure that we operate within sustainable parameters.

Achieving sustainability across a triple bottom line will not be easy and will require a range of short and longer term responses. However restoring the river's ecological health is a fundamental pre-requisite for returning rural communities' economic and social health.

In the short term, CCSA recommends immediate and urgent unilateral Commonwealth action to place control of the governance arrangements of the entire basin under a single, unified, independent, science-based, environmentally-focused body. Fast-tracking water delivery to the Lower Lakes should be combined with bio-remediation to stave off acidification until next winter's inflows. This body would then be responsible for the re-setting of the entire MDB system through the production of an Interim Basin Plan that must be urgently completed. Current water sharing arrangements can then be revised to ensure the adequacy of environmental flows and the restoration to health of our Ramsar-listed wetland sites and other significant ecological communities.

Fundamentally, this will require tackling head-on the over-allocations that bedevil the management of the system and integrating the responses to ensure that ecological communities are restored. Simultaneously, we must also address the economic and social problems facing rural communities dependent on the river's water for their livelihood.

Assisting rural communities to make the transition to sustainable water utilisation will clearly require long term structural adjustment programs to buyback water and buy-out unsustainable producers. CCSA believes the existing timetable for water purchases needs to be hastened to provide certainty to local communities and to maximise environmental benefits.

Immediate action also needs to be taken in the shorter term, to improve water conservation through demand management, and provide alternative sources of water such as rainwater and stormwater.

As well as reducing demand on the Murray, these approaches will also have beneficial side-effects in reducing pollution of coastal waters and improving estuarine and marine health.

## **Introduction**

The **Conservation Council of South Australia Inc (CCSA)** is the peak conservation body for South Australia, representing over 50 of the State's environment and conservation organisations.

CCSA is an independent non-profit, non party-political, community based organisation which provides resources, advice and representation for the SA environment movement, and which leads many of the key conservation campaigns in SA.

CCSA is known for its success in developing long term community development, education, and on-ground environmental restoration programs.

CCSA regularly liaises with Local, State and Federal Governments, Government agencies, media, educational institutions, NGOs, unions, industry, business and other groups on matters relating to the environment and social justice.

As a community organisation, much of what CCSA achieves is through a large network of skilled volunteers from all walks of life – for its office, on-ground, governance and campaign activities.

CCSA is committed to a healthy environment for South Australia.

In conjunction with **The Wilderness Society (TWS SA)** & the **Nature Conservation Society SA (NCSSA)**, CCSA recently met with the **Minister for Water & Climate Change Penny Wong**.

A joint statement was presented to the Minister, which included the following:

*The River Murray is much more than a source of water for Australia's food bowl, more than money in the pockets of our primary producers, more than a home for unique Australian plants, animals and migratory birds from around the world.*

*The Murray is Australia's great river system; it has a central place in our national identity and heritage. The Lower Lakes and Coorong is its estuary, a wetland of international significance.*

*It is not possible to save the River while letting its estuary die. Australians will not accept the death of the Murray and South Australians will not accept the sacrifice of the Lower Lakes and Coorong.*

**The Federal Government must act now!**

## **CCSA's Water Policy Principles**

CCSA believes that water policy for the Murray Darling Basin (and indeed all of our waterways) needs to be governed by a number of over-arching principles.

### **Principle 1 – A Healthy River Comes First**

The health of the river system must be put first. Federal and State governments must place core environmental needs at the forefront of water policy and decision-making, along with economic considerations.

### **Principle 2 - Respect Environmental Limits**

Environmental limits must be understood and respected to return allocations to within sustainable parameters. A step change in the way we manage the system and determine allocations is needed.

### **Principle 3 – Adelaide's Requirements**

Adelaide must greatly reduce its dependence on the Murray River.

### **Principle 4 - Immediate Federal Action**

Immediate federal action must be taken (preferably with the co-operation/referral of States' powers, but without if necessary) to ensure the fast tracking of the long overdue and desperately needed environmental flows to meet critical environmental needs.

### **Principle 5 - Community Engagement**

Political leadership is needed to ensure the community is engaged and brought along with the process of restructuring water policy. Structural adjustment programs utilising buybacks and buyouts must be implemented to allow rural people to leave with dignity and to facilitate short & long term sustainability of rural communities.

### **Principle 6 - Utilising Alternative Water Resources**

Utilisation of alternative sources of water such as recycled water and stormwater harvesting, combined with aquifer storage and recharge (AS&R), must be advanced using all available mechanisms.

