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Basin Plan Monitoring, Evaluation and Reporting Capability Assessment

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Summary

The Murray-Darling Basin Plan (the Basin Plan) commenced in November 2012. The Basin Plan includes a statutory Monitoring and Evaluation Program (MEP; Chapter 13) that requires annual reporting and 5-yearly evaluation by the Murray-Darling Basin Authority (MDBA), as well as reporting requirements on a range of matters by the MDBA, the Commonwealth Environmental Water Holder (CEWH), the Department of Agriculture and Water Resources (DAWR) and Basin States.

The MEP also requires (section 13.23) the MDBA to conduct an assessment of monitoring, evaluation and reporting (MER) capabilities relevant to the Chapter. MDBA engaged Alluvium Consulting Australia (Alluvium) to assist with this assessment. Grosvenor Performance Group assisted with developing an assessment framework as part of the Alluvium team. This assessment of evaluation capabilities is timely, as it follows the 'Interim' Basin Plan evaluation by MDBA in 2017, to which the States and Commonwealth contributed advice on methodologies, as well as data and reviews.

Following amendments to the Basin Plan, the MDBA's first statutory 5-year evaluation of the effectiveness of the Basin Plan will be undertaken for publication in 2020, along with 5-yearly reporting requirements, review of the Environmental Watering Plan (EWP), and review of the Water Quality and Salinity Management Plan (WQSMP) targets. The findings of this assessment will be used to improve capabilities required to deliver Basin Plan monitoring and evaluation by all Basin governments in 2020, 2025, and the first ten-yearly review of the Basin Plan in 2026.

The project was particularly focused on evaluation and reporting capabilities. A framework was developed for the assessment, which included seven capability areas: Culture, leadership, Governance, Collaboration & Engagement, People, Systems, Planning, Conducting, and Using. Organisational capacity under each capability area was rated using the following four categories: Beginning, Developing, Embedded, or Leading.

Findings

MDBA

The average rating for the MDBA was *Developing.* While the results reflect that improvement is required, they should be viewed in the context of relatively low organisational MER maturity in the lead up to the 2017 evaluation, and a concerted effort and investment in improving MER capability over the past year. Improvement in capability takes time, and hence an assessment for most areas of *Developing,* along with evidence of effective initiatives and efforts currently underway, demonstrate that a positive trajectory in MER capability will likely continue over coming years.

By way of example, significant improvements have been made in MER Governance and Leadership capability areas, resulting in a rating of *Developing–Embedded*. Culture is also improving but is inherently slower to respond and has been rated as *Developing*.

Systems were rated as *Developing*, highlighting well-developed systems for some areas but an absence of a fit-for-purpose data architecture that is linked to the Basin Plan Evaluation Framework. Of some concern is the Using capability area, rated *Beginning–Developing*, owing to the lack of a systematic approach to ensuring that evaluation findings are implemented.

Basin States

The Basin States results showed that there is some effort required to improve MER capability with respect to the implementation of the Basin Plan (Figure 4). The average rating across capability areas was *Developing*. The highest ratings were in the areas of Culture, Leadership, Governance, Collaboration & Engagement, and Using. These capability areas form the foundations and support for undertaking Basin Plan MER.

A median rating (across all Basin States) of *Developing* was achieved for the capability areas of People, Systems, Planning, and Conducting. This reflects some strong foundations in MER across other NRM and water planning areas, but a limited focus on Basin Plan MER to date. The most variability (difference between

minimum rating and maximum rating) for the Basin States was in the capability areas of Culture, Collaboration and Engagement, Planning, and Conducting. Learnings from Basin Plan implementation activities (doing WRP risk assessments for example) has helped to improve Basin State capability and improve business performance and processes.

DAWR
Assessment results for DAWR were relatively high, with average results of *Developing – Embedded* across all capability areas (Figure 5). This reflects the long history with Basin Plan implementation and a focus on MER relevant to the delivery of water recovery programs despite relatively low Basin Plan MER obligations.

CEWO
Assessment results for CEWO are generally high, with average results of *Embedded* across all capability areas. This reflects the long history with Basin Plan implementation and a core focus on MER in the context of environmental water management and understanding environmental outcomes at the Basin scale.

Recommendations
The assessment includes 41 operational recommendations and the following eight priority recommendations:

Priority recommendation 1: Leadership
There is a distinct need to reach agreement between all relevant parties on the overall intent and purpose of Basin Plan MER. It is recommended that collectively a clear MER vision statement is developed. This could then be incorporated into all strategic documents and communication material and drive the leadership philosophy and culture around MER. Many organisations have MER mentioned in some form in strategic documents or plans but need to be more explicit about the rationale for MER and the outcomes sought, to ensure there is a clear message and it is commonly understood. MER outcomes could be included in organisational KPIs, and/or MER plans could be required as part of project proposals to achieve funding.

Priority recommendation 2: Culture
It is recommended that Basin Plan MER be explicitly recognised, valued and supported, receive strategic planning attention and be resourced appropriately. It should not be viewed as an "add on" or separate to other basin implementation work. It is recommended an evaluative culture continue to be grown, consisting of reflection and learning and understanding and appreciation of MER. This manner of working should be explored through internal workshop sessions and be documented in organisational plans.

Priority recommendation 3: Collaboration
It is recommended that MDBA, Basin States, CEWH and DAWR develop a Community of Practice to raise MER capability and exchange experiences. An annual conference (similar to that held for WRP development) may assist raising capability, while providing a forum to exchange experiences across a broader scope of staff involved in MER, outside the more restricted membership and more structured workplan agenda of the MEWG. Involvement of professional evaluators from the industry and connection with established industry development bodies to ensure that the best available insights, knowledge and resourced are harnessed for Basin Plan MER should also be considered.

Priority recommendation 4: Planning
It is recommended that all organisations develop (or finalise) MER Frameworks prior to the 2020 evaluation. Planning is a critical element of effective MER, particularly in the complex inter-jurisdictional setting of the basin. Evaluation frameworks provide a means of mapping out Basin Plan outcomes, key evaluation questions and reporting requirements.

MER Frameworks should include well-defined objectives and outcomes, program logics, key evaluation questions, and inter-agency integration documents. They should align with Basin Plan requirements, leverage the large body of work that is continuing on LTWPs and WRPs, and cover all requirements under chapter 13 and Schedule 12, in particular, 5-yearly requirements that have not yet been tested.

Priority recommendation 5: Planning
It is critical that the Basin Plan MER framework include a chapter and graphics or tables that clearly indicate what monitoring information (data type, scale etc) will be brought together from the Basin States, Commonwealth and MDBA, for addressing evaluation questions and reporting requirements. This information should be developed collaboratively and be agreed by all parties ahead of the 2020 evaluation.

This process should seek alignment of evaluation frameworks relevant to the Basin Plan and also of other reporting obligations outside direct Basin Plan requirements to optimise monitoring and evaluation efforts. By identifying areas of alignment and utilising other sources of data, a pathway to increasing efficiency can be identified. This will require strong leadership to help to focus on what can realistically and practically be used and have the biggest impact.

Priority recommendation 6: Systems
It is recommended that all organisations improve their information management systems, with a focus on environmental data management systems and document management systems that are critical to sound MER practices.

Priority recommendation 7: Using
It is recommended that a central database be established to track all evaluation findings and recommendations to improve their accessibility and application. This database could then also be used to systematically record and track progress on the use of findings and implementation of recommendations. Without appropriate systems for enabling the use of evaluation findings and recommendations, Basin Plan requirements to 'have regard to' cannot be effectively met, nor the purpose and intent of MER completely realised.

Priority recommendation 8: Using
MDBA are currently working with partners to develop protocols around the review of documents prior to publication. This should be prioritised and implemented to ensure appropriate consultation on all published reports and data, as required by Chapter 13 and to foster good collaboration and acceptance of (and therefore use of) evaluation findings.

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1   Introduction

The Murray-Darling Basin Plan (the Basin Plan) commenced in November 2012. The Basin Plan includes a statutory Monitoring and Evaluation Program (MEP; Chapter 13), which requires annual reporting and 5-yearly evaluation by the Murray-Darling Basin Authority (MDBA), as well as reporting requirements on a range of matters by the MDBA, Commonwealth and Basin States.

The MEP also requires (section 13.23) the MDBA to conduct an assessment of monitoring, evaluation and reporting (MER) capabilities relevant to the Chapter. MDBA engaged Alluvium Consulting Australia (Alluvium) to assist with this assessment and Grosvenor Performance Group assisted with developing an assessment framework, as part of the Alluvium team.

This assessment of evaluation capabilities is timely, following the 'Interim' Basin Plan evaluation by MDBA in 2017, to which the States and Commonwealth contributed advice on methodology, as well as data and review. Following amendments to the Basin Plan, the MDBA's first statutory 5-year evaluation of the effectiveness of the Basin Plan will be undertaken for publication in 2020, along with 5-yearly reporting requirements, review of the Environmental Watering Plan (EWP), and review of the Water Quality and Salinity Management Plan (WQSMP) targets.

Purpose and scope of the assessment
The findings of the assessment will be used to improve capabilities required to deliver Basin Plan monitoring and evaluation by all Basin governments in 2020, 2025, and the first ten-yearly review of the Basin Plan in 2026.

The capability assessment will document the monitoring, evaluation, and reporting capabilities of all those responsible for implementing the Basin Plan MEP. This includes the MDBA, the Commonwealth Environmental Water Holder (CEWH), the Department of Agriculture and Water Resources (DAWR), and Basin State governments (the Basin jurisdictions).

This MER capability assessment will:

1. Describe the current state (maturity) of MER capability

2. Identify the target state of MER capability needed to jointly deliver the monitoring and evaluation program from 2018 to 2026

3. Prepare resultant findings on opportunities to improve MER capabilities (both short term opportunities (for the 2020 evaluation) and longer-term opportunities (for the 2025 evaluation).

MDBA has elected to focus on assessing evaluation and reporting capabilities to subsequently inform the assessment of monitoring. This reflects and understanding shared by MEWG that there have been many previous studies (gap analyses and capability assessments) on monitoring whereas there has been little review of evaluation capability to date.

While not the focus of the assessment, monitoring capabilities will be covered in a high-level way, in that capabilities are required to ensure monitoring is undertaken to inform reporting and evaluation activities. Capabilities in audit, also a subject of the Chapter, were assessed by MDBA in a Compliance Review in 2017 and are therefore out of scope. Capabilities in review, also a subject of the Chapter, are assumed to be captured by assessment of evaluation capabilities. However, MDBA has not explicitly commissioned assessment of policy review.

Definitions
Neither the *Water Act 2007 (Cwlth)*, nor the Basin Plan, provide a definition of evaluation (including monitoring and reporting) and therefore the common usage definition applies. The Australian Evaluation Society (2013) states "While many definitions of evaluation are used, the term generally encompasses the systematic collection and analysis of information to make judgements, usually about the effectiveness, efficiency and/or appropriateness of an activity."

Capability has been defined by the Victorian Public Sector Commission as: The skills and resources that make up an entity's capability include staffing, infrastructure, technology, financial resources, strategic leadership, process management, and networks and linkages with other organisations and stakeholders.

2 Context

2.1 The story so far

Natural Resource Management MER

Monitoring, evaluation and reporting (and improvement) are integral components of natural resource management projects and programs. These activities provide a means to assess the impact, appropriateness, effectiveness, efficiency and legacy of policies and programs, and a process by which to promote accountability. Evaluation in particular is an essential component of natural resources planning and management and must be considered at every stage of investment and program planning and implementation.

NRM monitoring, evaluation and reporting frameworks in Australia have now been developed and published by most state, territory and federal government agencies responsible for natural resources policy and management (e.g. Zammit et al., 2000; DECC, 2009; DEWNR, 2014; MDBA, 2014; DERM, 2009; DNRM, 2013; Raymond, 2010; Territory NRM, 2011). They all have similar structures and principles including the development of conceptual understanding of the systems being considered, mapping program actions and goals, and articulating the logic between immediate (or foundational) activities and long-term goals (via intermediate goals). They also invariably reflect the concepts behind the adaptive management cycle and continuous participation and communication, including the notion of continuous improvement through regular reporting and understanding of outcomes from management actions.

The NRM Monitoring, Evaluation, Reporting and Improvement Framework (NRM MERI Framework), developed with Australian Government funding in 2009 to assist with natural resources management in Australia, is a leading example of a fourth-generation monitoring and evaluation framework (AGLC 2009). It provides a generic framework for monitoring, evaluating, reporting on and improving the management of key environmental and resource assets. The purpose of the NRM MERI Framework is to reinforce, review and refine natural resource management and investment strategies and practices to ensure that adaptive management occurs as part of continuous improvement. It provides a model for assessing program performance and the state of (and change over time) in assets against planned immediate, intermediate and longer-term outcomes. It also provides opportunities to improve program and project design and delivery and to reorient investment at key decision points throughout the life of an investment strategy or policy.

The task of assessing and tracking the progress of investments in NRM activities is an enduring challenge. This is because:

- NRM outcomes need to be achieved at a range of spatial scales

- Multiple interacting factors affect the health of NRM assets

- The condition of NRM assets can be highly variable naturally

- There can be long time lags between management actions and a detectable difference in the condition of NRM assets

- The social context in which NRM operates can often mean there are different views on what constitutes success

- Climatic impacts can dwarf resource management impacts

- Developing cost-effective indicators presents a challenge.

The NRM MERI Framework places the emphasis on assets—both the intrinsic and utilitarian values that people place on the environment and the many resources and opportunities it provides for human consumption and wellbeing. An asset-based approach is most amenable to targeting and measuring outcomes in terms of conservation, repair and replenishment of natural resources. It also enables construction of a logic or theory of change to guide actions for improving the state of an asset. This in turn enables the development of measurements to monitor and assess:

- Change in the asset over time

- The relative effectiveness, efficiency and appropriateness of different interventions

- The extent of change or impact from action.

Basin Plan implementation and MER

The Basin is a complex, diverse and dynamic system of waterways. It is constantly changing in response to the influences of people, climate and the way water is used for production, communities and the environment. The Basin Plan was introduced to help restore a healthy and productive Basin and will take many years to achieve.

The principles to be applied for monitoring and evaluating the effectiveness of the Basin Plan are shown below (Basin Plan s13.03-13.04). Evaluation tends to be more analytical than monitoring and involves making judgments about how 'good' an intervention has been in terms of specific criteria or values. Monitoring occurs at different organisational levels and can include high level monitoring against state of the environment indicators as well as monitoring various program activities, outputs and intermediate outcomes.

Principle 1. The Authority is responsible for leading monitoring at the Basin scale, having regard to the desirability of:

a) Collecting information in an efficient way

b) Providing open access to information collected or used in, or generated by, monitoring

c) Harnessing existing monitoring capabilities where possible, rather than creating new monitoring capabilities

d) Building upon existing information and data supply arrangements where possible, rather than establishing new arrangements

e) Using an adaptive approach to test and improve monitoring capabilities

f) Eliminating duplication and fragmentation of monitoring processes where possible

g) There being no net reduction in existing monitoring efforts.

Principle 2. The Authority is responsible for leading all evaluations of the effectiveness of the Basin Plan, with Basin States, the Commonwealth Environmental Water Holder and the Department enabling evaluations by collecting, analysing and reporting information (including data) in a fit for purpose manner.

Principle 3. Commonwealth agencies and Basin States should report against matters in a manner which reflects the degree to which they are responsible for those matters. For example, the Commonwealth Environmental Water Holder is responsible for reporting on matters only to the extent that the matters relate to its responsibilities.

Principle 4. Monitoring and evaluation should be undertaken within the conceptual framework of program logic. Program logic is a mechanism that helps to determine when and what to evaluate so that resources can be used effectively and efficiently: see the Australian Government's NRM MERI Framework.

Principle 5. Monitoring and evaluation findings, including in respect of progress towards meeting targets and trends in the condition and availability of the Basin water resources, should enable decision-makers to use adaptive management.

Principle 6. Monitoring and evaluation should harness the monitoring capabilities of existing Basin State and Commonwealth programs (including jointly funded programs), provided that the programs are consistent with the principles in this Part, with a view to aligning and improving these programs over time. For example, water information provided by Basin States to the Bureau of Meteorology under Part 7 of the Act may be used, where possible, for monitoring and evaluation under this Chapter to avoid duplication in the sourcing of that information.

Principle 7. The best available knowledge (including scientific, local and cultural knowledge), evidence and analysis should be used where practicable to ensure credibility, transparency and usefulness of monitoring and evaluation findings.

Principle 8. Basin States and the Commonwealth should collaborate on the technical and operational elements of monitoring and evaluation in order to build engagement and ownership.

Principle 9. A risk-based approach should be used for investment in monitoring and evaluation.

Principle 10. Monitoring and reporting should be timely, efficient, cost-effective and consistent, and should supply the information needed for evaluation.

Principle 11. To the extent possible, there should be open access to information collected or used in, or generated by, monitoring and evaluation.

Monitoring and evaluation can encompass, and are important for, many things; from checking to see if a program has been implemented as it was designed, to determining whether it met the needs of the intended beneficiaries. Monitoring and evaluation of the effectiveness of the Basin Plan is important for:

- Collecting evidence to see if the Basin Plan is on track to achieve intended results in order to manage implementation performance (annual and 5-yearly reporting).

- Judging the effectiveness of the Basin Plan in terms of the extent to which outcomes have been, or are on-track to being, achieved and whether the Basin Plan remains relevant, in order to consider what should be done differently going forward and to modify the program to remain relevant in changing contexts (impacts of the Basin Plan after the first 5-years, 10-yearly reviews of the Basin Plan).

The requirement for reviews of the Basin Plan and to analyse the effectiveness of the Plan is set out in the Water Act 2007 (Cth.). Under the Basin Plan, the Authority and Basin States must have regard to findings and recommendations from evaluations, reviews and audits when implementing and proposing amendments to the Basin Plan.

In 2017 – five years after it commenced – a review of the Basin Plan's progress occurred. At this early stage of the Plan's implementation, there were some good signs that it was working and on track in many areas. There was evidence of local-scale environmental outcomes with positive ecological responses from birds, fish and vegetation. Progress was found to be lagging in a few important areas, including water resource plans and compliance regimes – these are being addressed. The social and economic impacts on basin communities were assessed and the findings for a number of irrigation-dependent communities presented in community profiles.

Difficult and challenging work lies ahead to recognise the impacts and benefits of the Basin Plan. The Plan is a shared responsibility and MER is a key part of its implementation.

2.2   Basin Plan MER roles and responsibilities

The MEP states that the effectiveness of the Basin Plan is to be evaluated against the objectives and outcomes set out in Chapters 5 (overall objectives), 8 (objectives for water-dependent ecosystems in the Environmental Watering Plan) and 9 (water quality objectives), and by reference to the matters in Schedule 12.

