RMCG

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Improving data alignment

Final Report

Department of the Environment and Energy

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Executive Summary

Regional NRM organisations around Australia are often subject to multiple and varied reporting requirements.

Not only does this lead to reporting burden for those tasked with meeting the requirements, but can also reduce the quality of information reaching investors when data is aggregated, thereby impacting their ability to make informed decisions about future NRM investments.

This project, for the federal Department of the Environment and Energy (DoEE), aimed to identify the NRM **priorities, targets and reporting requirements** associated with the state and territory governments' core NRM investment programs. In doing so, opportunities for the DoEE to better align with these were identified so they could:

- strategically target programs to complement and enhance state and territory government investment,
- tailor future questions to improve the quality and utility of information on NRM achievements, leading to more informed decision-making to maximise NRM outcomes, and
- potentially reduce some of the reporting burden experienced by regional NRM organisations.

Representatives from relevant state government departments were interviewed and each regional NRM organisation was invited to provide their feedback through either an interview (for the sole representatives in the territories) or a workshop (in the states). Three quarters of the 56 NRM regions participated in the project, with each state and territory well represented. The main findings of the project are provided below.

NRM FUNDING, PRIORITIES AND TARGETS ACROSS AUSTRALIA

This part of the project identified opportunities for federal government NRM investment programs to complement and enhance state and territory government NRM investment programs, where they exist.

The state governments in the eastern states provide substantial funding to their NRM organisations. The New South Wales, Victorian and Queensland state governments deliver funding to their regional NRM organisations under several large-scale, multi-year NRM investment programs. In other parts of the country, regional NRM organisations only receive small amounts of funding from their state and territory governments for on-ground NRM work.

These core investment programs and the primary NRM strategies of each state and territory government were analysed to identify the common NRM priorities across Australia. These priorities included:

Enhancing the role of people in NRM Biodiversity conservation Weed and pest control Land and soil protection Climate change (including renewable energy) Aquatic environment protection (including environmental water delivery)

Threatened & iconic species management Water resource management Native vegetation management Water quality improvement Marine management The priorities were expressed in terms of either environmental topics or threats to be managed, with a small number of spatial assets specified. While no targets were documented directly under the investment programs examined, targets do exist within the state and territory government strategies for each of the above NRM priorities. A link exists between state and territory government strategies and investment programs; however, this link is not explicit.

The analysis suggests that there is good alignment between the federal, state and territory governments in terms of high-level NRM priorities. This is, therefore, not a source of the reporting burden described by the regional NRM organisations. The common NRM priorities indicate that there are opportunities for alignment in the associated measures (i.e. outputs) required by the various governments. This is discussed further below.

Matters of national environmental significance are a key focus of federal government investment programs. Fortunately, these matters are aligned (to varying degrees) with the priorities of the state and territory governments. This indicates there is ample opportunity for federal government programs to complement state and territory government programs and, importantly for this project, for reporting to be aligned.

MONITORING AND REPORTING REQUIREMENTS ACROSS AUSTRALIA

The Federal government's monitoring and reporting requirements are one of several factors that contribute to the reporting burden described by many regional NRM organisations. An assessment was undertaken to identify opportunities for alignment between the federal requirements and other government requirements, as a way of potentially reducing some of this burden. This assessment looked at opportunities in measuring, recording and reporting NRM achievements and found:

- Reporting similar information is already required in reports to the various levels of government.
- Recording a wide range of systems are being used with limited opportunity for interoperability.
- Measuring a range of outputs are required to be measured and there is some common ground.

In terms of alignment with state government requirements and reducing reporting burden for regional NRM organisations, the main opportunities for the DoEE relate to what is measured (e.g. outputs) and making DoEE's online reporting system (the Monitoring Evaluation Reporting Improvement Tool – MERIT) as efficient and user-friendly as possible. These opportunities are explained below.

