Chapter 4

Long-term prospects for the management of Ramsar wetlands in the Murray-Darling Basin

Introduction

4.1 The Ramsar Convention on Wetlands of International Importance (Ramsar Convention) is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.[1] At the time of joining the Ramsar Convention, each party designates at least one suitable wetland for inclusion on the List of International Important Wetlands (Ramsar List). The addition of a site to the Ramsar List confers upon it the prestige of international recognition and expresses a government's commitment to take all steps necessary to ensure the maintenance of the ecological character of the site. Parties are expected to designate additional suitable wetlands for the Ramsar List or extend the boundaries of those already included. Wetlands are selected for the Ramsar list on the basis of their international significance in terms of ecology, botany, zoology, limnology or hydrology.[2]

4.2 There are 16 Ramsar wetlands in the Murray-Darling Basin (MDB or Basin), as shown in Figure 1.

4.3 This chapter considers the long term prospects of the management of Ramsar wetlands. In particular, the challenges facing governments in managing Ramsar wetlands and the steps that the Australian Government is taking to address those difficulties. This chapter contains a brief discussion on the provision of adequate environmental water to Ramsar wetlands. This issue is considered in greater detail in Chapter 5, which discusses the acquisition and provision of environmental water across the MDB.

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1 Ramsar Convention on Wetlands of International Importance (Ramsar Convention) website: http://www.ramsar.org/.

2 Ramsar Convention, *Ramsar information paper No. 4: The List of Wetlands of International Importance ('Ramsar List')*. Available at: http://www.ramsar.org/about/info2007-04-e.pdf.

Figure 1: Ramsar Convention wetlands in the Murray-Darling Basin.[3]

3 Australian Bureau of Statistics, *Water and the Murray-Darling Basin, A Statistical Profile, 2000–01 to 2005–06*, 15 August 2008, p. 20. Available at: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4610.0.55.007Main+Features12000-01%20to%202005-06?OpenDocument.

Current status of Ramsar wetlands in the Murray-Darling Basin

4.4 The committee's report for the first part of this inquiry detailed the parlous ecological condition of the Coorong and Lower Lakes Ramsar wetlands. Low flows into Lakes Alexandrina and Albert have resulted in the drying of wetland habitat, steadily increasing levels of salinity have exposed sulphur bearing sediments which have oxidised to form acid sulfate soils, releasing sulphuric acid into the lakes. In the Coorong, the silting up of the mouth has resulted in reduced tidal exchange, particularly in the South Lagoon. When coupled with a reduction of fresh groundwater seepage and a reduction in runoff from the upper southeast drainage scheme area, steady evaporation has resulted in worsening hypersaline conditions which are exceeding the levels that even the specialised ecosystems in the area are able to cope with.[4]

4.5 In this part of the inquiry, the committee received several submissions outlining the deteriorating state of several of the other Ramsar wetlands within the Basin. For example, the National Parks Association of NSW (NPA) highlighted the condition of the NSW Central Murray State Forests site:

> There is strong evidence to indicate that river regulation, over-allocation of water for irrigation, and industrial logging and associated activities, are causing a substantial and severely detrimental alteration in the ecological character of the NSW Central Murray State Forests Ramsar site.
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> The ecological condition of the region in which the site occurs has been classified as Very Poor by a recent systematic audit, with fish and macroinvertebrate communities both considered to be in very poor condition. The hydrological changes to the site have been substantial, with major changes in the frequency, size and duration of flood events, and much reduced breeding of colonially nesting bird species.
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> The health of River Red Gum forests has declined markedly, with all recent studies indicating that 70-80% of River Red Gum trees are either stressed or dying. Terrestrial species dependent on the site are also in decline, with iconic threatened species such as the Superb Parrot and Barking Owl still decreasing, and reporting rates reduced for many important woodland bird species.[5]

4.6 Dr Bill Phillips of Mainstream Environmental Consulting and Riversmart Australia, and a former Deputy Secretary General of the Ramsar Convention, gave evidence to the committee of the poor ecological condition of several of the Ramsar wetlands in the MDB:

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4 See Senate Standing Committee on Rural and Regional Affairs and Transport, *Water management in the Coorong and Lower Lakes (including consideration of the Emergency Water (Murray-Darling Basin Rescue) Bill 2008*, October 2008, pp 21-24.

