

## 4 DATA GAPS AND RECOMMENDATIONS

### 4.1 Key Gaps and Priority Areas

This section outlines the key gaps and priority areas identified during the Ramsar Snapshot study, and the information is summarised in Table 4-1.

#### 4.1.1 Wetland Status

There is a good information base describing the number and spatial extent of Australia's Ramsar wetland estate.

The spatial extent and distribution of different wetland types/classes within each site is poorly known. This information is available for some wetlands (e.g. some Victorian wetlands), and Queensland is currently in the process of mapping the state's wetlands to a 1:100,000 (min of 5 ha) scale, with areas of the Great Barrier Reef being mapped to 1:50,000 (min of 1 ha) scale. However, the absence of this base information on a national scale prevents meaningful analysis of (i) the extent of different wetland classes within Australia's Ramsar estate, and (ii) related to this, whether various wetland classes are adequately represented within Australia's Ramsar estate.

Data are available however, describing the number of wetland sites containing various wetland classes/types. Based on this information, it would appear that several wetlands are poorly represented in Australia's Ramsar estate, including:

- karst and cave systems;
- forested peatlands;
- freshwater springs;
- coastal freshwater lagoons;
- permanent saline marsh/pools;
- seasonal saline marsh/pools;
- coral reefs; and
- all of the artificial wetland classes.

As a priority, there is a need to:

- Develop, implement and continue wetland survey programs which aim to identify and map wetland areas (and classes), both within and outside Australia's Ramsar estate.
- Consider the merits of increasing the area and extent of poorly represented wetland classes in Australia's Ramsar estate in line with Commonwealth and State Government protocols for Ramsar site nominations.

### 4.1.2 Pressures

The present study represents the first national-scale study to consider key threats and impacts to Australia's Ramsar estate. As a starting point, this study requested respondents to identify and rank threats to the Ramsar site from a list of threats derived from the International Union for the Conservation of Nature (IUCN) and the Conservation Measures Partnership (CMP) standardised hierarchical classification of commonly encountered environmental threats and conservation/management actions. This list of threats was referenced within the draft Framework for developing Ecological Character Descriptions available at the time of the study.

In addition to threats, site managers were also requested to nominate the known or likely impacts to wetland values. It should be noted that the responses were derived from a range of sources (i.e. opinion of the site manager, detailed environmental survey etc), although it is not possible to determine the integrity or source of the data used by the respondents. Furthermore, it is possible that there was a degree of individual bias towards some of the nominated threats/impacts. For this reason, these data should be considered as indicative only.

There is currently no systematic way of comparing the magnitude of threats and impacts among sites. While site managers ranked the top known/likely impacts (and threats) within each site, these results are not weighted or scaled according to the magnitude of impact at the site. It is also noted that while there is a good information base describing threats and impacts for some sites, and in some cases states (e.g. South Australia – see the now outdated Lloyd and Balla 1986), no such approach has been undertaken at a national scale.

As a priority, there is a need to develop a systematic method for describing, comparing and reporting threats and impacts (and their magnitude) among and within Australia's Ramsar wetlands. If possible, a standard set of categories for both threats and impacts should be developed and agreed between the jurisdictions for application across the Australian Ramsar estate. This will require the development of threat and impact indicators relevant to the wetland types under consideration. The outcomes of such assessments could then be documented within each site's Ecological Character Description (ECD) as developed or reviewed.

### 4.1.3 Administrative Arrangements

#### DEW Administrative Gaps

A comparison of information held by DEW and site manager questionnaire responses indicates that in most cases (typically >50% of sites), DEW does not hold the most recent versions of all the various Ramsar administrative documents (i.e. Ramsar Information Sheet, Wetland Management Plan, electronic boundary data).

At present, there is no formal mechanism facilitating the transfer of administrative documents between the Commonwealth and State/Territory agencies. As a priority, there is a need to develop and implement a communication and reporting protocol to facilitate this process. Ideally, administrative documents should be submitted to the Commonwealth soon after completion, although submissions made on an annual basis (i.e. within an annual report) may also suffice (at the discretion of DEW and State/Territory managers). The Commonwealth should also develop and implement a

mechanism to ensure the most recent version of RISs are held by Wetlands International (e.g. annual submission of RISs).