STANDARD OUTPUTS

A comparison of standard outputs used by federal and state governments, identified a list of 25 standard outputs common to both levels of government. This set could be used as the minimum or base set of data to be measured by all regional NRM organisations around Australia (with the exception of the number of "information management systems" which is of limited value). Drawing on this idea, we have suggested amendments to the standard outputs in MERIT so they better align with this common. Adopting this approach would require removal of some outputs, adding new outputs and amending others and would need to be carefully managed. Even though these outputs have been identified as being in common use, it is still important that any changes to the suite of standard outputs in MERIT are based on a clear and transparent rationale that reflects both the current and the future focus of federal investment programs. Only those outputs that directly meet the investment and accountability needs of the Australian government should be

required in MERIT. It would also be helpful to provide MERIT users with information on why specific outputs need to be measured and how the information will be used.

NRM OUTCOMES

Two main areas for improvement were identified during the project – a need to better communicate with regional NRM organisations about what outcomes are being sought under federal investment programs and provision of guidance to MERIT users on how to report on outcomes. As part of addressing both these areas for improvement, it is recommended the DoEE develop high-level outcome statements for future investment programs (akin to those used in Caring for Our Country) as a way of communicating what the programs are aiming to achieve and to provide a framework to capture intended outcomes consistently in reporting. Because outcomes have a long-term focus, it is recommended that outcomes reporting in MERIT be limited to a very basic level (with a greater focus on short-term results). Project reports should nominate (from a federally endorsed list) which outcome statements apply, as context for the reports. Whether these outcomes eventuate, can be tested later as part of periodic project and program evaluations.

SHORT-TERM RESULTS

In the absence of reporting on long-term outcomes, it is important that project reports capture the short-term results arising from their activities. This reporting should be consistent with the program logics created for these projects and should use the standard outputs. By doing so, these reports become a sound way of gauging whether the project is continuing along the trajectory towards long-term outcomes. Reporting on short-term results should only be a requirement of projects with timelines greater than three years. Shorter projects (e.g. 12-18 months) will often be unable to report on anything more than delivery of activities. It is recommended the reporting on short-term results (as a standard part of NRM reporting to the federal government) could be based on the following:

- existence of works
- maintenance levels
- land manager support
- threat management
- capacity building results
- leveraging, and
- condition observations and measures.

MERIT

The federal government's online reporting system (MERIT) was generally viewed as a good starting point for capturing NRM achievements around the country. However, it was widely acknowledged that MERIT needs to evolve and there were many opportunities for improvement identified to make the tool easier to use and to be of greater value to both the DoEE and users. One of the most common suggestions raised was that the purpose of MERIT needed clarification. Our recommendation is that the DoEE should re-confirm its purpose as a reporting tool (rather than as project activity management software). Focusing on a set of 'core' standard outputs (with limited outcomes reporting) would be part of this. To accommodate the breadth of current use of MERIT (e.g. some use it as project management software), it should be structured into separate interfaces for different user groups, namely those using it for project management versus those using it for progress reporting. The current structure of MERIT (based on a form per activity) poses several

issues including the fragmentation and potential duplication of information, as well as promoting data aggregation by users as a way of reducing the burden associated with completing multiple forms. Redesigning the structure of the reporting component of MERIT to a form per project (rather than per activity) that captures activities, short and medium-term results and links to long-term outcomes will greatly improve the usability of the tool, the interpretability of the reports and the quality of information provided. Rationalising the data fields and improving MERIT's functionality would also be part of this transition. Provision of training and ongoing support to the regional NRM organisations in the use of MERIT will be critical to the future success of the tool.

RECOMMENDATIONS AND NEXT STEPS

A series of recommendations (and associated next steps) have been identified:

INVESTMENT PROGRAMS

- 1. Develop high-level outcome statements for investment programs as a way of communicating what the programs are aiming to achieve and to provide a framework to capture intended outcomes consistently in reporting. The outcome statements under phase one of the Caring for our Country program can be used as a guide of where this has been successful in the past.
- 2. Implement a process for regular communication between the DoEE and the various state and territory governments to identify future priority areas specifically for co-funding i.e. where there is a joint interest in national NRM priorities. Progress these opportunities where they arise.
- 3. Conduct a review to identify the lessons from existing and past co-funding efforts between the federal and state or territory governments, particularly in relation to the coordination and delivery of large investments e.g. Great Barrier Reef.