5 *Submission 10*, p. 2.

> I would consider that the condition of the Macquarie Marshes system is probably as bad as the Coorong currently and has been as bad for several years. Narran Lakes has the occasional reprieve, as it did earlier this year, but overall it is not good. In the Lower Gwydir system there are huge problems, which we do not have time to go into here. One particular part of that site has been completely neglected for several years in terms of providing water to it. One part of the Fivebough-Tuckerbil Swamps system near Leeton, the Tuckerbil part, suffers because of New South Wales government difficulties in that it is crown land and grazing lease and that very little attention is given to maintaining its Ramsar values.[6]

4.7 Governments across the Basin states also recognise the poor condition of Ramsar wetlands with the following statement included in the preamble to the Intergovernmental Agreement on Murray-Darling Basin Reform (IGA):

> The parties recognise that the extreme drought has exacerbated the Basin's environmental stress. Continued low flows and lack of natural flooding to Ramsar and other important environmental sites, including the Lower Lakes, Coorong, the Murray Mouth and the Murray Red Gum Forests, are resulting in serious environmental degradation.[7]

Prospects for the long-term management of Ramsar wetlands

Challenges to the management of the Ramsar wetlands

4.8 There are a number of challenges to be addressed in the management of Ramsar wetlands, including: the provision of adequate water to the Ramsar sites; the complexity of management arrangements due to state, territory and Commonwealth government involvement; and securing sufficient human and financial resources for the management of these sites.

Supply of adequate environmental water

4.9 The primary challenge to the management of Ramsar wetlands in the MDB is the provision of adequate water to the sites, as outlined in the Department of the Environment, Water, Heritage and the Art's (DEWHA) submission to the committee:

> Management challenges facing the Ramsar wetlands in the Murray-Darling Basin include provision of adequate environmental flows (volumes, timing, frequency and duration), environmental degradation as a result of invasive non-native species, and adaptation to the impacts of climate change.[8]

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6 *Committee Hansard*, 9 September 2008, p. 105.

7 Intergovernmental Agreement on Murray-Darling Basin Reform (IGA), Preamble, paragraph 2.

8 *Submission 1A*, Part 1 of the inquiry, p. 10.

4.10 In a 2008 report to the Ramsar Secretariat on the progress of the implementation of the Ramsar Convention, DEWHA expanded on the difficulties in obtaining adequate water for Ramsar sites:

> The greatest difficulty in implementing the [Ramsar] Convention in this triennium has been providing adequate volumes of water to Ramsar sites. This has meant that many Ramsar sites are under stress and the challenge of managing sites for wise use when there is insufficient water to meet human, agricultural and environmental needs has been significant.
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> Balancing these demands and supplying sites with sufficient water to meet their ecological needs in the context of historical water-use practices requires management and reform within catchments. This continues to be a complex and contentious process. The ongoing record drought conditions are exacerbating the pressure being placed on these already stressed systems.
>
> Wise use of our water resources in the face of long-term climate change is also a key challenge for Australia.[9]

4.11 In its submission to the committee the CSIRO stated that the water regimes for many Ramsar sites in the Murray-Darling Basin have been greatly altered as a result of water resource development. The CSIRO went on to say that the provision of adequate environmental flows for Ramsar sites needs to consider both the degradation already caused by water resource development and the likely additional stress from climate change:

> Providing adequate environmental flows will, in many cases across the Basin, require significant reductions in the volumes of consumptive water use, changes in the way in which dams are operated to capture flood waters, and consideration of investment in infrastructure to facilitate environmental watering of floodplains.[10]

4.12 The National Farmers' Federation (NFF) noted that Ramsar wetlands are not the only environmental assets in the Basin and it may not be possible to save every environmental asset. The NFF stated that it expects that tradeoffs may need to occur against the social and economic values of regional communities.[11]

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9 Department of the Environment, Water, Heritages and the Arts (DEWHA), *National Report on the Implementation of the Ramsar Convention on Wetlands: National Report to be submitted to the 10th Meeting of the Conference of Contracting Parties, Republic of Korea, 28 October – 4 November 2008* (2008 Report to Ramsar Secretariat), p. 15. Available at: http://www.environment.gov.au/water/publications/environmental/wetlands/ramsar-report10.html.