There is also a need to develop and implement a system that will allow the receipt, storage and retrieval of information/documents supplied to DEW. For digital reports, the Australian Wetlands Database would seem a logical means of storing and retrieving this information. Hard copy reports should also be catalogued, and wherever possible converted into digital reports.

The process describing the transfer of information should be fully documented to the extent that it could be audited as part of a rolling review.

### **Administrative Document Gaps**

The following represent important administrative documents for the management of Australia's Ramsar estate:

- A Management Plan (MP). The Commonwealth is required to develop an MP for all Commonwealth Ramsar sites, which it must up date every 5 years. For other Ramsar sites not under Commonwealth jurisdiction, the Commonwealth must use best endeavours to implement management plans for other wetlands listed under the Ramsar Convention, in cooperation with the relevant States and self-governing Territories (s333 *EPBC Act*). Management plans, other than those in Commonwealth areas, must be reviewed at intervals of not more than 7 years.
- A Ramsar Information Sheet (RIS), which needs to be updated every six years. The RIS is to be prepared and reviewed by the responsible Commonwealth/State/Territory agency.
- A map, which needs to be provided and updated with the RIS. The map is to be prepared and reviewed by the responsible Commonwealth/State/Territory agency.
- An Ecological Character Description (ECD). The ECD is to be prepared and reviewed by the responsible Commonwealth/State/Territory agency.

Many of these documents are either out of date, do not conform to relevant standards, or have not been completed (i.e. ECDs, Management Plans).

At the 9<sup>th</sup> Meeting of the Conference of Contracting Parties, it was highlighted that updates of RIS and/or maps was a high priority and the Ramsar Secretariat would contact the Contracting Parties required to provide updates.

At a national level, a high importance and prioritisation should be placed on undertaking regular reviews of the status of these four documents (i.e. MPs, RIS, maps and ECDs). Procedures and auditing protocols need to be established to document and monitor the status of these documents. This could be undertaken within an annual rolling review (see Section 4.2). Further, it is recommended that a review of all Ramsar maps is undertaken against the recently published *Mapping Specifications for Australia Ramsar Wetlands* (DEW 2007).

Table 4-1 Summary of data status and gaps

Category	Sources/ Type	Data type*	Overall Information Status	Further Information Needs
<b>Status</b>				
1. No. Ramsar sites	DEW Wetlands Database	1A	Satisfactory	Satisfactory for indicator under consideration.  It is noted that several wetland types appear to be under-represented in Aust Ramsar estate.
2. Ramsar wetland extent (+ by wetland type)	DEW Wetlands Database	1A (ND for wetland types)	Satisfactory for mapping wetland boundaries (but Level 3 gap for wetland types within each wetland)	See comment for item 1.  There is a need to develop and implement a standardised wetland mapping methodology to map various wetland types/classes.
3. Ramsar tenure	DEW Wetlands Database;  Questionnaire responses	1A	Tenure categories outlined in the RISs do not conform to standardised, tenure categories. Consequently it is difficult to provide a national scale assessment of land tenure in Australia's Ramsar estate	There is a need to adopt standardised, national scale tenure categories as outlined in Australian Land Tenure 1993 (Geoscience Australia 2004) for identifying and comparing tenure classifications across the Ramsar estate.  Tenure data should be incorporated into relevant management documents and maps for each site.
<b>Pressures</b>				
4. Threats	Questionnaire responses	1-3/A	Level 3 gap	This indicator was assessed entirely on the basis of questionnaire responses, with no data validation or means of evaluating the information on which responses were based. There is a need to develop and implement a standardised protocol allowing the identification, magnitude and severity of the threat to be determined and compared among sites.
5. Impacts	Questionnaire responses	1-3/A	Level 3 gap	See comment for item 4 with respect to impacts.
<b>Administrative Arrangements</b>				
6. Management Plan (Status)	DEW Wetlands Database;  Questionnaire responses	DEW data: 1A&B  Questionnaire data: 1A & 4A	Level 1, Level 2 &  Level 3 gaps	Level 1 – DEW held most recent MP for 67% sites  Level 2 – 5 sites with no MP, 6 sites with MP in draft or in review, 2 sites in prep. Most MPs do not cover entire site.  Level 3 – 1 site was not sure of status of MP