MONITORING AND REPORTING REQUIREMENTS

- 4. Amend the standard outputs in MERIT to better align with the list of standard outputs commonly used by the federal and state governments, but only after the federal government identifies which outputs (and associated data fields) are required to meet their future information needs i.e. reflect the focus of future investment and be useful for decision-making. Require only these outputs in MERIT as part of NRM reporting (while still allowing for optional collection of additional data).
- 5. Limit outcomes reporting in MERIT to some discussion of progress towards outcomes on a specific list identified by the federal investment programs (to be tested later under long-term evaluations).
- 6. Include reporting on the "short-term results" that arise after an activity is implemented as a standard requirement of projects with timelines over three years. Activity and output reporting is adequate for shorter projects (e.g. 12-18 months).
- 7. Ensure all projects contain a budget for collecting monitoring data.
- 8. Allow for the variability that exists across the country in how outcomes are measured and recorded.
- 9. Update MERIT, in consultation with users, to reflect the reporting focus and capture the various opportunities for improvement e.g. a form per project (rather than activity), rationalise the data fields.
- 10. Create a system and culture where excelling in NRM delivery is encouraged (and even rewarded).

MERIT COMMUNICATIONS

11. Clarify the purpose of MERIT as a tool that focuses on reporting of standard outputs. Clearly articulate the monitoring and reporting requirements over time.

- 12. Provide regular (twice yearly) training to (new) MERIT users through having a fixed annual schedule of online training events e.g. March and October. This provides a means of regular contact with users (for feedback) and an opportunity to introduce changes to the tool over time.
- 13. Provide ongoing support to MERIT users (outside of training) in the form of a systematic call for questions and provision of feedback (e.g. online forum/seminar every quarter). This could also include a dynamic support log, where feedback is accumulated and can be viewed by users when required.

RESOURCING

14. Where regional NRM organisations are enlisted by the federal government to support other groups (e.g. a Landcare group) to meet their reporting requirements, ensure this is more formally recognised so that it can be adequately resourced.

1 Introduction

1.1 BACKGROUND

Federal and state or territory government investment in natural resource management (NRM) occurs predominantly through the 56 regional NRM organisations across Australia (Figure 1-1). These organisations deliver a wide variety of work under various programs and are required to report on their outputs and outcomes to a range of audiences, particularly the government agencies contributing funding.

This means they are often subject to multiple and varied reporting requirements, which adds complexity to the monitoring, evaluation, reporting and learning (MERL) process. The high collective demand for reporting, in conjunction with the numerous methods required, often tests the capacity of regional NRM organisations.

However, this issue also extends to the government agencies who use the reporting deliverables to inform the design of their future investment programs. In the case of the federal Department of the Environment and Energy (DoEE), who invest in biodiversity conservation through regional funding, the information received through their online reporting system (the Monitoring Evaluation Reporting Improvement Tool – MERIT) can be of limited value when regions (understandably) aggregate their site-based data to minimise the reporting burden. The loss of detail can reduce the ability to judge how effective past investments have been and how future funding should be targeted to build on existing work. The current reporting arrangements are therefore reducing the ability of investors to make informed decisions about future NRM investment priorities.



Source: http://nrmregionsaustralia.com.au/nrm-regions-map/

Figure 1-1: Regional NRM organisations across Australia

1.2 PROJECT AIM

The project aimed to identify the following features of the state and territory governments' current core NRM investment programs and therefore identify opportunities for the DoEE to better align with these:

- NRM priorities and targets
- Reporting requirements placed on the regional NRM organisations.