10 *Submission 2*, p. 5.

11 *Submission 13*, p. 8.

4.13 The committee sought to determine the extent to which modelling could be done of the benefits to Ramsar wetlands in the scenario of water being released further up the Murray-Darling system. Dr Tom Hatton of the CSIRO told the committee:

> We could at least model the flows through those sites, which is one step short of saying, 'And you will save this many red gum trees along the way.' But we could certainly say what the flows through those wetlands would be.[12]

4.14 The submission of the Murray-Darling Basin Commission stated:

> It is expected that the arrangements enabled by the *Water Act 2007*, specifically the creation of a Murray-Darling Basin Authority which can set sustainable diversion limits, will substantially address [the supply of adequate environmental flows to Ramsar wetlands].[13]

4.15 The provision of adequate environmental water is discussed in greater detail in Chapter 5 in relation to the provision of environmental water to sites across the MDB.

Other issues in relation to the management of Ramsar sites

4.16 Representatives for DEWHA acknowledged that some of the complexity in management of Ramsar wetlands is due to the different levels of government involved. The following example relates to the Coroong and Lower Lakes:

> **…**different levels of government have different responsibilities in different ways…We can recite Australia's responsibilities under the Ramsar convention and other relevant international instruments. As it is state government property, the state has an underlying responsibility for the management of the area. The Commonwealth fully respects that but there are some decisions that the Commonwealth needs to take and there are other decisions that South Australia needs to take. When it comes to the management of river flows in the Murray system, the Murray-Darling Basin Commission and its processes have to take some decisions.[14]

4.17 In its report to the Ramsar Secretariat in 2008, DEWHA identified a further challenge to the management of Ramsar wetlands in Australia:

> Another difficulty continues to be securing sufficient human and financial resources to implement the Convention consistently and effectively across all sites and across all jurisdictions.[15]

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12 *Committee Hansard*, 9 September 2008, p. 17.

13 *Submission 4*, p. 1.

14 Mr Tony Slatyer, DEWHA, *Committee Hansard*, 19 September 2008, p. 74. See also: Sarah Moles, *Submission 1*, p. 5.

15 2008 Report to Ramsar Secretariat, p. 15.

Addressing the challenges for management of Ramsar wetlands

4.18 DEWHA's submission outlines how the Australian and state governments are addressing the challenges they face in the management of Ramsar wetlands:

> The Australian Government, with the states, is progressively improving the management and reporting framework for Australia's Ramsar wetlands to better address these threats and maintain the ecological character of the sites. The approach for each site incorporates: improving the understanding of the needs and condition; better planning; providing additional environmental flows; and investment in complementary on-ground works, scientific research, monitoring and reporting.[16]

4.19 DEWHA's submission highlighted the following specific actions the Australian Government is taking in relation to the management of the Ramsar sites:

- development of an Ecological Character Description (ECD) for each Ramsar wetland, using the *National Framework and Guidance for Describing the Ecological Character of Australian Ramsar Wetlands*. The ECDs inform the future management and monitoring of these sites and provide an enhanced information base against which to assess potential impacts of actions on internationally important wetlands;[17]
- development and implementation of Ramsar wetland site management plans, in accordance with the Australian Ramsar Management Principles;
- developing a Ramsar Rolling Review approach to report on the condition of Australia's Ramsar wetland sites and inform future management and investment priorities;
- provision of environmental water held by the Commonwealth Environmental Water Holder to Ramsar wetlands;
- incorporation of an Environmental Watering Plan in the Basin Plan;
- The Living Murray Initiative which aims to recover up to an average of 500 gigalitres of water per annum by June 2009 to provide increased environmental flows to six Icon sites (which include components of Ramsar

16 *Submission 1A*, Part 1 of the inquiry, p. 10.