### **Principle 7 - Demand Management**

Demand management should also be immediately addressed. Conspicuous consumption as part of a 'business-as-usual' approach to the way we use water is no longer socially (or environmentally) acceptable. The way we use our water resources will change and this will impact on people's lifestyles. Our society and economy must become water-smart and change our habits accordingly.

### **Principle 8 - Audit Engineering Solutions across a Triple Bottom Line**

Large scale engineering solutions need to be costed on a triple – bottom line basis. This would factor in economic, social and environmental considerations and would specifically address the carbon intensity of any proposal. Any 'solution' must be focused on building self-reliance and not furthering dependence, which means that the Mt Bold reservoir extension (designed to

increase Adelaide's storage capacity of water sourced from the Murray) and other engineering 'solutions' such as the Wellington Weir, should not proceed.

Similarly, desalination plants must be assessed using the same methodology and should be viewed as an option of last resort. As well as being incredibly energy intensive, financing such an expensive option is likely to preclude funding other more sustainable options, such as stormwater harvesting and AS&R, that have much better environmental outcomes overall.

**Principle 9 - Culture and Equity Considerations**

Cultural aspects and equity considerations must be taken into account in water policy.

## Discussion

Throughout the MDB we have exceeded what are sustainable yields and have over-allocated water over the last forty years, if not longer. For over one hundred years, the system has been managed for the parochial interests of the individual states and vested interests within them, each concerned with ensuring they get their bit, at the expense of the welfare of the whole system. The current period of lower rainfall (whether from drought or long-term climatic shift) has brought the situation to a head, and all jurisdictions are now agreed that this mismanagement must be rectified.

The initiatives undertaken so far, such as the 2004 COAG *National Water Initiative*, the *Murray Darling Basin Plan* (scheduled to commence in 2011) and the *Water for the Future* program are appropriate, but do not adequately reflect the urgency required.

CCSA acknowledges that there is no simple, single solution – there will be negative consequences to be had for the environment, for local communities dependent on the river and lakes, and there will be economic consequences in terms of lost production and exports.

In the short term, CCSA recommends immediate and urgent Commonwealth action to place control of the governance arrangements of the entire basin under a single, unified, independent, science based, environmentally focused body. This body would in turn be responsible for the resetting of the entire MDB system. This would be accomplished through an urgent Interim Basin Plan that would see current water sharing arrangements revised to ensure the adequacy of environmental flows and the restoration to health of our Ramsar-listed wetland sites and other significant ecological communities.

A number of different sources, including the South Australian **Environmental Defenders Office (EDO)**<sup>1</sup> and **Associate Professor John Williams**<sup>2</sup> have indicated that this is constitutionally possible and 'do-able'.

Fundamentally, this body must tackle the over-allocations that bedevil the management of the system to restore a healthy river system. This will require confronting the economic and social issues facing rural communities dependent on the river's water for their livelihood.

Assisting rural communities to make the transition to sustainable water utilisation will require long-term structural adjustment programs to cushion economic impacts and enable vulnerable communities to make the transition to sustainable practices. These would include buybacks of water and buy-outs of unsustainable producers.

---

<sup>1</sup> Environmental Defenders Office (SA) inc. Submission to the Senate Inquiry into Water Management in the Coorong & Lower Lakes, September 11<sup>th</sup> 2008.

<sup>2</sup> Associate Professor John Williams, Associate Dean, Law School University of Adelaide, Testimony given to the Submission to the Senate Inquiry into Water Management in the Coorong & Lower Lakes, September 11<sup>th</sup> 2008.

Immediate action also needs to be taken in the shorter term, to address water conservation through demand management, and provision of alternative sources of water such as rainwater, recycled water and stormwater.

As well as reducing the demand on the Murray, these approaches will also have positive side benefits such as reducing pollution of coastal waters and improving estuarine and marine health. Various studies have indicated that stormwater harvesting could supply from 60-90 GL of water to Adelaide alone<sup>3</sup>.

### **Short-term Recommendations:**

CCSA initially presented the recommendations below to **Water Minister Penny Wong** at a joint meeting between **CCSA, Nature Conservation Society SA (NCSSA)** and **The Wilderness Society SA Branch (TWS SA)** in Adelaide in August 2008. These should be read in conjunction with the above-mentioned principles and other recommendations made in this submission.

\* That a guaranteed annual environmental water entitlement be purchased for the Lower Lakes and Coorong and released into the Ramsar site immediately. The size of this entitlement needs to be based on the best available science to maintain the ecological health, function and integrity of the Ramsar site.<sup>4</sup>

[NB: It is recognised that flows across the barrages of about 2 gigalitres per day would be successful in reducing the risks of mouth closure<sup>5</sup>. This equates to about 730 gigalitres per year, and is the only natural way to flush salt, sediment and agricultural chemicals out of the MDB.]

