



**Australian Government**

**Department of the Environment, Water, Heritage and the Arts**

Our reference: 2008/05415

Mr Anada Tiéga  
Secretary General  
Ramsar Convention Secretariat  
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SWITZERLAND

Dear Mr Tiéga

I am writing to provide you with an update to the Article 3.2 notification for the Coorong and Lakes Alexandrina and Albert Ramsar site (Coorong Ramsar site). On 13 December 2006, the Australian Government wrote to the Ramsar Convention Secretariat to inform them of a change in the ecological character of the Coorong Ramsar site, in accordance with Article 3.2 of the Ramsar Convention. The notification was based on the findings of the ecological character description for the site, which reported that the Ramsar site has been in decline for 20-30 years and that further decline is likely or inevitable. At the time the report was written, all eight assessed Ramsar listing criteria continue to be met, with a further criterion currently lacking assessable baseline data.

Since the notification in 2006, flows down the Murray River into the Coorong Ramsar site have been significantly less than extraction and losses from evaporation and seepage. The water levels of the freshwater Lake Alexandrina and Lake Albert have been at unprecedented low levels this year. This has led to extensive drying of these lakes exposing thousands of hectares of actual and potential acid sulfate soils (ASS). Exposure and rewetting of ASS can release acid and mobilise heavy metals which can result in fish kill incidents, death of vegetation and in some cases irreversible ecological changes. Modelling has indicated that if lake levels continue to drop there is a risk of the active water bodies of the lakes becoming acid.

The low lake levels have led to disconnection of core refuge areas in the southern section of Lake Alexandrina. The tributaries entering Lake Alexandrina will also be under threat in 2009 if the drought continues, this means that the few remaining ecological refuges in the tributaries are draining and rapidly drying. The loss of the connectivity between the fringing vegetation and the water's edge and increased salinity levels has affected a range of flora and fauna at the site.

In particular, lower lake levels, exposure of habitat and increasing salinity levels have impacted on native fish populations including a number of endangered small native fish species such as Murray Hardyhead, Yarra Pygmy Perch and Southern Pygmy Perch. The South Australian Government has relocated a number of individuals of Yarra Pygmy Perch to holding tanks to ensure their survival. Recent advice indicates that some of these fish have bred and will be relocated to suitable dams and waterways until conditions improve and they can be re-released into the Ramsar site.



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Falling lake levels and lack of flow over the barrages into the Coorong estuary and lagoons has continued to exacerbate environmental issues in the Coorong such as increasing hypersalinity and loss of submergent vegetation and subsequent changes in bird populations.

The challenges facing the Coorong Ramsar site are numerous but are principally driven by altered hydrological regimes which have been exacerbated by the extended drought. The capacity to deliver water to the site is largely affected by decisions about the management of water in the Southern Murray-Darling Basin, which is experiencing a period of record low inflows.

In March 2008, the Murray-Darling Basin Ministerial Council considered the serious challenges facing the Coorong Ramsar site and initiated a series of responses. This has been complemented by major research and funding efforts across a range of organisations and governments.

The Murray-Darling Basin Commission (MDBC) has invested AUD 6 million for emergency pumping of water from Lake Alexandrina to Lake Albert to minimise the risk of exposing additional acid sulfate soils. Fortunately, emergency pumping is currently preventing further serious acidification of the Lower Lakes in the short-term. Recent rainfall in the area has also increased lake levels and has increased the period of time pumping can continue. Updates on water levels in the lakes can be accessed at the following site  
<http://data.rivermurray.sa.gov.au/>.

The MDBC in conjunction with State Government's has also developed a real-time management strategy to avoid acidification of Lakes Alexandrina and Albert. This primarily involves monitoring the consumption of alkalinity which will act as an early warning indicator. The South Australian government is working with the best expertise in Australia and possibly the world on the acid sulfate soil and other issues at the site. Extensive monitoring and modelling is underway to examine the impacts of this issue on the Ramsar site.

Concurrently, the Murray-Darling Basin governments are examining the feasibility of a range of short, medium and long-term management actions to address the serious issues facing this site. These actions will be considered in terms of future water availability, ecological response and climate change modelling. However, the immediate priority is options for short-term actions to replace the current pumping regime, in case it ceases to be effective if the lake levels continue to drop to critical acidification thresholds. This work is being informed by considerable monitoring and modelling at the site.

The Australian Government will provide up to \$200 million to South Australia for the long-term management of this Ramsar site. To accelerate this work, the Commonwealth has agreed to advance \$10 million in 2008-09 to South Australia to undertake the feasibility work necessary to expedite this important project.

In September 2008, a Parliamentary Senate inquiry was undertaken into water management in the Coorong and Lower Lakes. This inquiry provided an opportunity to air a range of views and highlighted how difficult the situation is across the Murray-Darling Basin, including around the Murray River's mouth. The terms of reference, submissions and the final report are available from the following link  
[http://www.aph.gov.au/Senate/committee/irat\\_ctte/lowerlakes\\_coorong/index.htm](http://www.aph.gov.au/Senate/committee/irat_ctte/lowerlakes_coorong/index.htm).

The use of bioremediation (establishing the carbon cycle through vegetation) is being trialled along 1-2 km of exposed shoreline of Lake Albert to examine the effectiveness of this technique to manage acid sulfate soils (ASS). Essentially this method should create additional alkalinity to buffer acid generation. If successful, it is anticipated that this approach will be implemented more extensively along the ASS affected edges of these lakes.

The Australian Government has contributed \$2.2 million dollars to the research being undertaken by the CSIRO CLLAMMecology Research Cluster, which is a collaboration of scientific experts working together on the science to underpin the restoration of the ecology of the Coorong, Lower Lakes and Murray Mouth (CLLAMM). Papers and reports produced by this group can be accessed from the following link

[http://www.csiro.au/partnerships/CLLAMMecologyCluster--ci\\_pageNo-2.html](http://www.csiro.au/partnerships/CLLAMMecologyCluster--ci_pageNo-2.html).

The Australian Government has also invested in substantial monitoring frameworks and works and measures programs (such as fish passages) through the Living Murray Initiative. This initiative has resulted in substantial flexibility in how the Lower Lakes can be managed for fish, birds and vegetation requirements. Unfortunately, during these extreme drought conditions, these improvements cannot be realised.

We are also seeking expert advice from the former Chair of the Ramsar Convention's Scientific and Technical Review Panel on the options available to enable Australia to continue to meet its obligations under the Convention in relation to the Coorong Ramsar site, while a long-term response to the site is developed and implemented.

We would also like to acknowledge the receipt of the Montreux questionnaire from the Ramsar Convention Secretariat with your request that we complete it.

The Australian Government will continue to provide the Ramsar Convention Secretariat with updates on the site's status and the significant suite of management actions underway.

Yours sincerely



Mr Tony Slatyer  
First Assistant Secretary  
Water Reform Division, and  
Australian National Focal Point for the Ramsar Convention

17 October 2008