17 The *National Framework and Guidelines for Describing the Ecological Character of Australian Ramsar Wetlands* is the second module under the National Guidelines for Ramsar Wetlands – Implementing the Ramsar Convention in Australia, which is discussed in paragraph 4.31 below.

wetlands) and undertake complementary on-ground works and measures at the sites;[18] and

- investment in the Macquarie Marshes and Gwydir Wetlands Ramsar sites through the NSW Wetlands Recovery Program and the River Environmental Restoration Program.[19]

Shortcomings in the management of Ramsar wetlands

4.20 The committee heard from a number of witnesses highlighting how, despite these measures, not enough is being done to ensure the protection and long-term sustainable management of Ramsar wetlands.

Obligations in response to the change in ecological character of a Ramsar wetland

4.21 Submissions and evidence to the inquiry were particularly critical of Australia's efforts to maintain the ecological character of its Ramsar wetlands, particularly those in the MDB. For example, the Inland Rivers Network (IRN) noted that Australia was the first country to designate a Ramsar wetland, and has subsequently designated 65 wetlands as Ramsar wetlands. However, IRN's submission went on:

> Australia's record of maintaining the ecological character of Ramsar-listed wetlands and promoting the sustainable management of all wetlands, both of which are required under the Ramsar Convention, is less impressive. The health of many of the Ramsar-listed wetlands in the Murray-Darling Basin is in rapid decline.[20]

4.22 Ms Sarah Moles described Australia's approach to Ramsar-listing of sites as 'somewhat passive'.[21] The joint submission of Mainstream Consulting and RiverSmart Australia noted that, historically, Australia has not afforded its Ramsar wetlands the same status and resources for management as it does for World Heritage sites.[22]

4.23 Under the Ramsar Convention, parties are obliged to inform the Ramsar Secretariat if the ecological character of any Ramsar-listed wetland has changed, is

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18 The six Icon sites are: Barmah-Millewa Forest; Gunbower and Koondrook-Perricoota Forests; Hattah Lakes; Chowilla Floodplain and Lindsay-Wallpolla Islands; Lower Lakes, Coorong and Murray Mouth; and the River Murray Channel. The February 2009 progress report on the Living Murray Initiative stated that 167.68 gigalitres of water has been recovered. See Murray-Darling Basin Authority, *The Living Murray: Environmental Water Recovery Progress Report*, February 2009, p.2. Available at: http://www.mdba.gov.au/files/TLM_WR_prog_rep_FEB09.pdf.

19 *Submission 1A*, Part 1 of the inquiry, pp 10-11.

20 *Submission 9*, Attachment: *Protecting Australia's Endangered Wetlands: A Proposal for a National Wetlands Initiative*, p. 2.

21 *Submission 1*, p. 5.

22 *Submission 12*, Part 1 of the inquiry, p. 5.

changing, or is likely to change as the result of technological developments, pollution or other human interference. Australia has notified the Ramsar Secretariat of the change in ecological character to the Coorong and Lower Lakes site. According to DEWHA, while this site was changing prior to being Ramsar listed, it has further declined since being listed in 1985.[23]

4.24 DEWHA also informed the committee that in October 2008 a further update was provided to the Ramsar Secretariat on the condition of the Coorong and Lower Lakes Ramsar site. That update was informed by current activities and discussed long term options for this site.[24]

4.25 The NPA described the processes in place for the Australian Government to assess and notify of changes in ecological character of Ramsar sites as 'inadequate':

> Major improvements are needed to establish baseline information sets and put in place adequate monitoring regimes. Damaging uses, such as industrial logging, should not be allowed in Government owned Ramsar wetlands and steps should be taken to upgrade such wetlands to full protected area status as National Parks.[25]