In doing so, the outcomes of the project are:

- An improved understanding of state and territory government priorities for management, which will enable the DoEE to deliver strategically targeted programs that complement and enhance state and territory government investment.
- An understanding of the common metrics being used across Australia for NRM reporting to state and territory governments, which will enable the DoEE to tailor their future questions to better align with other reporting requirements and improve their access to information on the outputs and outcomes being delivered. This may involve amending the MERIT reporting system. The reporting burden currently experienced by some regional NRM organisations may also reduce through the alignment of the reporting requirements between the federal and state/territory governments.

The end-point is the DoEE having more useful data, which will foster an improved understanding of what has been achieved so far and lead to more informed decision-making to maximise NRM outcomes.

1.3 SCOPE

Many state and territory funding programs exist, of varying sizes and descriptions. Many reporting requirements also exist within regional NRM organisations including internal and financial reporting, as well as reporting to external audiences.

The scope of this project includes the priorities, targets and mandatory reporting requirements (to be met by regional NRM organisations) associated with the core investment programs currently funded by state and territory governments. Core investment programs are defined as those providing substantial funds for delivery of NRM works over several years (i.e. not one-off or minor funding). While the project focused on NRM programs rather than specific agricultural investment programs, when agricultural management activities were part of the NRM programs they were included e.g. through integrated catchment management and sustainable land management principles.

1.4 THIS DOCUMENT

This report is the main deliverable from the project and captures the key findings and recommendations. It has been structured around the two key areas of investigation:

- NRM priorities and targets across Australia to inform future investment programs (Chapter 3).
- Reporting requirements placed on the regional NRM organisations to identify opportunities for alignment, efficiency and improved access to information (Chapter 4).

2 Method

2.1 OVERVIEW

The project was conducted over three phases as follows:



The method adopted during each phase is described below.

2.2 PHASE ONE - INCEPTION AND INVENTORY

This phase involved reviewing available information and conducting initial consultation in each state and territory to identify any core state and territory government investment programs being delivered by regional NRM organisations and their associated priorities, targets, and monitoring and reporting requirements.

A phone interview was conducted with a representative from each state government in May 2017.¹ Interviews focused on collecting background information about any core investment programs, then gathering detailed information (where available) on the specific requirements associated with the programs regarding measuring, recording and reporting on NRM achievements (Appendix 1).

This information was captured in a template for each program, which was then used to inform discussions with the relevant regional NRM organisations in phase two.

2.3 PHASE TWO - DIAGNOSIS

Relevant staff from each of the 56 regional NRM organisations (typically those involved in MER), were invited to provide their feedback on the monitoring and reporting requirements placed on them, particularly the associated difficulties and opportunities for improvement. Three-quarters of all NRM regions in Australia participated in the project, with each state and territory well represented. Consultation occurred in June 2017 through:

- A phone interview with one or more representatives from the sole regional NRM organisations in the Northern Territory (Territory NRM) and Australian Capital Territory (ACT NRM).
- A teleconference workshop in the following states:
 - Queensland with representatives from 10 regions (Torres Strait, Cape York, Northern Gulf, Terrain, Dry Tropics, Desert Channels, Reef Catchments, Fitzroy Basin, Burnett Mary and South East QLD).

¹ An interview was not conducted with the Northern Territory Government or ACT Government, as initial discussions with the sole NRM organisations in each territory highlighted no large-scale or ongoing funding is provided from the territory governments to the NRM organisations for on-ground works. Subsequently, no reporting requirements are placed on the NRM organisations from the territory governments (outside standard annual reporting). Attempts at contacting the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) were unsuccessful.