Schedule 12 provides matters for evaluation and reporting, which approximately coincide with a program logic for the Basin Plan (outputs, short-term and long-term outcomes). MDBA must evaluate by reference to these matters and the Basin States, Commonwealth Environmental Water Holder (CEWH) and the Department of Agriculture and Water Resources (DAWR), must report to MDBA on these matters. The matters are identified as requiring either annual or 5-yearly evaluation and reporting.

The full suite of obligations, functions and provisions relevant to monitoring, evaluation and reporting are provided in Appendix B.

Overall approach to evaluation, monitoring and reporting
MDBA is responsible for leading monitoring at the Basin scale and all evaluations of the effectiveness of the Basin Plan. The Basin States, CEWH and the Department enable evaluations by collecting, analysing and reporting information (including data) in a fit for purpose manner. The overall approach to MER includes principles for undertaking the MEP outlined in 13.04 and 13.03.

Evaluation

MDBA must evaluate effectiveness for purposes of:

- annual reports on effectiveness,

- advising on impacts of the Basin Plan

- 10-yearly reviews of the Basin Plan

- Any other reviews of the sustainable diversion limit

MDBA must, when making an evaluation, have regard to:

- Reports under the reporting requirements / schedule 12 (annual and 5-yearly reports by the Basin States, CEWH, Department and MDBA itself)

- Key evaluation questions in the MEP

- Any other relevant information held by the MDBA

MDBA must ask key evaluation questions in section 13.06. While all of these questions must be asked, the first four [(a) to (d)] relate directly to evaluation while the final three [(e) to (f)] are more the focus of adaptive management (discussed below). The key evaluation questions (a) to (d), relating directly to the summary function of evaluation are:

- To what extent has the intended purpose of the Basin Plan set out in section 20 of the Act been achieved?

- To what extent have the objectives, targets and outcomes set out in the Basin Plan been achieved?

- How has the Basin Plan contributed to changes to the environmental, social and economic conditions in the Murray-Darling Basin?

- What, if any, unanticipated outcomes have resulted from the implementation of the Basin Plan?

For the purposes of this capability assessment, it is useful to think in terms of the following technical areas:

- Environmental evaluation capability (water dependent ecosystems; assets, functions, resilience, climate change; also, coordination of environmental water; maintain appropriate water quality)

- Social evaluation capability (resilience, confidence, indigenous values and uses; maintain appropriate water quality; transition and adjustment)

- Economic evaluation capability (water security, productive and resilient industries; efficient water markets; water reach most productive use; transition and adjustment; water industries capacity to manage & adapt to climate variability and change)

Adaptive management

Adaptive management requires the capability to feed findings and recommendations into reviews, amendments, exercising powers and performing functions.

MDBA and Basin States must have regard to findings and recommendations of evaluations, reviews and audits, when:

- Proposing changes to the Basin Plan

- Exercising powers and performing functions under the Basin Plan

Principle 5 (s13.04(4)) also refers to the importance of adaptive management: "Monitoring and evaluation findings, including in respect of progress towards meeting targets and trends in the condition and availability of the Basin water resources, should enable decision-makers to use adaptive management."

Adaptive management is the subject of some of the KEQs under section 13.06 (e) – (g)

- How could the effectiveness of the Basin Plan be improved?

- To what extent were the actions required by the Basin Plan suited to meeting the objectives of the Basin Plan?

- To what extent has the program for monitoring and evaluating the effectiveness of the Basin Plan contributed to adaptive management and improving the available scientific knowledge of the Murray-Darling Basin?

MDBA must review the water quality targets in the water quality and salinity management plan every 5 years. The MDBA must also review the environmental watering plan every 5 years, including the targets set out in Schedule 7.

Improving knowledge
The function of improving the 'available scientific knowledge of the Murray-Darling Basin' is referenced under section 13.06 (g). Under this function, the MDBA must evaluate how the MEP has contributed to improving the body of knowledge about the Murray-Darling Basin. This evaluation is therefore closer to the type of evaluation that a 'knowledge agency' might undertake (e.g. CSIRO). The function involves different parameters than a contribution to management and policy.

Reporting
Reporters listed for each matter in schedule 12 must provide a report to the MDBA for each reporting period (s13.14(1)). These reporting activities enable the evaluation activities to take place (as directed under s13.05(1)).

The matters in Schedule 12 relate to the Basin Plan as a whole, and the following elements of the Basin Plan: the environmental watering plan; water quality and salinity; the water trading rules; and water resource planning.

For the purpose of the capability assessment, it is useful to consider reporting capabilities in relation to:

- Capability to report actions

- Capability to report outputs

- Capability to analyse, evaluate and report asset/regional outcomes

- Capability to analyse, evaluate and report basin outcomes

It is also important to note that the agreements and guidelines (s13.15, s13.16) are subsidiary items included to support the reporting requirements. MDBA must use best endeavours to enter into agreement on reporting requirements with Basin States, CEWH and the Department. MDBA may publish guidelines on reporting requirements. Basin States, Department and CEWH may have regard to the Guidelines.

Principle 3 (s13.04(2)) also indicates the responsibility different parties have for reporting: "Commonwealth agencies and Basin States should report against matters in a manner which reflects the degree to which they are responsible for those matters."

Publication of information
MDBA must publish findings and recommendations arising from evaluations and reviews, as well as information (including data) obtained in monitoring the effectiveness of the Basin Plan.

MDBA must consult with and provide opportunity to comment to, the Basin States, CEWH and Department, before publishing.

Improving monitoring, evaluation and reporting capabilities
Under the Basin Plan, the MDBA must conduct an assessment of monitoring, evaluation and reporting capabilities relevant to the Chapter, and use its best endeavours to give effect to improvements identified through the assessment, with the Basin States, the CEWH and the Department.

3   Approach

The approach to this project involved development of a capability assessment, undertaking the assessment and documenting findings and recommendations.

Figure 1. *Stages of the capability assessment*

Throughout the project stages, there has been engagement with the Monitoring and Evaluation Working Group of the Basin Plan Implementation Committee. This included a discussion on the assessment framework (31 July 2018), preparation and planning for the capability assessment interviews (21 August 2018), and discussion of the draft report and findings (13 December 2018). In addition, the Basin Plan Implementation Committee endorsed the terms of reference for the capability assessment.

3.1   Assessment framework

A preliminary assessment found that none of the standard frameworks or guidance material fully met the needs of the MEP Capability Assessment. Therefore, a fit-for-purpose framework was developed by Grosvenor Performance Group and Alluvium to fulfil the MDBA's needs. The framework adapts the most relevant capability areas from relevant standard frameworks, guidelines and manuals and aligns them against the obligations and functions in the Basin Plan MEP, to produce targeted assessment rubrics for each capability area.

The assessment framework is summarised in section 4, and the full framework is provided in Appendix A.

3.2   Undertaking the capability assessment

The assessment of current MER capability was undertaken through semi-structured interviews with key representatives from each organisation, in combination with a document review. The number of interviewees and meeting format varied between organisations; typically, between 2 and 15 representatives were involved in the in the capability assessment for each organisation.

Interview questions were developed based on the agreed capability assessment framework (see Appendix A). Using the framework, interview participants will only be asked about capability areas relevant to their functions under the MEP.

The assessment takes into account the context of each organisation's role and responsibility. A single holistic rating will be assigned to each capability area based on Alluvium's independent view taking into account the evidence provided by interviewees and the documentation review. Where evidence was not provided to support claims, the rating level may be affected.

3.3   Findings and recommendations

The reporting of the capability assessment summarises capability of MDBA, the Basin States, CEWH and DAWR against the key capability areas and with reference to the key functions and obligations in the MEP. The capability assessment of the different entities is differentiated to the extent that roles are differentiated in the MEP. That is, a capability assessment of the Basin States as a whole is identified, while MDBA and CEWH and DAWR are separately identified because they have unique roles in the MEP. Each organisation is provided with their detailed assessment, which includes documentation of interview statements, a review of evidence provided and the resultant assessment summary and rating.

4 Capability assessment framework and targets

4.1 Assessment framework

The capability areas that are relevant to each MEP summary function are provided below. Some of the capability areas are fundamental to all of the MEP functions, while others are relevant to specific functions.

Each capability area was assessed against four maturity level ratings (in increasing order): *Beginning*, *Developing*, *Embedded*, *Leading*. Rubrics have been developed that defined what each maturity level means for the different capability areas (see Table 4, Appendix A). Where the assessment findings fell under two different rating categories under the rubrics, midway ratings were assigned (e.g. *Developing-Embedded*).

Table 1. Summary of capability assessment framework

MEP summary function (and relevant organisations)	Capability area	Description of assessment
All MEP functions (MDBA Basin States CEWH DAWR)	Culture	Assesses the organisational attitude towards MER, including: ▪ Willingness to use evaluation to develop and improve Basin Plan implementation ▪ Awareness of evaluation planning and resourcing requirements
	Leadership	Assess MER leadership and the strategic vision for MER
	Governance	Assesses the organisational MER responsibilities, resources, strategy, policy and procedures, including: ▪ Effectiveness and efficiency of governance arrangements ▪ Responsibilities and accountabilities ▪ Policies and procedures
	Collaboration & Engagement	Assesses the nature of stakeholder relationships and level of influence, including: ▪ Alignment and common ownership of evaluation strategies ▪ Resources, time and leadership to enable collaboration
	People	Assesses how people are supported to deliver and the level of skills, competencies and experience, including strategies used to address any capability gaps
Evaluation and reporting (MDBA Basin States CEWH DAWR)	Systems	Assesses how systems support the delivery of evaluation and reporting, including: ▪ Consistency of data, document controls and processes, compatibility with other systems, linkages between information and data ▪ Appropriateness for Basin Plan evaluation and reporting purpose and frequency
	Planning	Assesses how program evaluation activities are planned, including: ▪ Evaluation framework ▪ Procedures, guidance and templates ▪ Scheduling of evaluation and reporting activities ▪ Ensuring consistency and compatibility of evaluation and reporting ▪ Alignment with other strategic and performance planning
	Conducting	Assesses how program evaluation activities are conducted ▪ Using processes, guidelines and templates ▪ Ensuring efficiency and coordination ▪ Managing delivery plans ▪ Managing quality

MEP summary function (and relevant organisations)	Capability area	Description of assessment
Adaptive management (MDBA Basin States)	Using	Assesses how the outcomes of program evaluation activities are used, including: ▪ Sharing evaluation findings and implementing/ addressing recommendations ▪ Relevance and practicality of findings and recommendations ▪ Availability and searchability of findings and recommendations ▪ Process for 'having regard' to findings and recommendations
Publication (MDBA)	Using	Assesses the publication of outcomes of program evaluation activities, including searchability and relevance to different audiences
Improving MER capability (MDBA)	Improving	Assess how evaluation capabilities within the organisation are improved, including: ▪ Understanding what success looks like for MER ▪ Undertaking steps to improve capability ▪ Showing how MER delivers benefit to basin plan implementation ▪ Ensuring elevation and reporting is relevant to stakeholders
Improving knowledge (MDBA)	Improving	Assessing how Basin Plan evaluation and knowledge management are linked.

Note that policy expertise is an important component of Basin Plan MER and is inherent within the capability requirements under the following areas: Leadership, People, Planning, and Using.

Based on the framework, not all capability areas were assessed for every organisation; only capability areas most relevant to the responsibilities and obligations under Chapter 13 of the Basin Plan were assessed. Where a given capability area was not assessed for an organisation (e.g. 'Using for CEWH), this does not suggest that the organisation does not require these capabilities to implement other parts of the Basin Plan or other state or commonwealth legislation, rather that they the given capability area is deemed out of scope for this particular assessment.

While the MEP (s13.05) is clear that MDBA leads and carries out the evaluation of Basin Plan effectiveness, the 5-yearly reporting requirements (Schedule 12) imply an element of evaluation on the part or the Basin States, CEWH and DAWR. In addition, the evaluation capability of the Basin States, CEWH and DAWR will be important to enabling MDBA's evaluation function and capability (s13.03(2)).

While the MDBA is responsible for the capability assessment, the scope of the assessment is all capabilities relevant to the MEP. Therefore, the assessment also captures relevant capabilities for Basin States, CEWH and DAWR.

While monitoring is not the focus of this project, the evaluation and reporting function includes the ability to manage monitoring activities and use monitoring results and data.
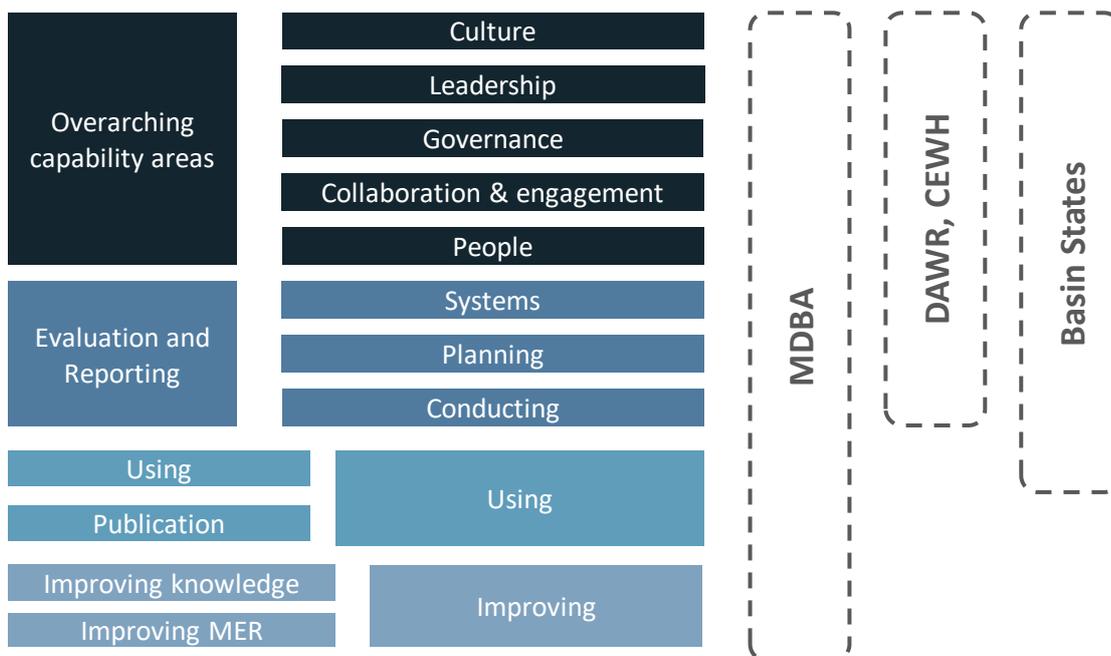
Figure 2. *Summary of capability areas and relevant organisations*

The assessment framework was applied to consider organisational capability in respect of Basin Plan MER obligations relevant to each organisation. Where there were applicable Basin Plan MER examples and information to inform the assessment, this focus was applied; however, where this information was not available or relevant, general MER capabilities were assessed in the context of future Basin Plan MER activities required of the organisation. Further information on the way in which the assessment framework was applied to each organisation is provided under the target capability ratings below.

The full assessment framework including the assessment rubrics are provided in Appendix A.

A note on Collaboration & Engagement capability area
Collaboration & Engagement is a fundamental capability that supports MER activities.

In addition to Collaboration & Engagement capability supporting all MER activities, MDBA has significant responsibilities under the Basin Plan to collaborate with partners. This includes leading evaluations of the Basin Plan, which is enabled by DAWR, CEWH and Basin States, and consulting with partners when undertaking reviews of the water quality and salinity management plan and the environmental watering plan, and also when publishing information arising from implementing Chapter 13.

For Basin States, collaboration & engagement includes within a given organisation, working with partners within the Basin State, and working directly with other states or commonwealth agencies. Basin States are required to enable evaluations of Basin Plan effectiveness undertaken by MDBA.

For DAWR, the only collaboration explicitly required by Chapter 13 is with MDBA to jointly report on social and economic outcomes (Schedule 12, Item 3). However, Collaboration is a fundamental capability to support any MER activity. In this case, collaboration refers to any partners, Basin States, or other commonwealth agencies.

For CEWH, collaboration is required with Basin States and MDBA to report on Matters 6 (incorporating local knowledge), 7 (basin scale outcomes), 9 and 10 (environmental watering and management framework), and 14 (water quality and salinity management plans).

4.2   Target capability

Target capability ratings are provided below. Two targets have been provided:

- a short-term focus for the 2020 evaluation, and

- a longer-term aspirational target looking to the 2025 evaluation (ahead of the 2026 Basin Plan review).

The ratings were developed by Alluvium with input from MDBA and MEWG representatives.

Purpose of the targets
Setting targets is a standard component of a capability assessment. Targets provide a reference point for capability requirements to meet the needs of the Basin Plan MEP. Where organisations seek to improve their MER capability, the recommendations section of this report considers these targets alongside the baseline assessment results and provides guidance on where effort should be focused.

While there is no formal requirement for organisations to meet these targets or for any future repeat capability assessments, under s13.23 of the Basin Plan, organisations relevant to this capability assessment must use their best endeavours to give effect to improvements identified in this report.

MDBA, Basin States, CEWH, and DAWR are encouraged to use the targets as a guide for areas of improvement and as aspiration goals to improve MER capability as individual organisations and as a group, to improve Basin Plan implementation and outcomes.

Rationale for the targets
The different target capability ratings for different organisations reflect the different roles and responsibilities relevant to Chapter 13 of the Basin Plan. Each target capability rating should only be considered within the context of a given organisation – targets are not comparable between organisations as the reference point for the assessment itself varies based on the different roles and responsibilities. The assessment framework was applied to consider organisational capability in respect of Basin Plan MER obligations relevant to each organisation.

In particular, the target rating of *Leading* for some capability areas across different organisations should not be confused with the statement that the MDBA is "responsible for **leading** all evaluations of the effectiveness of the Basin Plan" (as identified in principle 2, s13.03 (2)).

It should also be noted that while excellence is a noble aim, it is not always appropriate to target the highest level of capability (*Leading*). Achieving a *Leading* capability rating will require considerable organisational focus and resources. In the practical context of limited resources for a wide range of Basin Plan and other water management activities, achieving *Leading* capability will involve trade-offs in resources from other capability areas of the organisation. In some capability areas this is assessed being fully justified. However, in some other capability areas, it was assessed that a capability of *Embedded* was a sufficient target to achieve Basin Plan objectives and obligations.