Category	Sources/ Type	Data type*	Overall Information Status	Further Information Needs
7. Management Plan (EPBC Obligations – Consistency with Management Principles)	DEW Wetlands Database; Questionnaire responses	Questionnaire data: 1A	Level 2	Level 2 – 19% of sites had MPs that met all requirements (eg. fully consistent with management principles as outlined in the questionnaire) .
8. RIS	DEW Wetlands Database; Questionnaire responses	DEW data: 1A&B Questionnaire data: 1A	Level 1	Level 1 – DEW held most recent RIS for 55% sites
9. ECD	DEW Wetlands Database; Questionnaire responses	DEW data: 1A&B Questionnaire data: 1A	Level 2	Level 2 – > 50% sites do not have an ECD
10. Spatial Data	DEW Wetlands Database; Questionnaire responses	DEW data: 1A&B Questionnaire data: 1A & 4A	Level 1, Level 3 gaps	Level 1 – DEW held most recent electronic boundary data for 56% sites Level 3 – 56% of sites had data conforming to min standards
11. Water Requirements	DEW Wetlands Database; Questionnaire responses	DEW data: 1A&B Questionnaire data: 1A & 4A	Level 3 gaps	Level 3 – water requirements well known at 11 sites, partially known at 15 sites
12. Financial Investment	DEW Wetlands Database; Questionnaire responses DAFF database searches	1-2A	Level 1 & Level 3 gaps	Level 1 – DAFF database fields do not currently allow systematic retrieval of relevant data Level 3 – No empirical or even semi-quantitative data describing investment in wetlands due to limitations in existing databases and absence of effective information transfer process between site managers, Clth and state govt departments

1 = Empirical; 2 = Semi-quantitative; 3 = Qualitative; 4 = Conflicting data

A = Up to date; B = Not up-to date

ND = no data

Information gaps in the above table are described in Section 2 of the report as follows:

DEW administrative control gap (Level 1).

Overall Administrative document gap (Level 2).

Data quality gap (Level 3).

## 4.2 Rolling Review

The outcomes of the Ramsar Snapshot study are required to inform the development of a longer-term rolling review of Australia's Ramsar estate. This section provides recommendations for the development and implementation of the rolling review.

### 4.2.1 Development of Rolling Review

#### Setting objectives, methodologies and extent of the rolling review

The DEW has determined that the aims of the rolling review are to keep track of, and record, the status and management of Ramsar-listed wetlands in Australia on a regular basis. There is a need to articulate the objectives to the state and territory agencies that will be involved in the process, and ensure approval from these agencies in regard to their resourcing (time and financial) to ensure the best possible information is fed into the rolling review process.<sup>20</sup>

Potentially the Wetlands and Waterbirds Task Force (WWTF), in conjunction with DEW, should be used to establish key desired outcomes, methodology (e.g. use of proformas) and performance indicators/principles.<sup>21</sup> These are likely to be based on requirements for updating documents from the Ramsar Convention or *EPBC Act* or *Regulations*. Reporting requirements (e.g. State of the Environment reporting, at state/territory and/or national level) on the findings from the rolling review should also be established. However, it may be necessary to use a wider group of participants (e.g. additional representatives from the relevant agencies, and site managers) at the initial stages, through a workshop or other forum, to ensure the issues for management are covered and systems for implementation are agreed. In this case, review by WWTF may act as a means to refine the objectives, methodology, indicators and other requirements.

#### Reporting

The requirement for reporting is essential in the processing of the information gathered and the cohesive analysis of the data. It is suggested that reporting should use a framework such as that used in State of Environment reporting (i.e. pressure, state, response model). A predetermined reporting structure is necessary to allow for ease of comparison of results between areas (e.g. states/territories) and between years.

With increasing reporting requirements imposed on Governments, care should be taken to ensure the rolling review minimises reporting on those matters related to wetlands that duplicate or overlap other reporting already required such as the Conference of Parties (CoP) reports and 'State of the Environment' reporting. Preferably, the rolling review would be a key tool for streamlining these processes (eg. the rolling review informs the CoP Report and would be able to input data and analyses that would improve the efficiency and quality of reporting).