- New South Wales with representatives from six regions (North West, Northern Tablelands, North Coast, Central West, Riverina and Murray). Comments were provided by South East LLS after the workshop.
- Tasmania with representatives from three regions (North, South and Cradle Coast).
- South Australia with representatives from six regions (Alinytjara Wilurara, Arid Lands, Northern and Yorke, Adelaide and Mount Lofty Ranges, Murray Darling Basin, South East) and the State Government (DEWNR, Environmental Science and Info).
- Western Australia with representatives from four regions (Rangelands, Peel-Harvey Catchment, South West, South Coast).
- A workshop in Melbourne with representatives from 10 regions across Victoria (Mallee, North Central, Goulburn Broken, North East, Wimmera, Corangamite, Glenelg Hopkins, West Gippsland, East Gippsland, Port Phillip and Westernport). This workshop formed part of an existing meeting of Regional Investment Coordinators, that occurs regularly throughout the year.

An overview of the project was also provided at an existing meeting of the Queensland Operations Managers in Brisbane in late May. A high-level discussion with these regional NRM staff occurred to obtain further insights and feedback on the monitoring and reporting requirements placed on the Queensland regions.

The standard workshop agenda and interview questions are available in Appendix 2. These were used as a guide and were adapted where necessary, depending on the level of state government funding provided to the regions. A summary of the regional consultation key findings is provided in Appendix 3.

2.4 PHASE THREE - OPPORTUNITY IDENTIFICATION

The information collated during the first two phases of the project was analysed to identify areas of national consistency and therefore opportunities for improved alignment between federal and state or territory government investment programs and requirements around monitoring and reporting. This included identifying:

- NRM priorities within current state and territory government core NRM investment programs.
- Key targets associated with current state and territory government core NRM investment programs.
- Requirements placed on the regional NRM organisations regarding the reporting, recording and measuring of NRM achievements.

Opportunities identified throughout the project were tested through internal workshop discussions, with the RMCG project team.

3 NRM funding, priorities and targets across Australia

Key findings:

- There is good alignment in high-level NRM priorities between the federal, state and territory governments.
- Ample opportunity exists for federal government investment programs to complement state and territory government programs, through joint interest in matters of national environmental significance.
- The greatest opportunity for co-funding currently exists in Queensland, New South Wales and Victoria, where large and long-term state government NRM investment programs are being delivered.

Recommendations:

- Implement a process for regular communication between the DoEE and the various state and territory governments to identify future priority areas for co-funding i.e. where there is a joint interest in national NRM priorities. Progress these opportunities where they arise.
- Conduct a review to identify the lessons from existing and past co-funding efforts between the federal and state or territory governments, particularly in relation to the coordination and delivery of large investments e.g. Great Barrier Reef investment.

3.1 OVERVIEW

The project identified the substantial (large-scale, ongoing) state and territory government NRM investment programs that fund delivery of on-ground works through the regional NRM organisations. This section outlines the funding situation across the country as of May 2017 and provides a summary of each relevant investment program.

The NRM priorities and targets across Australia were identified from these core investment programs² and the primary NRM strategies of each state and territory government. These priorities and targets are summarised in this chapter and can be considered when the DoEE designs future NRM investment programs.

3.2 AREAS WITH SUBSTANTIAL STATE GOVERNMENT FUNDING

The New South Wales, Victorian and Queensland state governments deliver funding for on-ground works to their regional NRM organisations under several large-scale investment programs, as follows:

New South Wales:

- Catchment Action NSW (\$112m over four years) focuses on biodiversity conservation, threatened species, Aboriginal cultural heritage and native vegetation.
- Saving our Species (\$100m over five years) is a program targeting threatened species management.

² Where they existed

- Environmental Trust is an ongoing statutory body established by the NSW Government to fund a broad range of NRM related projects. This includes support for the Saving our Species program.
- Victoria:
 - The Victorian Waterway Management Program (\$537m over four years) including \$222m to improve waterway and catchment health, \$59.6m for irrigation modernisation and improving onfarm water use, \$58m for upgrading rural water systems, \$25m for flood and emergency preparation and \$9.7m to support Aboriginal participation in water decisions and access to water.
 - Biodiversity on-ground action (\$25.66m) to support biodiversity and threatened species through community action grants, support programs and regional partnership approaches.
 - Threatened Species Protection Initiative (\$5.2 m) to support immediate action on threatened species and habitat protection.
 - Regional Riparian Action Plan (an additional \$40m over five years) for priority riparian works.
- Queensland:
 - Regional Natural Resource Management Investment Program (\$80m over five years) supports a range of strategic projects including \$30 million to protect the Great Barrier Reef.
 - Queensland Feral Pest Initiative (\$25m over three years) supports weed and pest animal management projects.