The targets provided reflect the importance of different capability areas: the supporting capability areas (Culture, Leadership, Governance, and Collaboration & Engagement) are required to enable other capability areas and are therefore assigned a higher target. Culture and leadership are fundamental to making progress in this space and influences all of the other areas. In addition, Governance and Collaboration are fundamental to all activities and all organisations should strive to be leading in these fields.

Using is assigned a higher target given that it is critical to serving the purpose of MER. While Using may often be linked to capability in Systems, Planning and Conducting, Using is assigned a higher rating to reflect the importance of, and to encourage conceptual notions of, using MER to be established early, even if the processes to support it may need further development. To ensure that capabilities in Using are improved, improvement in Systems, Planning and Conducting is also required.

Target capability ratings

MDBA target capability ratings
MDBA has higher targets than some other organisations as it has responsibility for leading evaluations.

	MDBA	
	2020 Target	**2025 Target**
Culture	Embedded	Leading
Leadership	Embedded	Leading
Governance	Embedded	Leading
Collaboration & Engagement	Embedded	Leading
People	Embedded	Leading
Systems	Embedded	Leading
Planning	Embedded	Leading
Conducting	Embedded	Leading
Using (Adaptive management)	Embedded	Leading
Using (Publication)	Embedded	Leading
Improving MER performance	Embedded	Embedded
Improving Knowledge	Embedded	Embedded

Basin States target capability ratings for Basin Plan MER capability assessment
In general, Basin States are focused on other Basin Plan implementation responsibilities (e.g. Water Resource Plans), and therefore a target of *Developing* is appropriate by the 2020 evaluation for the undertaking capability areas (Systems, Planning and Conducting), with an increase to Embedded by the 2025 evaluation. The supporting capability areas (Culture, Leadership, Governance, and Collaboration & Engagement), however, are required to enable other capability areas and are therefore assigned a higher target for basin States of *Embedded* (2020) and *Leading* (2025).

	Basin States	
	2020 Target	**2025 Target**
Culture	Embedded	Leading
Leadership	Embedded	Leading
Governance	Embedded	Leading
Collaboration & Engagement	Embedded	Leading
People	Embedded	Embedded
Systems (Evaluation and reporting)	Developing	Embedded
Planning (Evaluation and reporting)	Developing	Embedded
Conducting (Evaluation and reporting)	Developing	Embedded
Using (Adaptive management)	Embedded	Leading
Note that other capability areas were not within the scope of this assessment for the Basin States.		

Department of Agriculture and Water Resources target capability ratings for Basin Plan MER capability assessment

For the supporting capability areas, DAWR have targets of *Embedded* (2020 / 2025) to reflect their strong history with Basin Plan implementation while acknowledging that their role in MER will not significantly increase beyond 2020. For the undertaking capability areas (Systems, Planning and Conducting), the targets are *Developing* (2020) / *Embedded* (2025) to reflect that Chapter 13 of the Basin Plan is not their core focus.

	DAWR	
	2020 Target	**2025 Target**
Culture	Embedded	Embedded
Leadership	Embedded	Embedded
Governance	Embedded	Embedded
Collaboration & Engagement	Embedded	Embedded
People	Embedded	Embedded
Systems (Evaluation and reporting)	Developing	Embedded
Planning (Evaluation and reporting)	Developing	Embedded
Conducting (Evaluation and reporting)	Developing	Embedded
Note that other capability areas were not within the scope of this assessment for DAWR.		

Commonwealth Environmental Water Holder target capability ratings for Basin Plan MER capability assessment

The CEWH have a long history with Basin Plan implementation and MER is part of their core focus; therefore, the CEWH targets for 2020 are *Embedded* to reflect this. The 2025 targets for CEWH are extended to *Leading* for the supporting capability areas, while the target remains as *Embedded* for Systems, Planning and Conducting.

	CEWH	
	2020 Target	**2025 Target**
Culture	Embedded	Leading
Leadership	Embedded	Leading
Governance	Embedded	Leading
Collaboration & Engagement	Embedded	Leading
People	Embedded	Embedded
Systems (Evaluation and reporting)	Embedded	Embedded
Planning (Evaluation and reporting)	Embedded	Embedded
Conducting (Evaluation and reporting)	Embedded	Embedded
Note that other capability areas were not within the scope of this assessment for the Basin States.		

5   Capability assessment findings

The capability assessment results are differentiated to the extent that roles are differentiated in the Basin Plan MEP. That is, results of the Basin States as a whole are presented, while MDBA and CEWH and DAWR are separately identified because they have unique roles in the MEP. Individual organisations have been provided with their results and full assessment information for their own improvement purposes.

The following assessments are based on organisational capability in respect of Basin Plan MER obligations relevant to each organisation. Note that as the assessments are in the context of the different activities undertaken by each organisation, the ratings for a given capability area are not intended to be compared between the different organisations. Rather, the assessment findings should be used to understand within each organisation which areas need improvement to reach target ratings and which are the priority capability areas.

5.1   Baseline assessment: Murray-Darling Basin Authority

The following assessment uses the framework set out in section 4 (and Appendix A) to assess the overall organisational capability of the MDBA in respect of its MER activities and obligations under the Basin Plan.

The role of MDBA in terms of Basin Plan MER, as set out in Chapter 13 and Schedule 12, includes evaluating the effectiveness of the Basin Plan against the objectives and outcomes set out in Chapters 5, 8 and 9, and by reference to the matters listed in Schedule 12, for the purposes of: annual reports; impacts of the Basin Plan after the first five years; ten-yearly reviews of the Basin plan; and any other reviews of the long-term average sustainable diversion limits.

MDBA is also responsible for conducting reviews of water quality and salinity management plan targets and the environmental watering plan every five years. MDBA may also periodically undertake assessments of trends in the condition and availability of the Basin water resources and the social, cultural and economic contexts in which they are used, as revealed by monitoring information.

Under Schedule 12, MDBA have annual and five yearly reporting requirements relating the following components: the Basin Plan as a whole; environmental watering plan; water quality and salinity; water trading rules; and water resource planning. MDBA is also responsible for publication of these reports.

Importantly, MDBA needs to work with partners for monitoring, evaluating and reporting on the implementation and effectiveness of the Basin Plan. When making an evaluation, MDBA must have regard to relevant reports produced by partners (CEWH, DAWR, Basin States) under Schedule 12. When the MDBA is undertaking reviews, assessing Basin condition, and publishing reports, it must consult with partners (CEWH, DAWR and Basin States).

When proposing any amendments to the Basin Plan and performing functions under the Basin Plan, MDBA must have regard to findings and recommendations arising from evaluations and reviews.

For further detail on MER roles and responsibilities under the Basin Plan, refer to Appendix B.

Summary of assessment
The average (mean) rating for MDBA was *Developing* (Figure 3). While the results reflect that improvement is required, they are viewed in the context of relatively low organisational MER maturity in the lead up to the 2017 evaluation, and a concerted effort and investment in improving MER capability over the last year. Improvement in capability takes time, and hence an assessment for most areas of *Developing,* along with evidence of effective initiatives and efforts currently underway, demonstrate that a positive trajectory in MER capability will likely continue over coming years.

For example, significant improvements have been made in MER Governance and Leadership capability areas, resulting in a rating of *Developing–Embedded*. Culture is also improving but is inherently slower to respond and has been rated as *Developing*.

Systems was rated as *Developing*, highlighting well-developed systems for some areas but an absence of a fit-for-purpose data architecture that is linked to the Basin Plan Evaluation Framework. Also of concern is the Using

capability area, rated *Beginning–Developing*, owing to the lack of a systematic approach to ensuring that evaluation findings are implemented.

Figure 3. *Capability assessment baseline results: Murray-Darling Basin Authority*

Assessment results

Culture capability area Developing	The Basin Plan evaluation function is valued and culturally supported within MDBA. There is a developing understanding of the role of MER in MDBA core business. Staff have a drive to get the best outcomes for the Basin, and MER is part of that, the cultural development is in bringing MER into the day-to-day business. Basin Plan evaluation findings receive profile internally within the organisation. In the MER framework and method there is an attempt to reflect integration into the organisation's core business, but it is not yet clearly reflected or embedded. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Leadership capability area Developing – Embedded	The importance of MER is acknowledged in key planning documents, including the Division Plan, Section Plan and the Advisory Committee for Social, Economic and Environmental Science (ACSEES) Work Plan. There is a shared vision for the role and importance of Basin Plan MER, but it is not documented anywhere. **The current capability is close to the 2020 target of *Embedded* for this capability area but will need to continue improve in this space to be *Leading* by 2025.**
Governance capability area Developing – Embedded	Significant improvements on the internal governance arrangements have been made since the 2017 evaluation. For example, a Project Control Board has been established for the 2020 evaluation. Lessons from 2017 evaluation have been learnt; roles and responsibilities in terms of evaluation coordination, project management and decision making have been clarified. Governance arrangements are in place and there is a developing understanding of the roles and responsibilities. **The current capability is close to the 2020 target of *Embedded* for this capability area but will need to continue improve in this space to be *Leading* by 2025.**

Collaboration & Engagement capability area	There is an increasing commitment for planning and resources for MER to take account for the role of collaboration. There is a strong intent to improve on the collaboration and engagement of the 2017 evaluation. This intended to be coordinated through the updated MER Framework. There have been some early attempts at productive coordination with the Basin States on how State information may feed into the 2020 evaluation, but further work is required in this area. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing	
People capability area	Some people strategies and plans are in place. MER skills are present within the core function and are becoming more widespread. Skills in project management are developing across the organisation. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing	
Systems capability area	There are some aspects of good data management systems within the organisation, but there is a need to have an organisation wide, systematic approach. There is a need to have fit for purpose architecture that aligns with the MER Framework. There are important enterprise systems and initiatives currently being developed or implemented that should be designed and completed to support MER activities. **The current capability is lower than the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing	
Planning capability area	A framework for Basin Plan MER is in place and commonly understood. Some components of planning are still being developed, including aspects of Evaluation planning that details how data and information will be used. A focus on scheduling and planning of activities efforts have improved significantly since the 2017 evaluation. Newly developed Planning Monitoring Evaluation and Reporting Strategies (PMERs) help to align MER activities with other Basin Plan requirements and implementation. The work undertaken to date demonstrates a positive trajectory for improving planning capability for Basin Plan MER. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing – Embedded	
Conducting capability area	The 2017 evaluation posed a number of challenges for MDBA in terms of undertaking MER activities in an efficient, coordinated and effective way. While some aspects of conducting have been addressed through a project management focus and establishment of a Project Control Board for the 2020 evaluation, these steps are yet to be tested or rolled out across all evaluation activities. Quality of MER activities is likely to be variable. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing	
Using capability area	Evaluation findings are available and searchable, but internal accessibility could be improved. Some evaluation findings are considered internally, but there is not a systematic process to track and record how they are addressed. Findings and recommendations are of relevance to implementation and policy review but are not targeted at users and there is not shared ownership of the findings. **The current capability is significantly lower than the 2020 target of *Embedded* for this capability area and will need to improve in this area.**
Beginning – Developing	
Using - publication capability area	Communication processes enable straight-forward web-based publishing after review. Communication processes support searchable online data. There are some elements of publications targeted at specific audiences. There is a good trajectory in capability on publication and ensuring products are targeted at specific audiences, it is expected that with the current initiatives, capability will likely be Embedded by 2020. **The current capability does not meet the 2020 target of *Embedded* for this capability area and will need to improve in this space to be *Leading* by 2025.**
Developing – Embedded	

Improving capability area	The organisation has shown a strong intent to improve MER capability. There is a need to more clearly define what success is for Basin Plan MER.
Embedded	**The current capability meets the 2020 target of *Embedded* for this capability area and looking towards 2025, will need to be maintained (or improved).**

Improving knowledge capability area	There is a growing commitment to improving knowledge of the MDB.
Developing – Embedded	**This current capability is close to the 2020 target of *Embedded* for this capability area and looking towards 2025, will need to be improved to meet the target of *Embedded*.**

5.2   Baseline assessment: Basin States

The following assessment uses the framework set out in section 4 (and Appendix A) to assess the overall organisational MER capability in respect of the nature of activities relevant to Basin States and their MER obligations under the Basin Plan.

Basin States are responsible for enabling evaluations (which are led by MDBA) by collecting, analysing and reporting information (including data) in a fit for purpose manner. This includes annual and five-yearly reporting activities under Schedule 12, relating the following components: the Basin Plan as a whole; environmental watering plan; water quality and salinity; water trading rules; and water resource planning. Basin States have five yearly reporting obligations for three matters:

- The achievement of environmental outcomes at an asset scale.

- Progress towards the water quality targets in Chapter 9.

- The efficiency and effectiveness of the operation of water resource plans, including in providing a robust framework under a changing climate.

MDBA is responsible for publishing Schedule 12 reports but must do so in consultation with Basin States. In addition, when MDBA undertakes review of the water quality and salinity management plan targets and the environmental watering plan, this must be done in consultation with Basin States.

When proposing any amendments to the Basin Plan and performing functions under the Basin Plan, Basin States must have regard to findings and recommendations arising from evaluations and reviews.

For further detail on MER roles and responsibilities under the Basin Plan, refer to Appendix B.

Basin Plan implementation, including Water Resource Plan development is still underway for Basin States; implementing other aspects of the Basin Plan have naturally been prioritised over Basin Plan MER. Most Basin States have strong foundations in MER across NRM and water planning areas, but engagement with Basin Plan MER to date has been limited to annual reporting requirements (but not five-yearly) and through specific programs (e.g. The Living Murray or CEWH-led Long-Term Intervention Monitoring). The following assessment considers how these general MER capabilities and Basin Plan MER activities undertaken to date have established capabilities within Basin States to support increased efforts in Basin Plan MER in the coming years.

Summary of assessment

The Basin States results showed that there is some effort required to improve MER capability (Figure 4). The average (mean) rating across capability areas was *Developing*. The highest ratings were in the areas of Culture, Leadership, Governance, Collaboration & Engagement, and Using. These capability areas form the foundations and support for undertaking Basin Plan MER.

A median rating (for a given capability area, across all Basin States) of *Developing* was achieved for the capability areas of People, Systems, Planning, and Conducting. This reflects some strong foundations in MER across other NRM and water planning areas, but a limited focus on Basin Plan MER to date. The most variability (difference between minimum rating and maximum rating) for the Basin States was in the capability areas of Culture,

Collaboration and Engagement, Planning, and Conducting. Learnings from other Basin Plan implementation has helped to improve Basin States capability in terms of people capability (doing WRP risk assessments) and improving business performance and processes.
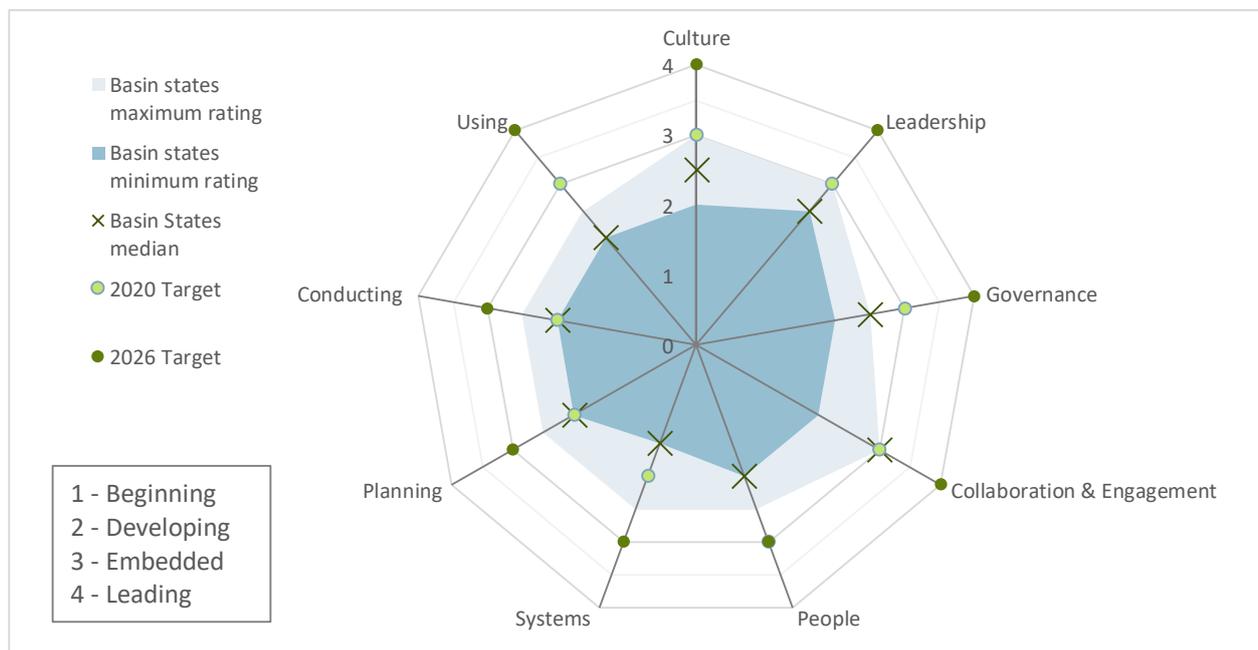
Figure 4. *Capability assessment baseline results: Basin States (Median rating for each capability area across all Basin States)*

Assessment results
The median rating across all Basin States for each capability area is provided, along with the range (minimum, maximum) of ratings.