\* The flooding of the Ramsar site with seawater **must not occur**, unless it is done simultaneously in conjunction with the release of fresh water into the Lower Lakes system from the River Murray. To only flood the Lower Lakes with the sea would result in a hyper-saline situation akin to the current scenario in the southern lagoon of the Coorong. As described above, the volume and timing of such releases must be based on credible science.

---

<sup>3</sup> Sustainable Focus with Richard Clarke & Associates, Report on Sustainable Water Options for Adelaide August 2008; Liberal Party SA, Stormwater Harvesting: Securing Our Water Future, May 2008

<sup>4</sup> At the present time, the best estimates of this are between 300 and 400 GL according to the Wentworth Group of Concerned Scientists' Submission to the Senate Inquiry into the Urgent provision of Water to the Coorong and Lower Lakes, September 2008.

<sup>5</sup> Close, A. 2002. Options for Reducing the Risk of Closure of the River Murray Mouth, MDBC Technical Report, 2002/2.

\* The viability of pumping hyper saline water out of the Southern Lagoon of the Coorong and into the Southern Ocean via a temporary pipeline should be assessed immediately.

Additionally, CCSA recommends an immediate moratorium on any new permanent plantings and any further **Managed Investment Schemes (MIS)** throughout the MDB. There must be no further water-using activities permitted until the system is reset and allocations restored to a sustainable level, with guaranteed entitlements for sites of environmental significance. This could be done through a fast-tracked Interim Basin Plan within a matter of months.

Trials into the use of bio-remediation (involving plants and mulching) as a mechanism for dealing with acid sulphate soils are due to commence soon and these will hopefully provide an alternative method of addressing acidification that does not require water.

## **Long-term Recommendations**

In the longer term, CCSA recommends the Federal Government must:

- Consider the MDB ecosystem and its dependent communities jointly – in recognition of the fact that healthy communities are integrally linked to, and dependent upon, a healthy, flowing, river system.
- Ensure the new allocation process that must be undertaken is underpinned by the best available scientific knowledge and understanding. The CSIRO, as the nation's top scientific body must be involved in the modelling to determine sustainable yields and what amounts of water may be available for the environment, local communities' critical needs, and what may be left over for agricultural use (including stock).
- Reject engineering 'solutions' proposed to provide short-term technical fixes like the Wellington Weir, or making levees through Lake Alexandrina etc. These are expensive, unproven and potentially counter-productive. The exception to this would be the immediate commencement of pumping up to 50 GL of hyper marine water from the Southern lagoon of the Coorong to reduce the hyper-salinity of the system – currently at least 5 times that of sea water.

## **Conclusion**

It is not too late to save the Coorong and Lower Lakes.

The Federal Government has committed the funds and provided the legislative mechanisms to save these incredibly important and world-renowned ecosystems.

The time to act is now – the only question is whether we have the political will to enact the solutions within the necessary timeframe...

CCSA does not claim to have all the technical answers to specific questions about where the water can come from, how much should be paid for it, or what areas and industries should be downsized or decommissioned. CCSA does however endorse the recommendation from the Wentworth Group of Scientists that a Commission of Inquiry with the powers of a Royal Commission be established to determine the answers to these questions.

It is clear that South Australia can, and should, act immediately to reduce its dependence on the River Murray by acting to substantially increase water recycling and harvesting of rainwater and stormwater. Improving our water efficiency through demand management offers further savings in water consumption.

In the short term, a relatively modest infusion of water between 300-400 GL should suffice to prevent acidification of the Lower Lakes in the short term by maintaining potentially acid sulphate soils under water. Simultaneously, we should look to trial bio-remediation using plantings and mulching to address acid sulphate soils.

We can also act immediately to begin remediation of the Southern lagoon of the Coorong via pumping out hyper-marine water across the Youngusband Peninsula.

CCSA is also supportive of investigating the potential to re-direct water from the South-Eastern Drainage scheme back into the Coorong – where it used to flow to - provided that the concerns regarding nutrient levels and salinity can be addressed.

CCSA does not support large scale engineering proposals such as further weirs, nor do we believe that the desalination scheme proposed for Port Stanvac and the Upper Spencer Gulf will provide a sustainable solution over the long-term.

Fast-tracking of water buyouts, combined with a long-term structural re-adjustment of the entire over-allocated basin is instead the way forward to reset the system. The urgent production of an Interim Basin Plan is the first step to ensure that we operate within ecological limits that prioritise the health of the entire river system.