Further details on these core NRM investment programs is provided in Appendix 4.

3.3 AREAS WITH LIMITED FUNDING FROM STATE OR TERRITORY GOVERNMENT

Limited funding is provided from the following state and territory governments to the regional NRM organisations for delivery of on-ground works:

- South Australia no State Government funding goes to the eight regional NRM organisations for on-ground works. Instead, the regions receive funding through the NRM Levy that is supplied through each Local Government.
- **Tasmania** no State Government funding goes to the three regional NRM organisations for onground works outside one-off funding (e.g. flood or fire recovery works).
- Northern Territory no funding for on-ground works is provided from the NT Government to Territory NRM.
- Australian Capital Territory the ACT Government matches half of the funding contributed from the Commonwealth (approx. \$6M) to the ACT NRM Council. This funding is viewed collectively with the Commonwealths' funding and is not part of a specific ACT investment program as such.
- Western Australia the State NRM Program is the primary investment program for NRM delivery by a range of groups in WA e.g. community groups, councils, interest groups. The Program (approx. \$8M/yr) includes:
 - Community Action Grants which are for on-ground works but are not available to the seven regional NRM organisations.
 - Community Capability Grants which are available to the regional NRM organisations but focus on improving organisational capability to undertaken on-ground works (not the works themselves). These are very small grants up to \$10,000 per organisation for a 12-month period.

The seven regional NRM organisations are viewed by the WA Government as equivalent to any other environmental group in their state e.g. community groups. They are therefore encouraged to compete for WA government funds where they are eligible.

3.4 STATE AND TERRITORY GOVERNMENT PRIORITIES

Most state and territory government NRM priorities are expressed in terms of either environmental topics or threats to be managed. It is less common for state or territory-level strategies or investment programs to specify spatial assets as priorities for NRM, although this does vary between jurisdictions.

The NRM priorities can be viewed as two groups – those that are common (i.e. a priority in at least half of all states and territories) and those that are less common (i.e. a priority in less than half of these jurisdictions). A summary of the state and territory-level NRM priorities around the country, as of May 2017, is provided in the below table. A more detailed summary of the analysis is provided in Appendix 5.

	TOPIC OR THREAT	SPATIAL ASSETS SPECIFIED
		(RELATED TOPIC OR THREAT)
Common NRM priorities	Enhancing the role of people in NRM (e.g. education, capacity building, participation, decision-making) Aquatic environment protection (e.g. rivers, wetlands, estuaries) including environmental water delivery Weeds and pest control Climate change including renewable energy Land and soil protection Biodiversity conservation Threatened and iconic species management Water resource management Native vegetation management Water quality improvement Marine management	 NSW Travelling Stock Reserves and private land in NSW (biodiversity conservation and native vegetation). Range of individual species (threatened species including iconic species). Priority National Parks and Wildlife Service (NPWS) sites (weeds and pests). WA Ramsar sites (aquatic environments) High priority agricultural land and rangelands (land and soils) Peel-Harvey, Vasse-Wonnerup, Wilson, Leschault, Hardy Inlet and Swan-Canning catchments (water quality). SA River Murray VIC Formally listed sites e.g. Ramsar, Heritage Rivers (aquatic environments). ACT Focal landscapes including the rural landscape, urban landscape, Cotter Catchment and Murrumbidgee River corridor (biodiversity conservation). Murrumbidgee River (aquatic environments and water quality) Cotter Catchment (water resources) QLD Great Barrier Reef (marine) Wild dogs, feral cats and feral pigs (weeds and pests)