Culture capability area **Developing – Embedded** [Range from 'Developing' to 'Embedded']	There is a demonstrated commitment to continuous improvement and learning for many of the Basin States. Most organisations recognise the importance of MER to support evidence-based decisions and this is demonstrated through business plans and strategies. MER is seen as core business for some organisations. In addition, some states have evaluative requirements built into legislation. Some organisations have had MER embedded into their business for many years, while others have been developing a culture of MER in more recent years. In many organisations the legacy of strong MER focus in Natural Resource Management (NRM) parts of the business (rather than water policy) has helped shape an increasing focus on MER in the water space. **For the current assessment, 20% of Basin States meet the target of *Embedded*. Looking forward to 2025, all states need to improve their capability in this area.**
Leadership capability area **Developing – Embedded** [Range from 'Developing - Embedded' to 'Embedded']	Basin State leadership generally have a shared vision and expectations for MER. In general, these visions for MER are not Basin Plan specific and instead reflect the wider priorities of each Basin State. **For the current assessment, 40% of Basin States meet the target of *Embedded*. Looking forward to 2025, all states need to improve their capability in this area.**

Governance capability area **Developing – Embedded** [Range from 'Developing' to 'Developing – Embedded']	Governance arrangements varied across the Basin States. Governance arrangements were generally well known by staff interviewed, but sometimes they were only for overall MER and there were no Basin Plan specific arrangements, in others the arrangements were not well understood, or they were understood but not yet clearly documented. In general, Basin States identified that the overall structures and broad governance arrangements involved in Basin Plan implementation has created sophisticated (if not elaborate) governance structures internally. Given this variability in maturity and understanding of governance arrangements, it is considered that these arrangements are only sometimes efficient and effective. **For the current assessment, all states do not meet the target of *Embedded*. Looking forward to 2025, the target is *Leading,* and all states need to improve their capability in this area.**
Collaboration & Engagement capability area **Embedded** [Range from 'Developing' to 'Embedded']	Internal Basin State collaboration is routine and mostly effective resulting in shared decision-making and accountability. Planning and resources generally include consideration of collaboration and engagement. Collaboration with other state or commonwealth organisations on specific programs and projects is typically effective; however, in terms of Basin Plan MER it is acknowledged that coordination and collaboration could be improved and that forums such as the MEWG could operate more effectively. While many examples of positive engagement with stakeholders have been provided, there is limited evidence of engagement on MER-specific activities. **For the current assessment, 60% of Basin States meet the target of *Embedded*. Looking forward to 2025, the target is *Leading,* and all states need to improve their capability in this area.**
People capability area **Developing** [Range from 'Developing' to 'Developing – Embedded']	General monitoring, evaluation, reporting and project management skills are widespread, with some variability in competencies and experience. Most organisations access additional expertise through links with other government departments or research institutions. Some skills gaps are identified by organisations, but in general no formal people strategies or plans are in place. For some organisations, there are efforts in place to train, develop and recognise evaluation capabilities. **For the current assessment, all states do not meet the target of *Embedded*. Looking forward to 2025, the target is *Embedded,* and all states need to improve their capability in this area.**
Systems capability area **Beginning – Developing** [Range from 'Beginning – Developing' to 'Developing – Embedded']	The quality and suitability of systems varies significantly between organisations and also for different themes. Systems are generally sophisticated in terms of water resource information, water quality and hydrography; while these systems are not always well maintained, they generally have sound structures and quality management processes. Systems for ecological data are generally less sophisticated, while systems to store, track and document evaluated data and reported results are often basic or not present at all. The functionality of some of these systems may limit the capability to meet Basin Plan MER obligations. At the opposite end of the spectrum, some organisations have systems that promote efficient and effective use of data. There is generally some degree of compatibility between parties' systems, but this remains an ongoing issue for MER. **For the current assessment, 40% of Basin States meet the target of *Developing*. Looking forward to 2025, the target is *Embedded,* and all states need to improve their capability in this area.**

Planning capability area **Developing** [Range from 'Developing' to 'Developing – Embedded']	The progress on planning for Basin Plan MER varies between Basin States. Most states have given consideration to how their existing state-wide MER approaches and other Basin Plan implementation activities (i.e. Long-Term Watering Plans and Water Resource Plans) can be adapted and integrated into frameworks / plans for Basin Plan MER. Some early planning for Basin Plan includes well defined objectives / outcomes, but most work to date is merely a starting point. The MER frameworks generally need more detail and refinement on program logics, key evaluation questions, integration with other agency documents and alignment with Basin Plan requirements. Procedures and templates are generally used where applicable but could be more widely utilised. Some organisations have MER guidelines and there are efforts to integrate these into adopted corporate systems (e.g. project management systems). **For the current assessment, all Basin States meet the target of *Developing*. Looking forward to 2025, the target is *Embedded*, and all states need to improve their capability in this area.**
Conducting capability area **Developing** [Range from 'Developing' to 'Developing – Embedded']	Some evaluation and reporting activities are efficient, coordinated and effective. Most states could demonstrate the use of project or delivery plans to ensure work is undertaken in line with the MER frameworks and required timeframes. Some states are undertaking pilot projects for Basin Plan 5-yearly reporting requirements to test their processes and understanding. **For the current assessment, all Basin States meet the target of *Developing*. Looking forward to 2025, the target is *Embedded*, and all states need to improve their capability in this area.**
Using capability area **Developing** [Range from 'Developing' to 'Developing – Embedded']	In response to audits and reviews, most states have a process for preparing government responses and subsequent project plans for implementing agreed recommendations. Few states have a searchable register of findings and recommendations. Few states have a clear process for ensuring that all evaluation findings are implemented and considered in future water policy and planning. Most states have approaches to ensure that findings and recommendations are practical, implementable and widely communicated. **For the current assessment, all Basin States do not meet the target of *Embedded*. Looking forward to 2025, the target is *Leading*, and all states need to improve their capability in this area.**

5.3   Baseline assessment: Department of Agriculture and Water Resources

The following assessment uses the framework set out in section 4 (and Appendix A) to assess the overall organisational MER capability in respect of the nature of activities relevant to DAWR and their MER obligations under the Basin Plan.

DAWR is responsible for enabling evaluations (which are led by MDBA) by collecting, analysing and reporting information (including data) in a fit for purpose manner. This includes annual and five-yearly reporting activities under Schedule 12, relating the following components: the Basin Plan as a whole; and water quality and salinity. The only five yearly reporting obligation for DAWR is for the extent to which the Basin Plan has affected social, economic and environmental outcomes in the Murray Darling Basin. MDBA is responsible for publishing Schedule 12 reports but must do so in consultation with DAWR.

For further detail on MER roles and responsibilities under the Basin Plan, refer to Appendix B.

Summary of assessment

Assessment results for DAWR were relatively high, with average results of *Developing – Embedded* across the capability areas (Figure 5). This reflects the long history with Basin Plan implementation and a focus on MER relevant to delivery of water recovery programs along with relatively low Basin Plan MER obligations.
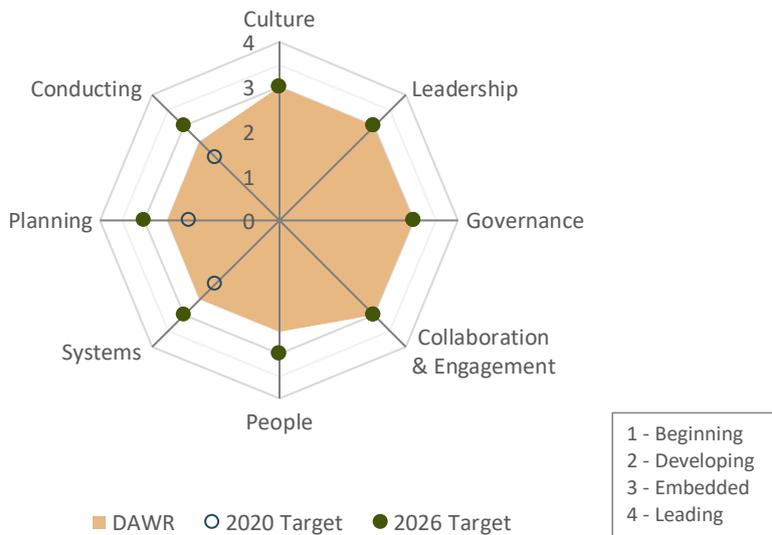
Figure 5. *Capability assessment bassline results: Department of Agriculture and Water Resources*

Assessment results

Culture capability area **Embedded**	There is demonstrated commitment to continuous learning and improvement throughout the agency. MER is integrated into the organisation's core business. **The current capability meets the target of *Embedded* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain their capability in this area.**
Leadership capability area Embedded	Leadership have a shared vision and expectations for Basin Plan evaluation, monitoring and reporting that is well understood internally. **The current capability meets the target of *Embedded* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain their capability in this area.**
Governance capability area Embedded	Governance arrangements for Basin Plan evaluation are in place in the organisation, and knowledge and understanding of the roles, responsibilities and requirements is widespread. **The current capability meets the target of *Embedded* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain their capability in this area.**
Collaboration & Engagement capability area Embedded	There is strong collaboration and alignment with delivery partners through the fundamental program design. There is ongoing collaboration and coordination with MDBA and CEWH. There is ongoing engagement with Basin States. **The current capability meets the target of *Embedded* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain their capability in this area.**
People capability area Developing – Embedded	General project management and evaluation skills are widespread. There are strategies to engage consultants or other agencies as required. Formal strategies are being developed for managing capability. **The current capability is close to the target of *Embedded* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain and slightly improve their capability in this area.**

Systems capability area	Systems to support core MER functions are robust, but ae not always integrated or managed in a standardised way. Improvements are being made to increase the integration. Data is generally searchable and archived.
Developing – Embedded	**The current capability exceeds the target of *Developing* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain and slightly improve their capability in this area.**
Planning capability area	Programs have well defined MER frameworks with outcomes, logics and assumptions. The outcomes and objectives are aligned with the Basin Plan. Further planning detail on scheduling and data inputs is required.
Developing – Embedded	**The current capability exceeds the target of *Developing* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to maintain and slightly improve their capability in this area.**
Conducting capability area	There is a strong project management focus through Program delivery. Reporting activities are generally delivered in accordance with plans. There is an ongoing challenging of increasing reporting requirements.
Developing – Embedded	**The current capability exceeds the target of *Developing* for this capability area. Looking forward to 2025, the target is *Embedded,* and DAWR will need to improve their capability in this area.**

5.4   Baseline assessment: Commonwealth Environmental Water Office

The following assessment uses the framework set out in section 4 (and Appendix A) to assess the overall organisational MER capability in respect of the nature of activities relevant to the CEWO[1] and their MER obligations under the Basin Plan.

CEWH is responsible for enabling evaluations (which are led by MDBA) by collecting, analysing and reporting information (including data) in a fit for purpose manner. This includes annual and five-yearly reporting activities under Schedule 12, relating the following components: the Basin Plan as a whole; environmental watering plan; and water quality and salinity. The only five yearly reporting obligations for CEWH is for the achievement of environmental outcomes at a Basin scale.

MDBA is responsible for publishing Schedule 12 reports but must do so in consultation with CEWH. In addition, when MDBA undertakes review of the water quality and salinity management plan targets and the environmental watering plan, this must be done in consultation with CEWH.

For further detail on MER roles and responsibilities under the Basin Plan, refer to Appendix B.

Summary of assessment
Assessment results for CEWO are generally high, with average results of *Embedded* across the capability areas. This reflects the long history with Basin Plan implementation and a core focus on MER in the context of environmental water management and understanding environmental outcomes at the Basin scale.

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[1] The CEWO is the Commonwealth agency that supports the role and functions of the Commonwealth Environmental Water Holder.
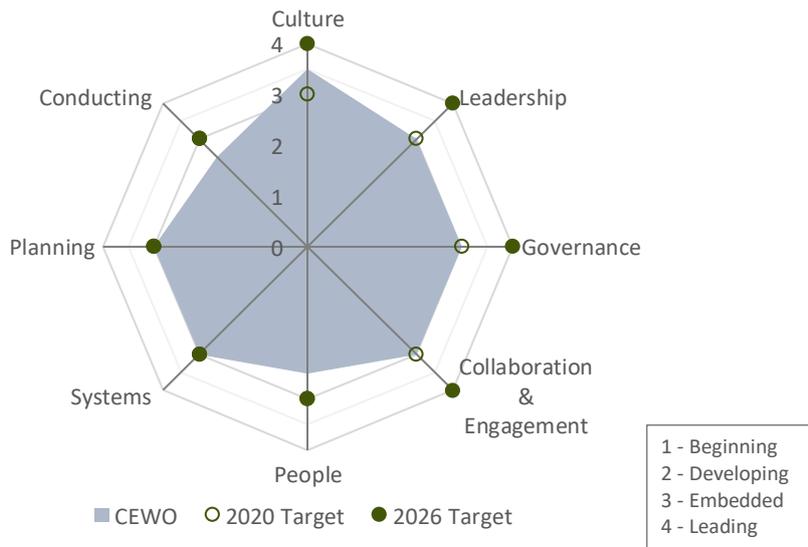
Figure 6. *Capability assessment bassline results: Commonwealth Environmental Water Office*

Assessment results

Culture capability area **Embedded – Leading**	Demonstrated commitment to continuous learning and improvement throughout the agency. MER is integrated into the organisation's core business. **The current capability exceeds the target of *Embedded* for this capability area but will need to continue to improve in this space to be *Leading* by 2025.**
Leadership capability area **Embedded**	Leadership have a shared vision and expectations for Basin Plan evaluation, monitoring and reporting that is well understood internally. **The current capability meets the target of *Embedded* for this capability area but will need to continue to improve in this space to be *Leading* by 2025.**
Governance capability area **Embedded**	Governance arrangements for Basin Plan evaluation are in place in the organisation, and knowledge and understanding of the roles, responsibilities and requirements is widespread **The current capability meets the target of *Embedded* for this capability area but will need to continue to improve in this space to be *Leading* by 2025.**
Collaboration & Engagement capability area **Embedded**	There is strong collaboration with delivery partners and relevant stakeholders. There is significant investment in engagement as part of the LTIM program. Collaboration with MDBA and Basin States occurs but could be more efficient and effective. **The current capability meets the target of *Embedded* for this capability area but will need to continue to improve in this space to be *Leading* by 2025.**
People capability area **Developing – Embedded**	General project management skills are widespread. Some higher order evaluation skills may not be in place and available evaluation expertise are not always effectively utilised (e.g. community of practice). Formal strategies are not in place for managing capability, but the partner-based delivery model does provide a significant resource and capability. **The current capability is close to the target of *Embedded* for this capability area but will need to continue to improve in this space to be *Leading* by 2025.**

Systems capability area **Embedded**	The Monitoring Data Management System and approach to publication of all data provides a systematic searchable database. The alignment with Basin Plan requirements depends on further clarification between CEWO and MDBA on reporting requirements. Providing direct access to MDBA improves compatibility between systems. **The current capability meets the target of *Embedded* for this capability area and will need to be maintained (or improved) to meet the 2025 target of be *Embedded*.**
Planning capability area **Embedded**	There is a strong process used to plan for and coordinate evaluation activities. However, alignment with Basin Plan reporting requirements for the 2020 evaluation has not yet been undertaken. **The current capability meets the target of *Embedded* for this capability area and will need to be maintained (or improved) to meet the 2025 target of be *Embedded*.**
Conducting capability area **Developing – Embedded**	There is a strong project management focus through contract management with providers. MER activities are coordinated and are generally delivered in accordance with agreed plans. **The current capability is slightly lower than the target of *Embedded* for this capability area and will need to be improved to meet the 2025 target of *Embedded*.**

5.5   Overall capability

During the assessment process, several issues were raised that relate to overall MER capability rather than individual MER capability. These themes are issues are discussed below. These issues may limit the overall MER capability, even if the capability of each individual organisation is high.

The themes and issues identified by participants during the interviews are provided below.

Spatial scale. An ongoing challenge of Basin Plan MER is the ability to report at both an asset scale and Basin scale (and other scales in between). States are required to report at the asset scale (i.e. Matter 8 reporting), and MDBA is required to report at a Basin scale. The process for this is not clear and a clear architecture of how this comes together is required. This reflects a broader MER policy issue of the scale for undertaking Basin Plan MER.

While assets can vary in size from small wetlands to large floodplain and wetland complexes, there is also a move by some states to consider their own assets in terms of broader landscape scale outcomes (i.e. considering networks of assets). There may be a need for reporting requirements to evolve to a landscape, as opposed to asset approach. However, the *Act* and the Basin Plan remain focussed on assets and there is no current proposal to amend this. Some of these issues have also been identified regarding the Basin-wide Watering Strategy.

Temporal scale. The condition of assets can naturally be highly variable and there can be long time lags between management actions and a detectable difference in the condition of assets. Therefore, in Basin Plan MER, long-term monitoring datasets are required. Funding limitations and a lack of prioritisation or planning pose a threat to maintaining long-term datasets for evaluations.

Reporting burden. With an increasing focus on MER and advances in the ability to collect environmental data, many organisations are identifying an increase in their reporting obligations that may not be able to be met. While this is not unique to the Murray-Darling Basin, the complexity of having Basin Plan reporting obligations, state or commonwealth government reporting obligations and also stakeholder expectations of information availability, has led to many organisations needing to prioritise reporting requirements to meet selected requirements within funding constraints. This also highlights the importance of alignment between Basin Plan reporting requirements and those of other state and Commonwealth organisations.

Priorities. Each organisation that is involved with Basin Plan MER also has other priorities and obligations that may compete for common resources and funding. This includes other Basin Plan implementation activities and requirements outside of the Murray-Darling Basin (including water policy, environmental water management and MER activities) that are often led by the same teams within Basin State governments. The priorities differ from organisation to organisation, but these other competing priorities must be acknowledged and reflected in expectations of Basin Plan MER.

Efficiency. In light of the points above on reporting obligations and other priorities, there is a need to increase the efficiency of MER activities and ensure that effort is allocated to the items that are most important for reporting and improvement purposes. It was also noted that it will be increasingly important to utilise work that is being undertaken outside of government (e.g. by research organisations) or by other areas of government (e.g. Geoscience Australia); the Basin-wide Science Strategy will need to assist with this.

Basin Plan governance and collaboration. The complexity of Basin Plan governance was raised by many organisations in terms of the increasing complexity of governance requirements within each organisation. Many participants identified that MEWG could operate more effectively to achieve better collaboration.

Policy evaluation. There is an acknowledgement that industry maturity around evaluation of direct management actions (e.g. environmental water delivery) is well developed, but that for evaluation of a policy instrument (i.e. the Basin Plan), there is a lower level of maturity.

Timing of the 2020 evaluation. While the 2020 evaluation was postponed from the original intent of a 2017 evaluation (5-years after Basin Plan commenced), there are still concerns that, given implementation progress, limited progress towards outcomes should be expected by the 2020 evaluation. For example, the Water resource Plans (WRPs) will have only just been implemented at the time of the 2020 evaluation. Timing may also be an issue as the Basin-wide Watering Strategy will be used as a reference for targets in the evaluation, but it is also due to be reviewed, and some changes required have already been acknowledged.

Communicating findings. MER is increasingly important for communicating outcomes to stakeholders. It is an important part of transparency and staying accountable for Basin Plan implementation. At times there may be a disconnect between what people may see on the ground and the findings of an evaluation report – there is a need to help translate evaluation findings to what may be observed. This is interconnected with the issue of spatial scale of MER activities.

Funding. Many organisations have identified that future reductions in Basin Plan funding may reduce their MER capabilities.

6   Recommendations

Under s13.23 of the Basin Plan, organisations relevant to this capability assessment must use their best endeavours to give effect to improvements identified in this report. It is worth noting there is now approximately 12 months available to reach the capability target for the 2020 evaluation. In most cases therefore, action is required immediately to address gaps. These recommendations are intended to assist in that regard. It is worth noting also that where a target does not change between 2020 and 2025, it does not mean that no work will be needed on those capabilities. Effort will still be required to maintain given capabilities over time, noting that resources and funding may decrease over the same period and that external factors, challenges and complexity may increase.