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<sup>20</sup> Note that the status and validity of information provided for Snapshot questionnaire was often found to reflect the resources allocated to completing the questionnaire by the various departments. Resourcing issues stemmed from a range of issues including a limit in number of personnel administering Ramsar management documents/principles, and the timing chosen for the survey.

<sup>21</sup> Based on the information received as part of the questionnaire, it is recommended that proposed methodologies of rolling reviews consider the incorporation of a streamlined process to assess/audit plans against the Australian Ramsar management principles in the Regulations including if desired, by independent verification (particularly where there is no final ECD in place for the wetland).

In this regard, it is crucial that an appropriate inter-governmental forum such as the WWTF be used to develop and derive the parameters of the review and identify the key data outputs desired from the rolling review, as appropriate measures and mechanisms in the jurisdictions will be required to deliver this data in the reporting timeframes. Funding from the Australian Government may be appropriate to the States for the initial set up of these data and feedback systems.

### **Information Record**

A component of this Ramsar Snapshot study has been to collate relevant information, including the location of information (e.g. State/Commonwealth level, electronic or hard copy, internet etc). However, it has also highlighted that there is no central repository for this information at the national level. Prior to the implementation of the rolling review process, a central repository for information for the Ramsar Convention and the *EPBC Act* and *Regulations* is required. This system should provide for the receipt, storage and retrieval of information/documents supplied to DEW.

Hard copy reports should be catalogued, and wherever possible converted into digital reports. A central website at a national level (such as the existing Australian Wetlands Database that holds the RISs for each site), could be used to store and access the relevant information for each site. If space limitations prevent the loading of documents onto this site, external links can be provided for each state to refer to a state-based Ramsar page. Some states have implemented this type of website, however protocols for establishment of state-based websites should require the listing of the four required management documents (i.e. RISs, management plans, maps and ECDs) for each site.

Protocols for a central website (at a national or state-level) should also ensure provisions for access by relevant personnel within each state/territory agency responsible for implementing the Ramsar Convention at State level.

It would also be appropriate for the central website to include relevant documentation such as guidelines and standards, to assist the states and territories in ensuring they meet all requirements for reporting to the Commonwealth (and subsequently Commonwealth requirements for reporting and provision of updated documentation to the Ramsar Secretariat).

## **4.2.2 Implementation of Rolling Review**

### **Approach to Implementation**

Maintaining the engagement of State and Territory site managers and other representatives involved in the management of Ramsar sites will be critical to obtaining accurate and valuable information about the sites over time. In approaching the rolling review process, lessons learned from the Snapshot study have been that:

- The timing or method used in the study was considered by some jurisdictions to be inappropriate at a state/territory level; and
- There was a lack of understanding of the reasons/processes behind the Ramsar Snapshot, and the importance of accessing and collating the required information within a defined period of time.

This section outlines recommendations for the rolling review arising from these issues.

### A Staged Approach

It is highly recommended that a staged approach, based on organizational hierarchy, is used to collate the information for the rolling review. In the planning stages of the Ramsar Snapshot, it was recommended that the process for accessing information at the site level should be:

- The questionnaire and instructions were provided by DEW to the state/territory representative (e.g. WWTF member) and then to site managers (with further state-based instructions from the State representative if necessary); and
- Site managers provided the completed questionnaires and other information to the State representatives, who would then verify the information, and provide to DEW for inclusion into the database.

Although this was not the final approach chosen by a number of State representatives, it was evident that where a State level verification process was undertaken, there was less conflict and/or confusion regarding data collated or conclusions drawn. This indicated the importance of the verification process at the mid-level, prior to provision of the information to the DEW.

### Timing and Frequency

Determination of the timing and frequency of the rolling review needs to consider the following issues:

- *Legal requirements:* The outcomes of the Ramsar Snapshot study have indicated that a number of the management documents required under the Ramsar Convention and under domestic regulation (*EPBC Act* and *Regulations*) are required to be updated. These documents are required to be updated:
  - At 6 year intervals for RISs;
  - At 5 year intervals for Commonwealth managed Ramsar management plans;
  - At 7 year intervals for other Ramsar management plans.
- *Timing suitability:* As discussed above, timing was an issue that impacted on the outcomes of the Ramsar Snapshot (e.g. school holidays and pre-planned annual leave). It is imperative to ensure that timing is set in advance, or as an annual requirement to be met by the site managers and state/territory representatives.