4.26 The committee received evidence on other actions that a party to the Ramsar Convention may take in the event of the deterioration of the ecological character of a Ramsar site:

> Under the Ramsar convention there is something called the Montreux Record. It has a very long title that basically means threatened sites. If a country detects that one of its Ramsar areas is in trouble, it is expected to advise the Ramsar secretariat of that, which Australia has done in the case of the Coorong and the lakes. There is also then a voluntary action which countries can take to place such sites publicly on what is called the Montreux Record of threatened sites. To date, the Australian government has not done that for any of its sites.[26]

4.27 In 2006, an Ecological Character Description for the Coorong and Lower Lakes Ramsar site, prepared for the South Australian Department for Environment and Heritage recommended 'that consideration be given to including the site on

23 *Submission 1A*, Part 1 of the Inquiry, p. 11.

24 DEWHA, answers to questions on notice, 13 March 2009 (received 9 April 2009); and *Submission 1A*, Part 1 of the inquiry, p. 11.

25 *Submission 10*, p. 6.

26 Dr Bill Phillips, Mainstream Environmental Consulting and Riversmart Australia, *Committee Hansard*, 9 September 2008, p. 107.

Ramsar's Montreux Record of sites where change in ecological character is occurring, or has taken place'.[27]

Other issues

4.28 IRN provided the committee with its proposal for a 'National Wetland Initiative'. In its proposal, the IRN identified a number of shortcomings in the current approach to managing wetlands, including:

- a lack of provisions in the *Water Act 2007* specifically designed to strengthen Australia's Ramsar program; and
- the slow rate of recovery of environmental water for wetlands through the Living Murray Initiative and the Commonwealth's water entitlement buyback scheme.[28]

4.29 The NPA also noted that the decline of Ramsar sites continues despite programs such as the Living Murray Initiative.[29]

4.30 Submissions also noted that legislative efforts, through the *Environmental Protection and Biodiversity Conservation Act 1999*, have been ineffective in the management of Ramsar wetlands. For example, Ms Moles highlighted these inadequacies in the legislation:

> In spite of a Ramsar trigger, the [*Environmental Protection and Biodiversity Conservation Act 1999*] 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.[30]

4.31 The Department of the Environment, Water, Heritage and the Arts, in a report to the Ramsar Secretariat on the implementation of the Ramsar Convention, notes the development of the 'Australian National Guidelines for Ramsar Wetlands – Implementing the Ramsar Convention in Australia', to supplement the EPBC Act:

> The aim of the guidelines is to facilitate improved management of Ramsar sites and maintenance of ecological character, in line with Australia's

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27 W. Phillips and K. Muller, *Ecological Character Description: Coorong, Lakes Alexandrina and Albert Wetland of International Importance*, South Australian Department for Environment and Heritage, 2006, p. 8. Available at: http://www.environment.sa.gov.au/biodiversity/pdfs/coorong_exec_summary.pdf.

28 *Submission 9*, Attachment: *Protecting Australia's Endangered Wetlands: A Proposal for a National Wetlands Initiative*, pp 1-2. The IRN's National Wetlands Initiative was also supported by the National Parks Association of NSW, *Submission 10*, p. 1.

29 *Submission 10*, pp 2-3.

30 *Submission 1*, p. 5. Section 16 of the *Environmental Protection and Biodiversity Conservation Act 1999* imposes approval requirements on activities that are likely to have a significant impact on the ecological character of a Ramsar wetland. See also: Mainstream Consulting and RiverSmart Australia, *Submission 12* to Part 1 of the inquiry, p. 5.