The following section provides recommendations for all organisations and all capability areas. A set of priority recommendations are summarised into section 7.

6.1   Recommendations for overarching MER capabilities (MDBA)

This section discusses recommendations relating to Culture, Leadership, Governance, and Collaboration and Engagement, and People capability areas. The current ratings and targets for these are shown below:

MDBA	2018 rating	2020 Target	2025 Target
Culture	Developing	Embedded	Leading
Leadership	Developing – Embedded	Embedded	Leading
Governance	Developing – Embedded	Embedded	Leading
Collaboration & Engagement	Developing	Embedded	Leading
People	Developing	Embedded	Leading

Recommendation 1:
It is recommended that MDBA continue to prioritise building its MER capabilities consistent with the requirements of the Basin Plan MEP. MDBA is already actively implementing improvements since the 2017 evaluation. However, MDBA's inherent role in leading Basin Plan implementation and MER means that the target capabilities for MDBA are necessarily high. MDBA appears to be on track to achieving many, if not all, of these targets.

Culture
Recommendation 2:
It is recommended that MDBA build an evaluative culture of reflection and learning, understanding and appreciation of MER. This way of working should be explored through internal workshop sessions and be documented in organisational plans.

MDBA should encourage partners to also adopt an evaluative culture to build a common platform and understanding of the purpose of MER.

Recommendation 3:
It is recommended MDBA document and work to achieve clear levels of expected competencies for MER, project management, collaboration and engagement; and ensure that MER is linked to core business through key performance indicators or other methods.

Leadership
Recommendation 4:
It is recommended MDBA develop a clear MER vision statement that is incorporated into all strategic documents, communication material and drives the leadership philosophy and culture around MER. All meetings from Authority down would include a MER Agenda item – this would be in the Strategic Agenda of any meeting. Leadership training programs and initiatives should regard MER as part of core business, and provide mentors and coaches as required.

Governance

Recommendation 5:

It is recommended MDBA continue to develop new governance arrangements for 2020 evaluation and ensure roles and responsibilities remain clear throughout the process. This should involve a commitment to adhering to the agreed governance arrangements through the 2020 evaluation (and all future evaluations). This should involve further improvements to the standard MER framework (internally) that is consistently followed and linked to core business to provide stability to the process. A check-in or review on governance arrangements mid-way through the 2020 evaluation process is recommended to ensure the good intent and established governance and maintained.

Collaboration and engagement

Recommendation 6:

It is recommended that MDBA, Basin States, CEWH and DAWR develop a community of practice to raise capability and exchange experiences. An annual conference (similar to that held for WRP development) may assist raising capability, while providing a forum to exchange experiences across a broader scope of staff involved in MER, outside the more restricted membership and more structured workplan agenda of the MEWG. This should also consider involvement of professional evaluators from the industry and connection with established industry development bodies to ensure that the best available insights, knowledge and resourced are harnessed for Basin Plan MER through collaboration.

Recommendation 7:

It is recommended that MDBA develop clear collaboration and engagement principles with all partners to enable regular review of the effectiveness of the collaboration. This would include progressing the development of the Evaluation Framework and Project Plan, including more detail on the ways in which partners will be involved throughout the entire MER process and mapping the MDBA vision for the arrangements with each partner, to determine alignment, gaps and opportunities for improvements. It should also include establishing agreed minimum data standards as part of the Project Plan development.

People

Recommendation 8:

It is recommended that MDBA ensure that the role of MER is clearly defined in the Strategic Workforce Plan or other formal people strategies, and ensure these strategies are regularly updated and any capability gaps are identified and addressed. MER skills should be developed where required through training, on-job mentoring and secondments.

Recommendation 9:

It is recommended that MDBA ensure the combination of MER skills and Basin Plan understanding is recognised as a specialised skill and that there are role descriptions within the organisation that explicitly require these specialised skills. This includes technical skills in environmental, economic and social domains as well as robust understanding of water policy. Access to additional evaluation expertise through links with other government departments, research institutions, and partners should be promoted where possible through memoranda of understanding or services panel arrangements.

6.2   Recommendations for undertaking MER (MDBA)

This section discusses recommendations relating to Systems, Planning, Conducting, and Using capability areas. The current ratings and targets for these are shown below:
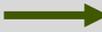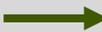
MDBA	*2018 rating*	*2020 Target*	*2025 Target*
Systems	Developing	Embedded	Leading
Planning	Developing – Embedded	Embedded	Leading
Conducting	Developing	Embedded	Leading
Using – adaptive management	Beginning - Developing	Embedded	Leading
Using - publication	Developing – Embedded	Embedded	Leading

MER Systems

Recommendation 10:
It is recommended that MDBA continue to utilise the MDBA record keeping system for all MER activities and as planned, complete the Data Management Plan as part of the MER framework as soon as possible. As a leader of Basin Plan evaluations, MDBA should identify as a high priority (following WRP accreditation obligations) the development and implementation of an enterprise-wide data and information architecture that delivers MDBA's ongoing MER responsibilities.

Recommendation 11:
It is recommended that MDBA identify Basin-wide interoperability data and system challenges and develop a clear and agreed improvement program for data and information exchange and sharing to support the MER Framework and Basin Plan responsibilities.

Planning

Recommendation 12:
It is recommended that MDBA continue their positive trajectory in terms of MER Planning by valuing and continuing to prioritise the MER Framework, the Project Plan (in particular scheduling of activities), and Planning Monitoring Evaluation and Reporting Strategies (PMERs). These tools should be further developed to include more detail to ensure that can meaningfully guide the 2020 evaluation

Recommendation 13:
It is recommended that the following proposals be implemented to improve monitoring data and evaluation effort across Basin States and the Commonwealth:

- The Basin Plan MER framework include a chapter and graphics or tables that clearly indicate what monitoring information (measurand, data type, scale etc) will be brought together from Basin States, Commonwealth and MDBA, for which evaluation questions and reporting requirements.

- MER framework appendices or technical papers develop more detailed design for specific questions, requirements or themes, including scientific design issues.

- The MER framework be developed alongside a "mock" or working draft evaluation report, that will clearly articulate how evidence will be brought to bear to establish findings and recommendations. This will allow work on the MER framework (and technical appendices) to contribute directly to the evaluation report.

Conducting

Recommendation 14:
It is recommended that MDBA maintain a focus on project management by utilising the new MDBA project management framework and incorporating quality management into all MER activities. Quality management should be identified as part of all project plans for MER activities.

Using

Recommendation 15:
It is recommended that the development of the "mock" / working draft evaluation report referred to in Recommendation 13 be accompanied by development of communications products for the range of audiences identified in a communication strategy. Basin States should be consulted on these products.

Recommendation 16:
As identified in the draft MER Framework, it is recommended that MDBA collaborate with partners and all intended users of evaluation findings to develop recommendations that are practical, relevant and can be implemented.

Recommendation 17:
It is recommended that MDBA improve internal accessibility of evaluation findings and recommendations by having a central database that tracks all findings and recommendations and using this database to systematically record and track progress on implementing findings and recommendations.

Recommendation 18:
MDBA are currently working with partners to develop protocols around review of documents prior to publication. This should be prioritised and implemented to ensure appropriate consultation on all published reports and data, as required by Chapter 13 and to foster good collaboration.

6.3 Recommendations for overarching MER capabilities (Basin States, CEWH, DAWR)

MER Culture
Changing culture takes time; organisations that were rated below *Embedded* are generally on the right path and need to continue efforts in this space to reach *Embedded*. For some organisations, there is a long history of MER within NRM departments and teams but it is only just becoming a core competency within water resource and policy teams.

Recommendation 19:
For organisations seeking to improve MER Culture from *Developing* to *Embedded*, it is recommended that Basin Plan MER be explicitly recognised, valued and supported, receives strategic planning attention and is resourced appropriately. It should not be viewed as an "add on", or a team separate to other basin implementation work.

Recommendation 20:
For organisations seeking to achieve a *Leading* MER Culture, it is recommended an evaluative culture is built, consisting of reflection and learning, and understanding and appreciation of MER. This way of working should be explored through internal workshop sessions and be documented in organisational plans. This should also be explored with partners.

MER Leadership
Recommendation 21:
For organisations seeking to improve MER Leadership from *Developing* to *Embedded*, it is recommended that a commonly understood vision for MER is documented, that articulates Basin Plan elements. Many organisations have MER mentioned in some form in strategic documents or plans but need to be more explicit about the rationale for MER and the outcomes sought, to ensure there is a clear message and it is commonly understood. MER outcomes could be included in organisational KPIs, and or MER plans could be required as part of project proposals to achieve funding.

Recommendation 22:
For organisations seeking to achieve *Leading* MER Leadership, it is recommended that in addition to the actions recommended above, the vision for MER would be a whole of government approach that is reflected in all relevant government agencies. Leaders would actively motivate staff regarding MER and lead by example by having plans and actions reflect MER findings and recommendations.

MER Governance
Recommendation 23:
For organisations seeking to improve MER Governance from *Developing* to *Embedded*, it is recommended that governance arrangements are specifically articulated for Basin Plan MER and include all relevant organisations within a jurisdiction. Accountabilities should be clearly documented in business and implementation plans.

Recommendation 24:
For organisations seeking to achieve *Leading* MER Governance, it is recommended that policies and procedures allow for flexibility and innovation and that each evaluation function is encouraged to strive for high performance, within clear responsibilities and scope. All parties should commit to improving MEWG effectiveness and efficiency. Consideration could be given to engaging independent facilitators or conducting a review of governance of the group.

Collaboration & engagement to support MER
Recommendation 25:
For organisations seeking to improve MER Collaboration & Engagement from *Developing* to *Embedded*, the following actions are recommended:

- Establish effective working groups for issues that require multiple teams / agencies / jurisdictions
- Consider knowledge sharing initiatives (online tools, e.g. Queensland's 'The Waterhole')

- Consider establishing Communities of Practice or similar forums
- Develop collaborative arrangements and/or agreements with research organisations

Recommendation 26:
For organisations seeking to achieve *Leading* MER Collaboration & Engagement, it is recommended that engagement of partners and stakeholders in understanding whether outcomes were met be prioritised. It is also recommended that collaboration results in knowledge sharing while enabling and empowering innovation within each of the parties. Parties need to be enabled by leadership commitment, planning and resourcing, to take action individually and collectively, particularly with regard to collaborating with Traditional Owners.

People involved in MER
Recommendation 27:
For organisations seeking to improve their MER People rating from *Developing* to *Embedded*, the following actions are recommended:

- Develop and regularly update formal staff strategies or plans that identify skill and capability limits or gaps
- Implement strategies to fill gaps in a timely fashion.
- Ensure MER is recognised as a specialised skill and that there are role descriptions within the organisation that explicitly require these specialised skills. This should be reflected in staff strategies and planning. In particular, the specialised skills required for Basin Plan MER are identified, including in environmental, economic and social domains as well as understanding of water policy.
- Ensure access to additional evaluation expertise through links with other government departments, research institutions, or partner agencies. Where possible, this expertise should be clearly identified, and arrangements made to ensure they are accessible when needed (e.g. a memorandum of understanding or services panel arrangement).
- Develop MER skills through formal training, on-job mentoring and secondments.

Recommendation 28:
For organisations seeking to achieve a *Leading* MER People rating, it is recommended that in addition to the actions recommended above, staff with high order MER skills, capability and experience are recruited or seconded where required and are effectively leveraged by the agency to entrench best practice MER processes and procedures in Basin Plan work areas.

6.4   Recommendations for undertaking MER (Basin States, CEWH and DAWR)

MER Systems
Recommendation 29:
For organisations seeking to improve MER Systems from *Beginning* or *Developing* to *Embedded*, the following actions are recommended:

- Ensure all existing data systems are maintained to an appropriate standard (certified systems or documented processes)
- Establish data management systems for ecological data that ensure data are recorded, stored, tracked and analysed in a consistent way, and each piece of evaluated information can easily be tracked through the system (e.g. South Australia's Managing Environmental Knowledge (MEK))
- Implement document management systems
- Promote and engineer compatibility of systems with other organisations for key data sources
- Ensure that data can be easily accessed / uploaded / downloaded by all staff involved in MER and remove any delays in requesting data (internally or externally).

Recommendation 30:

For organisations seeking to achieve *Leading* MER Systems, the following additional actions are recommended:

- Electronically publish all data (ISBN numbers for reports)
- Ensure compatibility of systems with all other relevant organisations for all data sources
- Introduce automated data storage and sharing

Note that for some organisations, actions to further advance their systems capability is dependent on MER planning to better understand evaluation and reporting requirements and adapting systems to best suit those requirements.

Planning MER

Recommendation 31:

For organisations seeking to improve MER Planning from *Developing* to *Embedded*, the following actions are recommended:

- Ensure MER guidelines and templates (or similar documents) are in place. Ensure that these guidelines and templates are applied for all Basin Plan MER by including these requirements as part of the organisation's project management systems and/or performance planning
- Basin Plan MER frameworks need to be further developed for the 2020 evaluation and updated for the 2025 evaluation
  - They should have well-defined objectives and outcomes
  - They should include program logics, key evaluation questions, inter-agency integration documents and alignment with Basin Plan requirements
  - They should leverage the large body of work that is continuing on LTWPs and WRPs
  - They need to cover all requirements under chapter 13 and Schedule 12, in particular, 5-yearly requirements that have not yet been tested, i.e.,
    - Matter 8 – Achievement of environmental outcomes at the asset scale
    - Matter 12 – Progress towards the water quality targets in Chapter 9
    - Matter 18 – The efficiency and effectiveness of the operation of water resource plans including providing a robust framework under a changing climate.
- Detailed Basin Plan MER plans should be developed that include information on scheduling, responsibilities, and monitoring and data requirements. This should be at a sufficient level of detail to guide data acquisition (monitoring and acquiring data from other sources), set up appropriate system architectures, and establish clear analysis methods and reporting templates
- MER frameworks and plans should be shared among all jurisdictions as early as possible for feedback and to promote efficiency, consistency and knowledge sharing
- Ensure that all planning documents are as concise and simple as possible, aligned with partners and stakeholders and well understood within the organisation

Note that while evaluation of some aspects of Basin Plan implementation may be difficult in 2020 due to delayed implementation (e.g. WRPs), the planning aspect should still be undertaken to ensure sound structures are established for the following 5-year evaluation, including collection of appropriate data between now and 2025.

Recommendation 32:

For organisations seeking to achieve *Leading* MER Planning, the following additional actions are recommended:

- Ensure Basin Plan MER frameworks and plans are best practice, regularly updated and improved
- Publish Basin Plan MER frameworks and plans
- Proactively drive and maintain awareness of evaluation and reporting planning considerations, schedules and minimum times required, critical paths, key dates and inputs
- Ensure planning supports consistent, predictable, coherent, compatible and innovative reporting that supports Basin Plan evaluation, implementation and adaptive management

Conducting MER

Recommendation 33:

For organisations seeking to improve MER Conducting from *Developing* to *Embedded*, the following actions are recommended:

- Undertake pilot projects to test processes and planning documents prior to evaluations
- Ensure sound project management of MER activities by implementing project management training, and project management systems to support MER
- Ensure a quality management system and agreed standards are adopted for MER activities
- Ensure relevant templates and guidelines are used by embedding them within corporate project management systems and/or including them as a requirement for project funding, or as part of performance planning

Recommendation 34:
For organisations seeking to achieve *Leading* MER Conducting, it is additionally recommended that innovative practices are routinely trialled and integrated where they are successful and continuous improvement routinely occurs as part of normal business practice.

Using MER
Recommendation 35:
For organisations seeking to improve MER Using from *Developing* to *Embedded*, the following actions are recommended:

- Establish systems and processes to document all adaptive management that is occurring, including formalising existing 'ad hoc' approaches
- Establish a searchable register of findings and recommendations from all reviews and evaluations completed as part of Chapter 13 requirements.
- Establish processes for implementing evaluation recommendations and considering findings in future water policy and planning. The implementation of recommendations or consideration of findings in water policy and planning decisions should be recorded in a register of findings. Most organisations have good processes for dealing with direct evaluations or reviews, so can use these processes and systems specifically for Basin Plan MER to meet requirement to 'have regard' under s13.12.
- Ensure that findings and recommendations are practical and implementable by involving different teams in the recommendation development process

Recommendation 36:
For organisations seeking to achieve *Leading* MER Using, the following additional actions are recommended:

- Ensure that the register of findings and recommendations is publicly available and compatible with other systems used in Basin Plan MER
- Ensure findings and recommendations of evaluations and reviews are developed and refined for a policy practitioner audience to understand and apply

6.5   Recommendations for improving collective MER capability (MEWG)

In addition to each organisation considering the ways in which they can improve and learn from other organisations, we recommend that MEWG reflects on the following recommendations and considers how they should progress their collective MER capability.

Recommendation 37:
It is recommended that MDBA, Basin States, CEWH and DAWR develop a Community of Practice to raise capability and exchange experiences. An annual conference (similar to that held for WRP development) may assist raising capability, while providing a forum to exchange experiences across a broader scope of staff involved in MER, outside the more restricted membership and more structured workplan agenda of the MEWG.

Recommendation 38:
To fast track the collective capability, second leading MER professionals from all partners (or third parties) who have a clear understanding of the task and legislative and policy context. Enable these leading, seconded MER professionals to mentor and develop staff for 2020 and towards 2025 targets

Recommendation 39:
Alignment and efficiency must be utilised to address issues of limited or reduced resources while meeting the spatial and temporal requirements of Basin Plan MER. This should be achieved by first committing to mapping out the Basin Plan outcomes, key evaluation questions and reporting requirements (as part of a MER Framework). This should be done by each organisation and then also collectively. Part of this exercise would involve agreement on the overall intent and purpose of Basin Plan MER. As part of this process, the absence of an agreed understanding of the appropriate scale for undertaking MER should be addressed.

Recommendation 40:
Once the Basin Plan MER framework is completed, it should be optimised by identifying alignment with reporting requirements or data sources outside of Basin Plan MER (i.e. from state obligations, research organisations, other areas of government). The Basin-wide Science Platform will need to assist with this. By identifying areas of

alignment and utilising other sources of data, a pathway to increasing efficiency can be identified. It is recommended that a prioritisation process use of the best available knowledge to determine the best lines of evidence, rather than pursuing all possible lines of evidence. This prioritisation will require strong leadership Prioritisation will help to focus on what will realistically and practically be used and have the biggest impact. Once priorities are identified, all organisations can gradually work towards an aligned MER system where alignment with other priorities and information sources is optimised to reduce competing priorities and limitations on available resources.