	TOPIC OR THREAT	SPATIAL ASSETS SPECIFIED (RELATED TOPIC OR THREAT)
Less common NRM priorities	NRM planning Urban development Aboriginal cultural heritage protection Research including monitoring Pollution reduction including waste management Fish management Phytophthora (dieback) management Fire management Sustainable practices by industry Remediating fire affected areas Flood recovery Integrated Catchment Management Mining NRM based economic opportunities Groundwater management	 NSW Aboriginal cultural heritage sites and objects. WA Inshore and demersal finfish e.g. Dhufish. Freshwater fish – sawfish in Fitzroy River, pygmy perch and trout minnow in the southwest and mussels in the Helena River. Fitzgerald River, Lesueur and Cape Arid National Parks (Phytophthora).

* The scope of this analysis did not extend to the priorities outlined within small or short-term state and territory government investment programs or to NRM priorities within regional documents.

3.5 STATE AND TERRITORY GOVERNMENT TARGETS

Targets were apparent in several of the state and territory government strategies assessed during the project. No targets were identified within the investment program documentation. As of May 2017, targets³ had been developed for the following topics and locations (see below table). Note: Shaded cells in the table indicate where a target exists, while notes indicate the specific focus of the target (where apparent).

A complete list of relevant state and territory-level NRM targets is provided in Appendix 6.

³ Within the delivery scope of regional NRM organisations

Table 3-2: NRM targets within state and territory government strategies*

TOPIC OR THREAT	NSW 2021 PLAN	SA STRATEGIC PLAN 2011	ACT NATURE CONSERVATION STRATEGY 2013-2023	VIC BIODIVERSITY 2037 PLAN	NT NRM PLAN 2016-2020
Role of people in NRM	Devolve decision making, funding & control	Participation	Participation, education, community support	Participation & connecting with nature	Water and soil knowledge, adaptive management
Aquatic environment protection including ewater delivery	Environmental water	Environmental flows in River Murray			
Weeds and pest control					
Climate change and renewable energy	Minimise impacts, renewable energy		Climate change refugia managed		Energy efficiency
Land and soil protection		Minimise soil erosion, improved pastoral land			Increased knowledge
Biodiversity conservation	Voluntary conservation on private land, land acquisitions	No loss of species		Improved outlook all species, permanent protection on private land	
Threatened and iconic species management		No loss of species		Improved outlook	
Water resource management					Increased knowledge, water efficiency
Native vegetation management	See biodiversity conservation above		Connectivity, extent & condition of lowland veg. communities	Extent and condition, revegetation for connectivity, permanent protection on private land	
Water quality protection		Salinity			
Marine management		Health & diversity			
Aboriginal cultural heritage protection					Sites managed
Research and monitoring			Threatening processes & climate change refugia understood	Environmental- economic accounting	
Pollution reduction and waste management	Illegal dumping & air quality				
Fire management			Reduce inappropriate fire regimes		Appropriate fire regime
Sustainable practices by industry					Efficiency and sustainable practices
NRM based economic opportunities					

* Applicable to regional NRM delivery. Shaded cells indicate where a target exists, while notes indicate the specific focus of the target (where apparent).

3.6 OPPORTUNITIES

In terms of opportunities for the DoEE to deliver strategically targeted programs that complement and enhance state and territory government investment, it is important to keep in mind the roles and responsibilities of each sphere of government under Australia's NRM governance framework. As stated in Brown and Bellamy (2006):

"Under the Australian Constitution, responsibility for the legislative and administrative framework within which natural resources are managed lies with the state and territory governments, who in turn have traditionally devolved some responsibilities particularly relating to land use and development planning to local governments. The <u>Australian Government's involvement in NRM</u> focuses dominantly on <u>matters of national</u> <u>environmental significance and fulfilling Australia's international obligations</u>".