> commitments under the Ramsar Convention and responsibilities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The EPBC Act includes specific Ramsar provisions. The guidelines will provide a more coherent framework for Ramsar implementation in Australia and provide jurisdictions and other interested parties with clear guidance on related policies and procedures.
>
> The guidelines are being developed as a series of modules, or chapters, on topics including: introduction to the Ramsar Convention; process for nominating Ramsar wetlands; developing Ecological Character Descriptions (ECDs); requirements for mapping Ramsar wetlands; and management planning guidelines.[31]

Ramsar Snapshot Study

4.32 During the course of the inquiry the Federal Government released a preliminary review of the current status and management of all of Australia's Ramsar wetlands (the Ramsar Snapshot Study).[32] The Ramsar Snapshot Study notes that as a Party to the Ramsar Convention, Australia is required to meet its obligations under the Convention in terms of reporting, management planning and provision of supporting information on Ramsar wetlands:

> These obligations are implemented at the national level through the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and associated regulations, policies and funding programs.[33]

4.33 The Ramsar Snapshot Study notes that currently 'Australia does not have a systematic reporting process to allow government stakeholders and other resource managers to gain an overarching view of the state of Australia's Ramsar estate at any given time'.[34]

4.34 Key information gaps found by the Ramsar Snapshot Study and recommendations for priority work, included:

- The need to continue to develop and implement wetland survey and mapping programs for Ramsar wetland sites;
- The need to develop and implement a standardised national scale of tenure categories to better understand and compare the tenure classifications across Ramsar sites;

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31 2008 Report to Ramsar Secretariat, p. 12.

32 BMT WBM Pty Limited for the Department of the Environment and Water Resources, *Ramsar Snapshot Study – Final Report 2007* (Ramsar Snapshot Study), released 2 February 2009. Available at: http://www.environment.gov.au/water/publications/environmental/wetlands/ramsar-snapshot-study.html.

33 Ramsar Snapshot Study, p. I.

34 Ramsar Snapshot Study, p. I.

- The need to develop a systematic method for describing, comparing and reporting threats and impacts (and their magnitude) among and within Australia's Ramsar wetlands; and
- The need to develop a formal mechanism facilitating the transfer of administrative documents (such as management plans, Ramsar Information Sheets, and Ecological Character Descriptions) between the Commonwealth and State/ Territory agencies.[35]

Committee view

4.35 The evidence that the committee has received demonstrates that mismanagement and a lack of co-operation and coordination at all levels of government, in addition to a lack of water, has resulted in a number of Ramsar wetlands in the MDB being under considerable ecological stress.

4.36 The committee notes, and agrees with, the criticism that historically Ramsar wetlands have not been accorded the same status and level of resources as other environmental assets, such as World Heritage Areas.

4.37 The committee is concerned at the declining ecological condition of a number of Ramsar wetlands across the MDB. The committee is particularly concerned that Australia has not taken seriously its obligations under the Ramsar Convention to inform the Ramsar Secretariat if the ecological character of a Ramsar wetland has changed.

4.38 The provision of adequate water is one of the priorities for improving the condition of Ramsar wetlands in the MDB. The committee understands that the Australian Government is addressing this issue through the purchase of water entitlements for the Commonwealth Environmental Water Holder and, in the longer term, through the Environmental Watering Plan in the Basin Plan. The committee encourages the government to continue to investigate opportunities to supply adequate water to Ramsar wetlands.

4.39 The committee notes the evidence that it has heard that the management of Ramsar wetlands, due to the tenure of the land involved, is often a cooperative effort between the Commonwealth and State and Territory governments. DEWHA has indicated that the Australian Government is assisting States to meet their obligations in relation to the management of Ramsar wetlands. The committee encourages the Australian Government to continue to work cooperatively with the States to assist in their management of Ramsar wetlands.

4.40 The committee believes that the Ramsar Snapshot Study has identified some important information gaps and areas for the improved management of Ramsar

35 Ramsar Snapshot Study, p. IV.

wetlands. The committee recommends that the work identified in the Ramsar Snapshot Study as key information gaps and priority work be undertaken by DEWHA.

Recommendation 3

4.41 The committee recommends that the work identified in the Ramsar Snapshot Study as key information gaps and priority work be undertaken by the Department of the Environment, Water, Heritage and the Arts.