Recommendation 41:
In addition to the above planning process, it is critical that the collective capabilities around policy evaluation and communicating finding are developed. Policy evaluation capabilities can be developed by maintaining specialised roles within all organisations that require a policy understanding and technical / science understanding. These roles should be clearly identified, and business planning and training undertaken to maintain and develop skills in this important area. Communication of findings should be seen as an important component of MER and collaboration with science communication specialists could be explored to develop this capability.

7 Priority recommendations

Under s13.23 of the Basin Plan, organisations relevant to this capability assessment must use their best endeavours to give effect to improvements identified in this report. The previous section provided a suite of recommendations to cover all organisations and all capability areas. A set of priority recommendations are summarised here to guide key actions prior to the 2020 evaluation.

Priority recommendation 1: Leadership
There is a distinct need to reach agreement between all relevant parties on the overall intent and purpose of Basin Plan MER. It is recommended that collectively a clear MER vision statement is developed. This could then be incorporated into all strategic documents and communication material and drive the leadership philosophy and culture around MER. Many organisations have MER mentioned in some form in strategic documents or plans but need to be more explicit about the rationale for MER and the outcomes sought, to ensure there is a clear message and it is commonly understood. MER outcomes could be included in organisational KPIs, and/or MER plans could be required as part of project proposals to achieve funding.

Priority recommendation 2: Culture
It is recommended that Basin Plan MER be explicitly recognised, valued and supported, receive strategic planning attention and be resourced appropriately. It should not be viewed as an "add on" or separate to other basin implementation work. It is recommended an evaluative culture continue to be grown, consisting of reflection and learning and understanding and appreciation of MER. This manner of working should be explored through internal workshop sessions and be documented in organisational plans.

Priority recommendation 3: Collaboration
It is recommended that MDBA, Basin States, CEWH and DAWR develop a Community of Practice to raise MER capability and exchange experiences. An annual conference (similar to that held for WRP development) may assist raising capability, while providing a forum to exchange experiences across a broader scope of staff involved in MER, outside the more restricted membership and more structured workplan agenda of the MEWG. Involvement of professional evaluators from the industry and connection with established industry development bodies to ensure that the best available insights, knowledge and resourced are harnessed for Basin Plan MER should also be considered.

Priority recommendation 4: Planning
It is recommended that all organisations develop (or finalise) MER Frameworks prior to the 2020 evaluation. Planning is a critical element of effective MER, particularly in the complex inter-jurisdictional setting of the basin. Evaluation frameworks provide a means of mapping out Basin Plan outcomes, key evaluation questions and reporting requirements.

MER Frameworks should include well-defined objectives and outcomes, program logics, key evaluation questions, and inter-agency integration documents. They should align with Basin Plan requirements, leverage the large body of work that is continuing on LTWPs and WRPs, and cover all requirements under chapter 13 and Schedule 12, in particular, 5-yearly requirements that have not yet been tested.

Priority recommendation 5: Planning
It is critical that the Basin Plan MER framework include a chapter and graphics or tables that clearly indicate what monitoring information (data type, scale etc) will be brought together from the Basin States, Commonwealth and MDBA, for addressing evaluation questions and reporting requirements. This information should be developed collaboratively and be agreed by all parties ahead of the 2020 evaluation.

This process should seek alignment of evaluation frameworks relevant to the Basin Plan and also of other reporting obligations outside direct Basin Plan requirements to optimise monitoring and evaluation efforts. By identifying areas of alignment and utilising other sources of data, a pathway to increasing efficiency can be identified. This will require strong leadership to help to focus on what can realistically and practically be used and have the biggest impact.

Priority recommendation 6: Systems
It is recommended that all organisations improve their information management systems, with a focus on environmental data management systems and document management systems that are critical to sound MER practices.

Priority recommendation 7: Using
It is recommended that a central database be established to track all evaluation findings and recommendations to improve their accessibility and application. This database could then also be used to systematically record and track progress on the use of findings and implementation of recommendations. Without appropriate systems for enabling the use of evaluation findings and recommendations, Basin Plan requirements to 'have regard to' cannot be effectively met, nor the purpose and intent of MER completely realised.

Priority recommendation 8: Using
MDBA are currently working with partners to develop protocols around the review of documents prior to publication. This should be prioritised and implemented to ensure appropriate consultation on all published reports and data, as required by Chapter 13 and to foster good collaboration and acceptance of (and therefore use of) evaluation findings.

Appendix A
Capability assessment framework

Developing the framework

What is unique about the Basin Plan evaluation capability?

Several elements of the Basin Plan evaluation and reporting functions and obligations are notable as being unusual or unique compared to evaluation functions and capability assessments in other contexts:

- The capability being assessed is, in the first instance, that "relevant to the Chapter" (i.e. relevant to the Basin Plan MEP); broad, generic evaluation capability is only assessed where Basin Plan MEP activities and examples have not yet occurred for a given organisation.

- The capability being assessed relates primarily to organisations, with individual capabilities relevant only in the context of assessing the organisations' capabilities.

- The capability being assessed relates to public institutions (i.e. Commonwealth and Basin State agencies) who are themselves leading the policy implementation under evaluation. This is known as an "internal evaluation" function, as opposed to evaluation by an independent outside entity. (While MDBA can engage outside entities (e.g. contractors or universities) for services and/or advice, the Basin Plan requires MDBA itself to evaluate – i.e. MDBA must "own" and exercise the function.)

- The Basin Plan has at times been a highly and publicly contested public policy intervention, meaning that evaluation findings by MDBA, Basin States, CEWH and the Department, as well as the evidence underpinning them, are likely to be closely scrutinised by key stakeholders.

- While the Basin Plan requires MDBA to evaluate effectiveness, this evaluation must "have regard to" (and in practice relies heavily on) reports provided by the Basin States, CEWH and the Department, that will in themselves be substantially evaluative (i.e. include significant analysis and interpretation of raw data).

- The distribution of jurisdictional responsibilities for water policy and management between MDBA, the Basin States, CEWH and the Department, is complex and subtle. While the Act and the Basin Plan are worded to provide clear roles and responsibilities, in practice these rely heavily on inputs, outputs, enabling and cooperation between the parties.

- Like many interventions in natural resources and other complex areas of public policy, the Basin Plan's impact and effectiveness are difficult to clearly attribute amongst many other factors that influence the attainment of objectives (e.g. climate change and variability, economic variability and shocks, social change).

- Similarly, the time scales for implementation and for ecosystem response, mean that many objectives and outcomes are likely to take years or decades to be realised.

- The Basin Plan applies across an exceptionally large and varied landscape, the size of France and Germany combined, with a large variety of regional climate zones, water-dependent ecosystems, agricultural systems, regional economies, social geography and communities. Framing common indicators and collecting, analysing and evaluation data at this scale is challenging.

- The Basin Plan introduces the concept of "Basin-scale" outcomes for evaluation, yet the technical basis for evaluation at the Basin scale is complex and not necessarily resolved.

- The effectiveness of the Basin Plan in achieving its objectives relies strongly on several significant complementary reforms and public investments, including the national water reforms (COAG 1994, NWI 2004), $13 billion invested in water recovery and water efficiency and Basin State legislation, policies and operational practice (including Water Resource Plans (WRPs) and prerequisite policy measures). (See MDBA 2014).

For the above reasons (in addition to the requirements of Basin Plan section 13.23), it is appropriate that the assessment of capabilities is undertaken in an integrated fashion for all the entities involved in implementing the Basin Plan and the MEP.

Existing frameworks

Capability assessments in general

Capability assessments are designed to assess performance, most commonly of an organisation or individual. They may be general and holistic in nature or focus on a specific function or performance area. The output is a point in time assessment of capability (current state) which can be used to inform the development of an action plan for capability uplift to the desired state. The Australian Public Service Commission model of capability is shown at Figure 7.

Figure 7. *Example model of capability from the Australian Public Service Commission.*

Capability assessments for evaluation, monitoring and reporting

There are a number of capability assessment frameworks that exist for evaluation, monitoring and reporting as outlined in Table 2 below (not exhaustive).

Evaluation capability at an organisational level in not just about the skills of individuals to do evaluation, it includes this, as well as the skills to manage, plan and use evaluations. It also includes the enabling and supporting structures of the organisation such as technical infrastructure, policy and process and the supportive environments that allow and encourage a good evaluation function and culture to flourish. To assess organisational evaluation capability at the organisational level all of these various domains need to be addressed.

Table 2. A sample of capability assessments for evaluation, monitoring and reporting.

Framework name	Year of development	Description
Australasian Evaluation Society's Evaluator's Professional Learning Competency Framework	2013	Supports individuals to develop their evaluation knowledge and expertise. Some elements are relevant to an organisational capability assessment.
Institute of Public Administration Australia's professional capability standards for policy and regulatory professionals	Policy - 2014 Regulation - 2015	Outcomes based standards which reflect performance expectations of a skilled individual at Australian Qualification Framework level 9. Of particular relevance is Part 4.4 Maintain ongoing policy accountability and re-evaluate and adapt policy in response to delivery performance and changing circumstances.
Australian Public Service Commission's model of capability	Commenced 2011	The model of capability was developed by the Australian Public Service Commission as part of their strategic capability review program.

Framework name	Year of development	Description
		It is designed to assess holistic organisational capability. It is not specific to evaluation.
ACT Government Evaluation Policy and Guidelines	2010	Supports improved performance and accountability through a commitment to planning for and delivering evaluations. The policy and guidelines include details of organisational evaluation maturity rated across four levels and recognises that developing and maintain evaluation maturity is an ongoing process.
Department of Infrastructure and Regional Development's Monitoring and Evaluation (M & E) Capability Strategy	2017	Sets out the department's strategy to build M&E capability including a monitoring and evaluation maturity table to be used for assessment of the department's maturity.

There are also numerous sources which outline evaluation, monitoring and reporting guidelines, such as:

- Queensland Government (2014), Evaluation Program Guidelines, Brisbane

- NSW Government (2016), Program Evaluation Guidelines

- Australian and New Zealand School of Government (ANZSoG, 2012), Better Evaluation, Melbourne

- United Nations Development Programme (UNDP, 2008) Handbook on Planning, Monitoring and Evaluating For Development Results

- United Nations Environmental Program (UNEP, 2008) Evaluation Manual

- HM Treasury (2011), Guidance for Evaluation, UK.

MEP Summary functions and organisations

To assist the development of the capability assessment framework, we have summarised the key MEP functions and obligations from the Basin Plan MEP:

- Overall MER

- Evaluation

- Adaptive management

- Improving knowledge

- Reporting

- Publication of information

- Improving MER

The full suite of obligations, functions and provisions relevant to monitoring, evaluation and reporting are provided in Appendix B.

Overall approach to evaluation, monitoring and reporting

MDBA is responsible for leading monitoring at the Basin scale and all evaluations of the effectiveness of the Basin Plan. The Basin States, CEWH and the Department enable evaluations by collecting, analysing and reporting information (including data) in a fit for purpose manner. The overall approach to MER includes principles for undertaking the MEP outlined in 13.04 and 13.03.

Evaluation

MDBA must evaluate effectiveness for purposes of:

- annual reports on effectiveness,

- advising on impacts of the Basin Plan

- 10-yearly reviews of the Basin Plan

- Any other reviews of the sustainable diversion limit

MDBA must, when making an evaluation, have regard to:

- Reports under the reporting requirements / schedule 12 (annual and 5-yearly reports by the Basin States, CEWH, Department and MDBA itself)

- Key evaluation questions in the MEP

- Any other relevant information held by the MDBA

MDBA must ask key evaluation questions in section 13.06. While all of these questions must be asked, the first four [(a) to (d)] relate directly to evaluation while the final three [(e) to (f)] are more the focus of adaptive management (discussed below). The key evaluation questions (a) to (d), relating directly to the summary function of evaluation are:

- To what extent has the intended purpose of the Basin Plan set out in section 20 of the Act been achieved?

- To what extent have the objectives, targets and outcomes set out in the Basin Plan been achieved?

- How has the Basin Plan contributed to changes to the environmental, social and economic conditions in the Murray-Darling Basin?

- What, if any, unanticipated outcomes have resulted from the implementation of the Basin Plan?

For the purposes of the capability assessment, it is useful to think in terms of the three technical areas:

- Environmental evaluation capability (water dependent ecosystems; assets, functions, resilience, climate change; also, coordination of environmental water; maintain appropriate water quality)

- Social evaluation capability (resilience, confidence, indigenous values and uses; maintain appropriate water quality; transition and adjustment)

- Economic evaluation capability (water security, productive and resilient industries; efficient water markets; water reach most productive use; transition and adjustment; water industries capacity to manage & adapt to climate variability and change)

The questions used in the capability assessment will address the capabilities in relation to these three technical areas under the evaluation MEP summary function.

Adaptive management
Adaptive management requires the capability to feed findings and recommendations into reviews, amendments, exercising powers and performing functions.

MDBA and Basin States must have regard to findings and recommendations of evaluations, reviews and audits, when:

- Proposing changes to the Basin Plan

- Exercising powers and performing functions under the Basin Plan

Principle 5 (s13.04(4)) also refers to the importance of adaptive management: "Monitoring and evaluation findings, including in respect of progress towards meeting targets and trends in the condition and availability of the Basin water resources, should enable decision-makers to use adaptive management."

Adaptive management is the subject of some of the KEQs under section 13.06 (e) – (g)

- How could the effectiveness of the Basin Plan be improved?

- To what extent were the actions required by the Basin Plan suited to meeting the objectives of the Basin Plan?

- To what extent has the program for monitoring and evaluating the effectiveness of the Basin Plan contributed to adaptive management and improving the available scientific knowledge of the Murray-Darling Basin?

MDBA must review the water quality targets in the water quality and salinity management plan every 5 years. The MDBA must also review the environmental watering plan every 5 years, including the targets set out in Schedule 7.

Improving knowledge
The function of improving the 'available scientific knowledge of the Murray-Darling Basin' is referenced under section 13.06 (g). Under this function, the MDBA must evaluate how the MEP has contributed to improving the body of knowledge about the Murray-Darling Basin. This evaluation is therefore closer to the type of evaluation that a 'knowledge agency' might undertake (e.g. CSIRO). The function involves different parameters than a contribution to management and policy.

Reporting
Reporters listed for each matter in schedule 12 must provide a report to the MDBA for each reporting period (s13.14(1)). These reporting activities enable the evaluation activities to take place (as directed under s13.05(1)).

The matters in Schedule 12 relate to the Basin Plan as a whole, and the following elements of the Basin Plan: the environmental watering plan; water quality and salinity; the water trading rules; and water resource planning.

For the purpose of the capability assessment, it is useful to consider reporting capabilities in relation to:

- Capability to report actions

- Capability to report outputs

- Capability to analyse, evaluate and report asset/regional outcomes

- Capability to analyse, evaluate and report basin outcomes

It is also important to note that the agreements and guidelines (s13.16, s13.16) are subsidiary items included to support the reporting requirements. MDBA must use best endeavours to enter into agreement on reporting requirements with Basin States, CEWH and the Department. MDBA may publish guidelines on reporting requirements. Basin States, Department and CEWH may have regard to the Guidelines.

Principle 3 (s13.04(2)) also indicates the responsibility different parties have for reporting: "Commonwealth agencies and Basin States should report against matters in a manner which reflects the degree to which they are responsible for those matters."

Publication of information
MDBA must publish findings and recommendations arising from evaluations and reviews, as well as information (including data) obtained in monitoring the effectiveness of the Basin Plan.

MDBA must consult with and provide opportunity to comment to, the Basin States, CEWH and Department, before publishing.

Improving monitoring, evaluation and reporting capabilities
Under the Basin Plan, the MDBA must

- Conduct an assessment of monitoring, evaluation and reporting capabilities relevant to the Chapter,

- Have regard to findings and recommendations arising from relevant evaluations, reviews, audits and assessments

- Use its best endeavours to give effect to improvements identified through the assessment, with the Basin States, the CEWH and the Department (and any other relevant persons or bodies

Capability assessment rubrics

The capability areas that are relevant to each MEP summary function is provided below (Table 3). Some of the capability areas are fundamental to all of the MEP functions, while others are relevant to specific components of the MEP functions.

Note that while some capability areas may be particularly relevant to some MEP functions (e.g. governance is important for adaptive management, and collaboration is particularly important for reporting), for the purposes of this capability assessment, these capability areas are relevant to all the functions and will be assessed as one assessment for overall MEP function.

Based on these relationships between the MEP summary functions and capability areas, capability assessment rubrics have been developed for each capability area (Table 4). Each rubric has four maturity levels (in increasing order): beginning, developing, embedded, leading.

Table 3. Relationship between capability areas and summary functions

		MEP summary functions					
		Overall MER	**Evaluation and reporting#**	**Adaptive management**	**Publication of information**	**Improving knowledge**	**Improving MER**
		MDBA (Basin States, CEWH, DAWR) *	*MDBA, Basin States, CEWH, DAWR**	*MDBA, Basin States*	*MDBA*	*MDBA*	*MDBA ***
Capability areas	**Culture**	RUBRIC					
	Leadership	RUBRIC					
	Governance	RUBRIC					
	Collaboration & engagement	RUBRIC					
	People	RUBRIC					
	Systems		RUBRIC				
	Planning		RUBRIC				
	Conducting		RUBRIC				
	Using			RUBRIC	RUBRIC		
	Managing performance					RUBRIC	RUBRIC
KEY:		Capability area is relevant to summary function		Capability area is relevant to the summary function but is primarily covered in a different rubric.			

*While the MEP (s13.05) is clear that MDBA leads and carries out the evaluation of Basin Plan effectiveness, the 5-yearly reporting requirements (Schedule 12) imply an element of evaluation on the part or the Basin States, CEWH and DAWR. In addition, the evaluation capability of the Basin States, CEWH and DAWR will be important to enabling MDBA's evaluation function and capability (s13.03(2)).

**While the MDBA is responsible for the capability assessment, the scope of the assessment is all capabilities relevant to the MEP. Therefore, the scope of the assessment also captures relevant capabilities for Basin States, CEWH and DAWR.