Based on this, it is recommended that the rolling review is carried out in accordance with a predetermined timetable. The interval between rolling reviews should be based on the level of confidence that DEW or State representatives have in the information being gathered, and the achievement of meeting, for example, Ramsar document review deadlines.

A review carried out every year or two years would allow for all new management documents to be updated on state/territory and Commonwealth records and databases, and for documents in need of review and amendment to be categorised as priority actions. Note that where requirements change (e.g. new review timelines required under legislation) timing of the rolling review may need to be adjusted. Further, where interim updates to documentation occur, provision should be made for State representatives to provide updates to DEW outside of the rolling review timeframe.

### Personnel

The involvement and participation of site managers in the rolling review (as has been the case with the present study) is a critical information source particularly in the context of identifying site-specific issues such as threats and impacts over time.

While lead departmental staff within the Australian Government and State Government Departments will have a sound understanding of the Convention and the Australian Ramsar Management Principles, some site managers may not have this same level of experience. To this end, the Australian Government and States may want to consider providing training to site managers covering a basic understanding of the Ramsar Convention and its requirements, an overview of the relevant legislation for the site and reporting requirements.

This would improve reporting capabilities and also build capacity regarding management of the site to be in accordance with Ramsar management principles.

### Resourcing and managing the rolling review process

It is suggested that the success and longevity of a rolling review process for Australia's Ramsar estate will be dependent on:

- establishment of a long-term project manager or similar entity that is responsible for developing, implementing and managing the data coming out of the rolling review;
- this project manager entity being recognized and endorsed by the Australian Government and the States through the WWTF;
- adequate resourcing and training of the project manager entity to undertake the rolling review function and to ensure the collection and collation of the information is efficient and effective;
- the information collected being accessible, reliable and up-to-date such that the Australian Government, State Government and other users of the data such as local government and regional bodies can confidently use the information from the rolling review in planning, assessment and management decision-making; and
- a periodic evaluation and review of the process to re-affirm a continuing commitment by the Australian Government and the States that such information is valuable to be kept up to date.

As outlined above, once the parameters of the rolling review and the expected outcomes are agreed, it is equally critical that an entity is tasked with "owning" and managing the review and its data. While the WWTF can provide policy guidance and co-ordinate information into a rolling review process, it is unlikely to be able to function as the custodian of the data or manage the review process over time. It is recommended that this is best achieved either by nomination of a lead agency (such as DEW) to develop and manage the process or to have the rolling review project developed and managed by an external organisation. Irrespective of the implementation model chosen, it is critical to the long-term success of the process that the Australian Government

and State Government agencies have confidence the data collected by the review is being accurately interpreted and is readily available to decision-makers

### 4.2.3 Benefits from the Rolling Review Process

ECDs and RISs, as they are developed and reviewed for Ramsar sites across Australia, will continue to provide a wealth of information at the individual site level about the values of the Ramsar site and limits of acceptable change. However, through a periodic analysis and review of key information obtained as part of the rolling review, trends in the condition and management of the Ramsar estate at the national or regional scale may also be better elucidated. Review of Ramsar Information Sheets together with qualitative data such as site manager questionnaires (as was undertaken in this Ramsar Snapshot study), if collected systematically over time, will allow identification of threats and impacts across wetlands of the same type or across wetlands in a given region over several years. In this way, the rolling review would provide a Ramsar Snapshot process that is able to work across both spatial scales (the current study) and temporal scales.

This information would allow benchmarking and comparison of management issues and approaches across the jurisdictions and also may be a trigger for new or additional policy responses from Government in relation to Ramsar sites. This could be in the form of future funding programmes for monitoring, setting priorities for rehabilitation or similar “on the ground” programmes. Likewise, perceptions about emerging or increasing threats and impacts such as climate change could be monitored across the Ramsar estate over time.

This information would be of benefit to a range of stakeholders involved in planning, managing and reporting on the status of wetland sites across Australia’s Ramsar estate such as regional bodies as well as assisting Governments in addressing specific reporting requirements under the Convention.