While monitoring is not the focus of this project, the Evaluation and reporting function includes the ability to manage monitoring activities and use monitoring results and data

Table 4. Capability assessment rubrics

Capability area: Culture					
Description: Assesses the organisational attitude towards program evaluation					
MEP summary function	**Organisation**	**Beginning**	**Developing**	**Embedded**	**Leading**
Overall	MDBA (also in an enabling and supporting sense, Basin States, CEWH, DAWR)	Basin Plan evaluation awareness is low and is as a response to identified problems. The Basin Plan evaluation function is carried out in isolation, without strategic planning, poorly resourced and without organisational cultural support. Basin Plan evaluation findings are not integrated and applied into the organisation's core business. The Basin Plan evaluation framework and method do not reflect integration to the organisation's core business.	Widespread awareness of the benefits of Basin Plan evaluation. The Basin Plan evaluation function is valued, culturally supported, receives strategic planning attention and resourced proportionately in the context of organisation-wide resources. Basin Plan Evaluation findings receive profile internally within the organisation. The Basin Plan evaluation framework and method attempt to reflect integration to the organisation's core business	Basin Plan evaluation perceived as an integral component of sound performance management. The Basin Plan evaluation function is valued, culturally supported, receives strategic planning attention and resourced proportionately in the context of organisation-wide resources. Basin Plan Evaluation findings are intended to be integrated and applied into the organisation's core business. The Basin Plan evaluation framework and method reflect integration to the organisation's core business	Demonstrated commitment to continuous learning and improvement throughout the agency. The Basin Plan evaluation function is valued, culturally supported, receives a relatively high priority of strategic planning attention and resourcing in the context of organisation-wide resources. Evaluation findings are systematically integrated and applied into the organisation's core business. The evaluation framework and method reflect a sophisticated integration with the organisation's core business

Capability area: Leadership					
Description: Assesses to extent to which the agency's leadership communicates an inspiring shared vision for evaluation, monitoring and reporting					
MEP summary function	**Organisation**	**Beginning**	**Developing**	**Embedded**	**Leading**
Overall	MDBA (also in an enabling and supporting sense, Basin States, CEWH, DAWR)	Leadership in relation to Basin Plan evaluation, monitoring and reporting is ad hoc and reactive. There is no shared vision or expectations amongst the agency's leadership for Basin Plan evaluation. Leadership does not develop organisational strategy for evaluation and allows organisational duplication or gaps to continue unresolved	Leadership recognise the importance of a shared vision and expectations for Basin Plan evaluation and are working towards achieving this. Leadership are beginning to communicate the developing vision and expectations internally. Leadership actively developing the organisation's evaluation strategy, coherence and ability to carry out Basin Plan evaluation and apply findings.	Leadership have a shared vision and expectations for Basin Plan evaluation, monitoring and reporting that is well understood internally. Leadership demonstrate and communicate internally Basin Plan evaluation and application of findings as integrated with the core business of the organisation and of Basin Plan implementation. Leadership advocates clear strategy, coherence and vision of organisational responsibilities to deliver evaluation.	Leadership are proactive in informing staff and stakeholder organisations of the agency's vision, expectations and opportunities for Basin Plan evaluation, monitoring and reporting Leadership effectively communicate a shared vision that inspires and motivates internal and external stakeholders. Leadership demonstrate and communicate Basin Plan evaluation and application of findings as integrated with the core business of the organisation and of Basin Plan implementation.

Capability area: Governance					
Description: Assesses the organisational program evaluation responsibilities, resources, strategy, policy and procedures					
MEP summary function	**Organisation**	**Beginning**	**Developing**	**Embedded**	**Leading**
Overall	MDBA (also in an enabling and supporting sense, Basin States, CEWH, DAWR)	Governance arrangements are ad hoc and reactive. Staff and stakeholders lack clarity about roles, responsibilities and requirements in relation to Basin Plan evaluation, monitoring and reporting. Few or no formal policies or procedures exist. Decision making is inefficient and confused. Internal and interjurisdictional meetings are inconclusive, and matters are left unresolved. Basin Plan evaluation functions are duplicated or there are gaps.	Governance arrangements for Basin Plan evaluation are in place in the organisation, but knowledge and understanding of the roles, responsibilities and requirements vary. Some formal policies and procedures exist. Some strategic decisions are resolved. Internal and interjurisdictional meetings are developing and progressing a clear workplan and register of decisions. Clear responsibility is established for each evaluation function and where overlaps exist, there are governance arrangements to manage these.	Governance arrangements for Basin Plan evaluation are in place in the organisation, and knowledge and understanding of the roles, responsibilities and requirements is widespread. Governance arrangements are typically effective and efficient. Formal policies and procedures are in place. Strategic decisions on evaluation are resolved. Internal and interjurisdictional meetings are effective, with a clear workplan and decisions register. Clear responsibility is established for each evaluation function and where overlaps exist, there are governance arrangements to manage these.	Governance arrangements are efficient and effective at promoting the achievement of strategic goals in relation to evaluation, monitoring and reporting. Parties internally and externally are fully accountable for their performance, transparent in decision making and representative participation is achieved. Formal policies and procedures are in place which provide room for flexibility and innovation. Strategic decisions on evaluation are taken as a high organisational priority Internal and interjurisdictional meetings are effective, with a clear workplan and decisions register and a shared vision. Each evaluation function is encouraged to strive for high performance, within clear responsibility and scope, and within internal governance arrangements.

Capability area: Collaboration and engagement

Description: Assesses the nature of stakeholder relationships and level of influence and thought leadership

MEP summary function	Organisation	Beginning	Developing	Embedded	Leading
Overall	MDBA (also in an enabling and supporting sense, Basin States, CEWH, DAWR)	Collaboration and engagement is ad-hoc and reactive. Commitment to collaboration appears to be lacking. Resources and planning do not take collaboration into account.	Collaboration and engagement structures and processes are in place but are not wholly effective. There is a commitment that planning, and resources will take account of collaboration. Forum (MEWG) to collaborate is in place.	Collaboration and engagement is routine and mostly effective resulting in shared decision making and accountability Commitment, planning and resources allow adequate time, resourcing and leadership support for collaboration. The forum (MEWG) is well run, has effective meetings and enables subsequent collaborative actions.	Collaboration and engagement is highly effective resulting in knowledge sharing while enabling and empowering innovation within each of the parties. Parties enabled by leadership commitment, planning and resourcing, to take action individually and collectively to proactively achieve shared goals to the benefit of all. The forum (MEWG) enables innovation and collaboration, within an atmosphere of collective excellence

Capability area: People

Description: Assesses how people are supported to deliver and the suitability of the agency's level of skills, competencies and experience in delivering high quality, timely and cost-effective monitoring, evaluation and reporting.

MEP summary function	Organisation	Beginning	Developing	Embedded	Leading
Overall	MDBA (also in an enabling and supporting sense, Basin States, CEWH, DAWR)	No formal people strategies, policies or plans are in place to address key evaluation and technical capabilities. Evaluation and relevant technical skills, competencies and experiences are limited amongst the agency's available resources. There is no conscious effort to train, develop or recognise skills, competencies and experiences of existing staff. There is not a shared understanding of what evaluation capability is.	Some people strategies, policies and plans are in place, but there are gaps, and/or they are not wholly effective/implemented. Evaluation and relevant technical skills, competencies and experiences are variable amongst the agency's available resources. Pockets of capability exist but are not consistently widespread. There is uneven understanding of what staff capabilities are required to undertake Basin Plan evaluation. Some efforts are in place to train, develop and recognise evaluation capabilities	Formal people strategies, policies or plans are in place to address key evaluation and technical capabilities. Any skills/capability limits are known and recognised with strategies in place to address needs as required. General monitoring, evaluation, reporting and project management skills are widespread. Higher order skills may not be routinely in place and/or not always used effectively.	Clear strategic understanding of the skills, competencies and experience requirements for the agency's evaluation capability. People polices, and plans are better practice and effectively support capability sustainment. General monitoring, evaluation, reporting and project management skills are widespread and integrated into BAU delivery. Relevant staff have higher order skills, capability and experience, which is effectively leveraged by the agency. There is a conscious strategy to developing and support a "leading edge" advanced capability.

Capability area: Systems

Description: Assesses how systems support the delivery of evaluation, monitoring and reporting as well as the management of the program evaluation function.

MEP summary function	Organisation	Beginning	Developing	Embedded	Leading
Evaluation & Reporting	MDBA, Basin States, CEWH, DAWR	Few systems in place to support delivery of Basin Plan evaluation and reporting. Systems lack integration and automation. Systems are uncontrolled. Systems are incompatible and do not support efficient delivery, archiving and use for evaluation of the reports (including data) provided by the parties. Data and information systems are not searchable or systematically archived. Systems do not support or enable timely, efficient and effective delivery of the Basin Plan evaluation and reporting functions. Systems not able to receive information and data from other parties	Systems in place to support core evaluation and reporting functions but may have gaps in capability or implementation/use and may not support all the specific Basin Plan reporting requirements. System processes are managed but not standardised or integrated. Automation is limited/siloed. Awareness of systems is low Some attempt to implement searchability and archiving. Systems provide some support to delivery of the Basin Plan evaluation and reporting function, but do not enable efficient and effective delivery of the function. Some limited ability to receive/provide information and data from/to other parties	Systems to support core evaluation and reporting functions are robust, integrated and managed in a standardised way. Automation promotes efficient and effective use of systems and data. Quality and performance are able to be measured. Staff are aware of where and how evaluation and reporting information and data is stored. Data and information architecture is systematic, efficient, searchable and archived, but may not be fully functional for the specific requirements of Basin Plan evaluation. Some elements of effective compatibility between the parties' systems	Systems are fully aligned and integrated with organisational business needs for Basin Plan evaluation and reporting. Able to support required insights on demand, with high degree of confidence in the quality and reliability of the results. Routine exploration of innovative and new technology and strategies and adoption of new /improved systems/strategies on the basis of high-quality assessment experience, which is effectively leveraged by the agency. High degree of compatibility between the parties' systems, which enables Basin Plan evaluation and reporting functions.

Capability area: Planning					
Description: Assesses how evaluation, monitoring and reporting activities are planned					

MEP summary function	Organisation	Beginning	Developing	Embedded	Leading
Evaluation & Reporting	MDBA, Basin States, CEWH, DAWR	Basin Plan and/or implementation strategies, plans and activities have poorly defined objectives, outcomes and/or logic and assumptions. Evaluation planning is ad-hoc and mainly occurs after implementation of the policy/program. Quality of planning is generally low. No, or very basic, strategic evaluation and reporting plan at the agency level. Poor awareness of evaluation and reporting planning considerations, schedule and minimum time required, critical path, key dates or inputs. Disconnect between Basin Plan evaluation and other agency strategic and performance planning Disconnect between evaluation plan and actual Basin Plan requirements and practical implementation Reporting is delivered unevenly and does not reflect a mutually agreed approach. Poor planning leads to inconsistent and incoherent reporting	Basin Plan and implementation strategies, plans and activities have well-defined objectives/outcomes and logic and assumptions. Evaluation plans/frameworks are in place for some Basin Plan elements and implementation strategies, plans and activities, from commencement. Agency evaluation, monitoring and reporting processes, guidelines and templates are used some of the time. Quality of planning is variable. Some strategic planning occurs at the agency level. Mixed awareness of evaluation and reporting planning considerations, schedule and minimum time required, critical path, key dates or inputs. Some elements of Basin Plan evaluation are well connected to other agency strategic and performance planning. Some elements of evaluation and reporting plan are well connected to actual Basin Plan requirements and practical implementation. Planning supports some consistency and coherency in some types of reporting	Basin Plan and implementation strategies, plans and activities have well-defined objectives/outcomes and logic and assumptions. Evaluation plans/frameworks are routinely in place for Basin Plan elements and implementation strategies, plans and activities, from commencement. Plans are regularly reviewed to ensure they remain relevant. Agency evaluation, monitoring and reporting processes, guidelines and templates are routinely used. Quality of planning is typically high. Some planning occurs to integrate past and current evidence, data and activities and avoid duplication within the organisation. Strategic agency level evaluation and reporting planning occurs routinely. Strong and consistent awareness of evaluation and reporting planning considerations, schedule and minimum time required, critical path, key dates and inputs. All elements of Basin Plan evaluation and reporting are well connected to other agency strategic and performance planning. All elements of evaluation plan are well connected to actual Basin Plan requirements and practical implementation. Planning supports consistent, predictable, coherent and compatible reporting	Basin Plan and implementation strategies, plans and activities have well-defined objectives/outcomes and logic and assumptions. Evaluation planning is an integral component of Basin Plan elements and implementation strategies, plans and activities, development and delivery. Evaluation planning systematically leverages past and current evidence, data and activities and avoid duplication internally and externally. Quality of planning is best practice, incorporates leading trends and is underpinned by quality evaluation, monitoring and reporting processes, guidelines and templates. Strategic agency level evaluation and reporting planning aligned with needs of internal and external stakeholders and customers. Strong, consistent and proactive awareness of evaluation and reporting planning considerations, schedule and minimum time required, critical path, key dates and inputs. All elements of Basin Plan evaluation and reporting are well connected to other agency strategic and performance planning. All elements of evaluation plan are well connected to actual Basin Plan requirements and practical implementation. These are linked closely to systematic adaptive management capabilities (see above). Planning supports consistent, predictable, coherent, compatible and innovative reporting that supports Basin Plan evaluation, implementation and adaptive management

Capability area: Conducting					
Description: Assesses how evaluation, monitoring and reporting activities are conducted					

Summary function	Organisation	Beginning	Developing	Embedded	Leading
Evaluation & Reporting	MDBA, Basin States, CEWH, DAWR	Evaluation and reporting activities occur but infrequently and are ad hoc in nature. Evaluation and reporting activities are inefficient, uncoordinated and ineffective. Evaluation activities cannot be demonstrated to add value or deliver benefit. Quality, cost and timeframes are generally not monitored/assessed.	Evaluation and reporting activities generally occur for priority elements of the Basin Plan and its implementation strategies, plans and activities. Some evaluation and reporting activities are efficient, coordinated and effective. Some evaluation and reporting activities can be demonstrated to add value or deliver benefit. Quality of activities is highly variable. Timeframes and cost are sometimes controlled.	Evaluation and reporting activities are consistently efficient, coordinated and effective, and executed in accordance with plans. Quality of activities is satisfactory to high. Timeframes and cost are routinely controlled. Coordination between the parties and stakeholders is typically effective. Evaluation and reporting activities can be demonstrated to add value or deliver benefit, supporting efficient and effective Basin Plan implementation and adaptive management.	Evaluation and reporting activities are efficient, coordinated and effective, such that they demonstrably support and enable efficient and effective Basin Plan implementation and adaptive management. Evaluation and reporting activities and coordination is seamlessly integrated as part of BAU core business delivery. Performance of activities is high across the domains of quality, timeframes and cost. The benefit and value of evaluation and reporting activities demonstrably outweighs their cost. Innovative practices are routinely trialled and integrated where they are successful and continuous improvement routinely occurs as part of normal business practice.

Capability area: Using					
Description: Assesses how the outcomes of monitoring, evaluation and reporting activities are communicated and used internally and externally to continually improve management and policy					

Summary function	Organisation	Beginning	Developing	Embedded	Leading
Adaptive management	MDBA and Basin States (with respect to adaptive management clause BP 13.12, but in practice CEWH and DAWR should be enabled to "use" the BP MER capabilities to adaptively manage)	Evaluation findings are sometimes communicated within the immediate team. Occasional implementation of recommendations. Findings and recommendations of evaluations and reviews are often "stranded" in reports that are not systematically stored or readily available. The findings and recommendations may be too technical, not relevant and unrelated to practical implementation or policy review. There is no register of findings and recommendations. Reviews, Basin Plan amendments and implementation take place in isolation from evaluation activity and findings. The Authority and Basin States are unaware of the requirement to "have regard" to findings and recommendations. Evaluation, monitoring and reporting activities cannot be demonstrated to add value or deliver benefit.	Evaluation findings are considered internally by only some of the Basin Plan parties, by program only. Significant recommendations are sometimes addressed/implemented There is a register of findings and recommendations, but it is not readily accessible, searchable, nor integrated with other core organisational data. As a result, the Authority and Basin States implementation of the requirement to "have regard" to findings and recommendations is ad hoc and not systematically recorded Findings and recommendations of evaluations and reviews are framed to be of practical relevance for implementation or for policy review and amendment of the Basin Plan but are not targeted at the users. Findings and recommendations of evaluations and reviews are difficult for implementers or policy practitioners to grasp and understand how to apply. Reviews, Basin Plan amendments and implementation have some regard to evaluation activity and findings, but in an ad hoc, unrecorded and unexplained way. Some evaluation, monitoring and reporting activities can be demonstrated to add value or deliver benefit.	Findings and recommendations of evaluations and reviews are framed to be of practical relevance for implementation or for policy review and amendment of the Basin Plan, they are readily available, searchable and actively communicated to implementation and policy practitioners. Findings and recommendations of evaluations and reviews are further developed and refined for implementers and policy practitioners to grasp and understand how to apply. Recommendations are routinely addressed/ implemented There is a searchable register of findings and recommendations available to all jurisdictions and compatible with other core data systems. The searchable register supports the Authority and Basin States to be aware of the requirement to "have regard" to findings and recommendations, and systematically apply and record how this is done. Reviews, Basin Plan amendments and implementation have regard to evaluation activity and findings, the rationale supporting how regard was had is recorded and explained Evaluation, monitoring and reporting activities can be demonstrated to add value or deliver benefit, supporting efficient and effective Basin Plan implementation and adaptive management.	Evaluation findings routinely inform decision making and drive continuous improvement cycles Findings and recommendations of evaluations and reviews are framed to be of practical relevance for implementation or for policy review and amendment of the Basin Plan, they are readily available, searchable and actively communicated to implementation and policy practitioners. Findings and recommendations of evaluations and reviews are actively developed and refined for implementers and policy practitioners to grasp and understand how to apply. There is a publicly searchable register of findings and recommendations available to all jurisdictions and compatible with other core data systems. The register supports the Basin Plan evaluation function to follow up on how these are applied and whether the findings and recommendations were in fact appropriate and successful. The systems support the Authority and Basin States to be aware of the requirement to "have regard" to findings and recommendations, and to systematically apply and record how this is done. Reviews, Basin Plan amendments and implementation systematically have regard to evaluation activity and findings, the rationale supporting how regard was had is recorded and explained, is searchable and demonstrates an integrated continuous improvement system. MER activities demonstrably support and enable Basin Plan implementation and adaptive management. The benefit and value of evaluation, monitoring and reporting activities demonstrably outweighs their cost.
Publication of information	MDBA	Communication processes only support posting documents (e.g. pdfs) online. They do not support web-based publishing of reports and data or online searchability. Publication is not targeted to audiences.	Communication processes support web-based publishing of data and reports, but not in a searchable or accessible way. There are some elements of publications targeted at specific audiences.	Communication processes enable automatic web-based publication after review. Communication processes support searchable online data. Publications include tailoring and targeting of reports and data to specific audiences.	Communication processes enable automatic web-based publication after review and support searchable online data Publications include enable tailoring and targeting of reports and data to specific audiences. Systems enable leading and innovative techniques of publication, searchability, access and tailoring to audiences.

Capability area: Managing MER performance					
Description: Assesses how the performance and capability of the MEP summary functions are measured and improved					

Summary function	Organisation	Beginning	Developing	Embedded	Leading
Improving monitoring, evaluation and reporting capabilities	MDBA	MEP Performance management practices and systems are ad hoc and reactive Disconnect between Basin Plan MEP functions and agency performance planning Performance management of the MEP function does not reflect integration to the organisation's core business	Some MEP Performance management practices and systems are in place, but are not fully integrated with broader management and/or have gaps Some elements of MEP functions are well connected to agency performance planning. Performance management of the MEP function attempts to reflect integration with the organisation's core business	MEP Performance management practices and systems are integrated and routine. Management practices cover all key areas. The functions generally perform well. All elements of MEP functions are well connected to agency performance planning and reflect integration to the organisation's core business.	MEP Performance management activity is proactive and provides meaningful, timely and comprehensive understanding of the function's performance and needs. The function is innovative, efficient and fully effective. All elements of MEP functions are well connected to agency performance planning. Performance management of the MEP function reflects a sophisticated and systemic integration with the organisation's core business
Adaptive management: Improving knowledge	MDBA	There is no organisational (nor interjurisdictional) strategy, plan, nor performance management regarding the contribution to MDB science and knowledge	There is an organisational (and/or interjurisdictional) strategy, plan, and/or performance management regarding science and knowledge, but it is not well integrated with MEP functions, core Basin Plan functions, nor is it focussed on contribution to MDB science and knowledge	There is an organisational (and/or interjurisdictional) strategy, plan, and/or performance management regarding science and knowledge, that is integrated with MEP functions and is focussed on contribution to MDB science and knowledge	There is an organisational (and interjurisdictional) strategy, plan, and performance management regarding science and knowledge, that is well integrated with MEP functions and other core Basin Plan functions, and is focussed on contribution to MDB science and knowledge

Capability assessment interview questions

The following questions were used as a basis of the semi-structured interviews.

Capability area	MEP summary function	Draft interview questions
Culture	Overall MER	▪ Is there genuine <u>engagement and willingness</u> in your organisation to use MER to develop and improve Basin Plan implementation? ▪ Are the <u>benefits of MER recognised</u> in your organisation? ▪ Is MER given an appropriate level of planning and resourcing consideration across each level and area within the organisation?
Leadership	Overall MER	▪ What is the <u>strategic vision</u> for MER in the organisation? ▪ Do leaders within the organisation <u>advocate for</u> the role and importance of MER?
Governance	Overall MER	▪ What are the <u>governance structures</u> which facilitate effective evaluation management and decision-making in the organisation? ▪ Do the governance arrangements <u>operate efficiently</u>? Do the governance arrangements operate to <u>achieve the evaluation outcomes</u>? ▪ Are evaluation responsibilities and accountabilities clearly articulated? ▪ Are evaluation policies and procedures documented, kept current, effectively communicated and implemented? ▪ Does evaluation planning occur on an organisation-wide basis and to what extent does it take into account organisational objectives, risk, capability and opportunities?
Collaboration & Engagement	Overall MER	▪ Does the organisation ensure the agency's evaluation strategies and activities are <u>aligned with those of other agencies</u>? ▪ Is there <u>shared decision-making and accountability</u>? ▪ Does the organisation <u>involve partners and stakeholders</u> from the earliest stages of policy development, and learn from their experience? ▪ Does the organisation <u>engage, align and enthuse partners in other agencies</u> and across the delivery model to work together to deliver? Is there shared commitment among them to remove obstacles to achieve effective joint working? ▪ Does the organisation develop and generate <u>common ownership</u> of evaluation strategies with <u>political leadership, delivery partners and stakeholders</u>? ▪ To what extent is there a <u>culture of teamwork</u>, including working across internal and external boundaries, seeking out relevant expertise, skills and experience?
People	Overall MER	▪ Is there ready <u>access to evaluation expertise</u>? Is this expertise regarded as the 'go to' for evaluation policy, procedures, strategy? ▪ Is the evaluation area adequately resourced with <u>appropriate skills and experience</u>? ▪ What strategies are in place to ensure the appropriate skills and expertise are available? ▪ Do the people management systems identify and support talent development? ▪ Are effective succession plans in place for key positions? ▪ Are there plans in place to fill any key evaluation capability gaps in the organisation? ▪ Are external expertise and advisers engaged where expertise and/or capacity is not available within the organisation?
Systems	Evaluation & Reporting	▪ Describe the systems in place that support MER. Do these systems effectively support MER activities? ▪ Do systems ensure consistency of data, avoiding manual and/or duplicate entry? ▪ Do systems facilitate and support document and record keeping controls and processes? ▪ Do systems feature the ability to link information and data sets? ▪ To what extent is your data and information architecture structured for the Basin Plan evaluation and reporting purpose and frequency? ▪ Can your system transfer data to or from other parties' systems?

Capability area	MEP summary function	Draft interview questions
Planning	Evaluation & Reporting	▪ Describe your MER framework. ▪ Is the evaluation framework <u>commonly understood</u> between parties? ▪ Is the evaluation framework well connected to actual <u>Basin Plan requirements and practical implementation</u>? ▪ Does the framework include procedures, guidance and templates? ▪ Do guidance and processes leverage past and current evidence, data and work (to avoid duplication)? ▪ Does your organisation ensure <u>scheduling, minimum time required, critical path, key dates and inputs</u> for Basin Plan evaluation and reporting? ▪ Does your organisation ensure consistent, predictable, coherent and compatible reporting and evaluation? ▪ Is the Basin Plan MER connected to your agency's <u>other strategic and performance planning</u>?
Conducting	Evaluation & Reporting	▪ How often does your organisation <u>use the processes, guidelines and templates</u> for Basin Plan evaluation and reporting? ▪ How does your organisation ensure <u>efficiency and coordination</u> in Basin Plan MER? ▪ How are <u>delivery plans</u> and programs effectively managed and reviewed? ▪ How does your organisation <u>ensure and manage quality</u> in evaluation and reporting? What kind of quality management systems or processes do you use?
Using	Adaptive management	▪ How does your organisation 'have regard' to evaluation findings and recommendations? Does your organisation keep records of how this is done? ▪ Is there a process for evaluation recommendations to be addressed / implemented? Does this occur? ▪ Are findings and recommendations of evaluations readily available and searchable? ▪ Are findings and recommendations communicated to implementation and policy practitioners? ▪ How practical and relevant do evaluation findings and recommendations tend to be?
	Publication of information	▪ Are evaluation and reporting products and data published? How? ▪ Do the communication processes support searchable online data? ▪ Are publications targeted to specific audiences?
Improving	Improving MER capability	▪ Is the organisation clear about what success looks like for MER? ▪ Does the organisation undertake steps to improve MER capability? ▪ Do the Basin Plan MER activities deliver benefit to Basin Plan implementation? How? Can you provide any case studies? ▪ How does your organisation ensure that evaluation and reporting is relevant for stakeholders (internal, partners and external audiences)?
	Improving knowledge	▪ Does your organisation's MER contribute to improving Murray Darling Basin science and knowledge?

Appendix B
Relevant obligations in the Monitoring and Evaluation Program

Table 5. Chapter 13 requirements and who is involved

Section of Chapter 13 (Functions and Obligations only)	**Who** – lead obligation (L); enable (E), (blank =no role)			
	MDBA	**CEWH**	**DAWR**	**States**
13.02	L			
(3) The effectiveness of the Basin Plan is to be evaluated against the objectives and outcomes set out in Chapters 5, 8 and 9, and by reference to the matters in Schedule 12.				
Part 2—Principles to be applied				
13.03 Principles of responsibility for monitoring and evaluating the effectiveness of the Basin Plan				
Principle 1				
(1) The *Authority is responsible for leading monitoring at the Basin scale,* having regard to …. **(see Principles sheet)**	L			
Principle 2				
(2) *The Authority is responsible for leading all evaluations of the effectiveness of the Basin Plan*, with	L			
Basin States, the Commonwealth Environmental Water Holder and the Department enabling evaluations by collecting, analysing and reporting information (including data) in a fit for purpose manner.		*E*	*E*	*E*
Part 3—Evaluations, reviews, audits and assessments				
Division 1—Evaluation of Basin Plan				
13.05 Purpose of evaluation				
(1) The Authority must evaluate the effectiveness of the Basin Plan against the objectives and outcomes set out in Chapters 5, 8 and 9, and by reference to the matters listed in Schedule 12, for the purposes of:	L			
(a) annual reports on the effectiveness of the Basin Plan, as required by paragraph 214(2)(a) of the Act; and	L			
(b) advising on the impacts of the Basin Plan after the first 5 years, as required by section 49A of the Act; and	L			
(c) 10 yearly reviews of the Basin Plan, as required by subsection 50(1) of the Act; and	L			
(d) any other reviews of the long-term average sustainable diversion limits (for example, following a request under subsection 50(2) of the Act). Note: The Authority must publish the findings and recommendations arising from an evaluation: see section 13.18.	L			
(3) In making an evaluation, the Authority must have regard to:	L			
(a) relevant reports produced under Part 4 *(reporting requirements / schedule 12 matters)*; and	L	E	E	E
(b) the key evaluation questions in section 13.06; and	L			
(c) any other relevant information it holds.	L			
13.06 Key evaluation questions				
The key questions that the Authority must ask when making an evaluation referred to in section 13.05 are the following:	L			
(a) to what extent has the intended purpose of the Basin Plan set out in section 20 of the Act been achieved?	L			
(b) to what extent have the objectives, targets and outcomes set out in the Basin Plan been achieved?	L			

Section of Chapter 13 (Functions and Obligations only)	MDBA	CEWH	DAWR	States
(c) how has the Basin Plan contributed to changes to the environmental, social and economic conditions in the Murray-Darling Basin?	L			
(d) what, if any, unanticipated outcomes have resulted from the implementation of the Basin Plan?	L			
(e) how could the effectiveness of the Basin Plan be improved?	L			
(f) to what extent were the actions required by the Basin Plan suited to meeting the objectives of the Basin Plan?	L			
(g) to what extent has the program for monitoring and evaluating the effectiveness of the Basin Plan contributed to adaptive management and improving the available scientific knowledge of the Murray-Darling Basin?	L	E	E	E
Division 2—Reviews of water quality targets and environmental watering plan				
13.08 Reviews of the water quality and salinity management plan targets				
(1) The Authority must conduct a review of the water quality targets in the water quality and salinity management plan every 5 years after the commencement of the Basin Plan.	L			
(2) The first review must include a consideration of:	L			
(a) the appropriateness of the existing target values for levels of salinity in paragraph 9.14(5)(c); and	L			
(b) whether it is necessary to increase the number of target sites in order to improve the management of salinity;	L			
having regard to Schedule B to the Agreement.	L			
(3) The Authority may request from a person or body (for example, a person or body mentioned in subsection (4)) any information that it considers necessary to conduct the review. Note: See also section 238 of the Act.	L			
(4) The review must be undertaken in consultation with the Basin States, the Commonwealth Environmental Water Holder and other relevant Commonwealth agencies.	L	E	E	E
13.09 Reviews of the environmental watering plan				
(1) The Authority must conduct a review of the environmental watering plan every 5 years after the commencement of the Basin Plan.	L			
(2) The review must include a review of the targets set out in Schedule 7.	L			
(3) The Authority may request from a person or body (for example, a person or body mentioned in subsection (4)) any information that it considers necessary to conduct the review. Note: See also section 238 of the Act.	L			
(4) The review must be undertaken in consultation with the Basin States, the Commonwealth Environmental Water Holder and other relevant Commonwealth agencies.	L	E	E	E
Division 4—Assessments of Basin condition				
13.11 Periodic assessments of Basin condition				
(1) The Authority may periodically undertake assessments of trends in the condition and availability of the Basin water resources and the social, cultural and economic contexts in which they are used, as revealed by monitoring information.	L			
(2) An assessment must be undertaken in consultation with the Basin States, the Commonwealth Environmental Water Holder and other relevant Commonwealth agencies.	L	E	E	E

Note at top of table: **Who** – lead obligation (L); enable (E), (blank =no role)

		Who – lead obligation (L); enable (E), (blank =no role)			
Section of Chapter 13 (Functions and Obligations only)		**MDBA**	**CEWH**	**DAWR**	**States**
Division 5—Evaluations, reviews and audits to inform changes to, and implementation of, Basin Plan					
13.12 Evaluations, reviews and audits to inform changes to, and implementation of, Basin Plan					

(1) When:
    (a) proposing any amendments to the Basin Plan; or
    (b) unless a contrary intention appears from the Basin Plan—exercising powers or performing functions under the Basin Plan;
the Authority and the Basin States must have regard to:
    (c) the findings and recommendations arising from any relevant evaluations under Division 1; and
    (d) the findings and recommendations of any relevant reviews conducted under Division 2; and
    e) the findings and recommendations of any relevant audits conducted under Division 3.
		L			L

Part 4—Reporting requirements					
13.13 Definitions					
13.14 Reporting requirements for Basin States, the Department etc					
(1) For each matter listed in Schedule 12, each reporter listed for the matter must, for each reporting period and by the reporting day, produce a report (including data) on the matter as at the end of the reporting period.		L	L	L	L
(2) If the reporter is not the Authority, the reporter must, by the reporting day, give the report to the Authority.			L	L	L
13.15 Agreements in relation to reporting requirements					
(1) The Authority must use its best endeavours to enter, within 2 years after the commencement of the Basin Plan, into an agreement with:		L			
(a) each Basin State; and					E
(b) the Commonwealth Environmental Water Holder; and			E		
(c) the Department;				E	
in relation to meeting the reporting requirements in section 13.14.					
13.16 Guidelines for reporting requirements					
The Authority may publish guidelines in relation to the reporting requirements in this Part, and the Basin States, the Department and the Commonwealth Environmental Water Holder may have regard to the guidelines.		L			
Part 5—Publication of information					
13.17 Publication of monitoring information					
The Authority must, in consultation with Basin States, the Department and the Commonwealth Environmental Water Holder (as relevant), and any other relevant person or body, take all reasonable steps to publish on its website information (including data) obtained in monitoring the effectiveness of the Basin Plan.		L			
13.18 Publication of evaluation findings and recommendations					
(1) The Authority must take all reasonable steps to publish on its website the findings and recommendations arising from its evaluations of the effectiveness of the Basin Plan under Division 1 of Part 3.		L			

Who – lead obligation (L); enable (E), (blank =no role)				
Section of Chapter 13 (Functions and Obligations only)	**MDBA**	**CEWH**	**DAWR**	**States**
(2) The Authority must provide the Basin States, the Department, the Commonwealth Environmental Water Holder and any other relevant person or body with an opportunity to comment on the proposed findings and recommendations before the findings and recommendations are published.	L			
13.19 Publication of findings and recommendations arising from reviews				
(1) The Authority must take all reasonable steps to publish on its website the findings and recommendations arising from any review conducted under Division 2 of Part 3.	L			
(2) The Authority must provide the Basin States, the Department, the Commonwealth Environmental Water Holder and any other relevant person or body with an opportunity to comment on the proposed findings and recommendations before the findings and recommendations are published.	L	E	E	E
13.21 Publication of findings of assessments				
(1) The Authority must take all reasonable steps to publish on its website the findings of each assessment conducted under Division 4 of Part 3.	L			
(2) The Authority must provide the Basin States, the Department, the Commonwealth Environmental Water Holder and any other relevant person or body with an opportunity to comment on the proposed findings before the findings are published.	L	E	E	E
13.22 Publication of reports produced under Part 4				
(1) The Authority must take all reasonable steps to publish on its website a copy of each report produced by or given to the Authority under Part 4.	L			
Part 6—Improving monitoring, evaluation and reporting capabilities				
13.23 Improving monitoring, evaluation and reporting capabilities				
(1) No later than 5 years after the Basin Plan commences, the Authority must conduct an assessment of monitoring, evaluation and reporting capabilities relevant to this Chapter.	L			
(2) When conducting the assessment, the Authority must have regard to the findings and recommendations arising from relevant evaluations, reviews, audits and assessments conducted under Part 3.	L			
(3) If the assessment identifies improvements that can be made to monitoring capabilities, the Authority must use its best endeavours, with the Basin States, the Department, the Commonwealth Environmental Water Holder and any other relevant persons or bodies, to give effect to those improvements.	L	E	E	E

Table 6. Schedule 12 requirements and who is involved

Matter	Reporting frequency	Who – reporter (R), (blank =no role)			
		MDBA	CEWH	DAWR	States
Basin Plan as a whole					
1 - The transparency and effectiveness of the management of the Basin water resources.	Five-yearly	R			
2 - The protection and restoration of water dependent ecosystems and ecosystem functions in the Murray Darling Basin, including for the purposes of strengthening their resilience in a changing climate.	Five-yearly	R			
3 - The extent to which the Basin Plan has affected social, economic and environmental outcomes in the Murray Darling Basin.	Five-yearly	R		R	
4 - The effectiveness of the management of risks to Basin water resources.	Annual	R			R
5 - The transition to long term average sustainable diversion limits.	Annual			R	
6 - The extent to which local knowledge and solutions inform the implementation of the Basin Plan.	Annual	R	R		R
Environmental watering plan					
7 - The achievement of environmental outcomes at a Basin scale, by reference to the targets in Schedule 7.	Five-yearly	R	R		
8 - The achievement of environmental outcomes at an asset scale.	Five-yearly				R
9 - The identification of environmental water and the monitoring of its use.	Annual	R	R		R
10 - The implementation of the environmental management framework (Part 4 of Chapter 8).	Annual	R	R		R
Water quality and salinity					
11 The fitness for purpose of the Basin water resources.	Five-yearly	R			
12 - Progress towards the water quality targets in Chapter 9.	Five-yearly	R			R
13 - The implementation, where necessary, of the emergency response process for critical human water needs.	Annual	R		R	R
14 - The implementation of the water quality and salinity management plan, including the extent to which regard is had to the targets in Chapter 9 when making flow management decisions.	Annual	R	R		R
Water trading rules					
15 - The facilitation, by efficient and effective water markets, of tradeable water rights reaching their most productive use.	Five-yearly	R			
16 - The implementation of water trading rules.	Annual	R			R
Water resource planning					
17 - The certainty of access to Basin water resources.	Five-yearly	R			
18 - The efficiency and effectiveness of the operation of water resource plans, including in providing a robust framework under a changing climate.	Five-yearly	R			R
19 - Compliance with water resource plans.	Annual				R
20 - The prioritisation of critical human water needs.	Annual				R
21 - The accountability and transparency of arrangements for water sharing.	Annual				R