It is therefore logical to identify how these national concerns align with the priorities and targets identified in each state and territory. Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), nine matters of national environmental significance are identified. These are outlined below, along with commentary on whether (and if yes, how) they are currently reflected in the NRM priorities of the state and territory governments:

- World heritage properties the Great Barrier Reef is the only Wold Heritage Area that is explicitly mentioned within state and territory government NRM priorities.
- National heritage places Australia's National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation. State and territory government NRM priorities include both direct and general reference to some of these places - the Great Barrier Reef in Queensland, potentially some NPWS sites in NSW and Aboriginal cultural heritage sites in NSW and the NT.
- Wetlands of international importance (listed under the Ramsar Convention) specified in WA and Victorian Government priorities, although not in terms of individual wetlands.
- Listed threatened species and ecological communities explicitly specified in the priorities of all the state and territory governments except QLD. However, threatened species are expected to be a priority in QLD as well, even though it is not at the forefront of current strategies.
- Migratory species protected under international agreements where migratory species are also listed threatened species, the previous comment applies. The only migratory species specifically mentioned in state and territory government priorities, was the sawfish in WA.
- Commonwealth marine areas while specific marine areas were not identified in the state and territory government priorities, this matter is expected to be relevant where marine management has been identified as a priority topic i.e. in NSW, SA, NT and QLD.
- The **Great Barrier Reef Marine Park** the Reef is identified within Queensland Government investment priorities.
- Nuclear actions (including uranium mines) not specified.
- A water resource, in relation to coal seam gas development and large coal mining development relevant where water resource management has been identified as a priority topic i.e. in all areas except NSW and Tasmania.

Outside nuclear actions, each of the national priorities in relation to NRM are currently reflected within state and territory government priorities. This suggests there is ample opportunity for future federal investment in these areas to build upon state and territory government investment, thereby presumably enhancing the outcomes achieved.

The funding analysis for this project reveals the greatest co-funding opportunities currently exist in the eastern states, where substantial ongoing investment occurs from the Queensland, New South Wales and Victoria state governments. There is ample opportunity for federal investment to enhance investment at the state and territory level, particularly in Queensland, New South Wales and Victoria.

Priority areas for joint investment (as of May 2017) therefore include:

- **Queensland** Great Barrier Reef including the Marine Park and other Commonwealth marine areas, water resources (in relation to development of coal seam gas or large coal mines).
- New South Wales National Parks and Wildlife Service sites that are both a NSW priority for management and on the National Heritage List, Aboriginal cultural heritage sites on the National Heritage List, listed threatened species and ecological communities including migratory species protected under international agreements, Commonwealth marine areas.
- Victoria Wetlands of international importance (Ramsar), listed threatened species and ecological communities including migratory species protected under international agreements, water resources (in relation to development of coal seam gas or large coal mines).

Other opportunities (in addition to those above) are likely to exist in these states and in the other states and territories. It is therefore important for the DoEE to regularly communicate with all state and territory governments about potential areas for co-investment.

This is especially important, given that NRM priorities across Australia are dynamic. This report represents a snap-shot in time and it is likely that the priorities of state and territory governments (and therefore the opportunities for the DoEE to enhance these) will change in the future. Some discussions held as part of consultation for this project indicated a preference for more regular communication between federal and

state/territory government departments, particularly regarding priorities for management and reporting metrics. Several comments were made about the decline in communication and integration of NRM between federal and state/territory governments since the cessation of bilateral agreements under the second phase of the National Heritage Trust (NHT) and the

Regular communication between the DoEE and the state and territory governments about NRM priorities and opportunities for joint investment is warranted.

National Action Plan for Salinity and Water Quality (NAP). The positive response towards this project of most participants around the country (both at the regional and state/territory government level) is a further indication that communication from the DoEE is expected to be welcomed, especially where improvements are being sought. Given this context, there is an opportunity for the DoEE to initiate more regular discussions with represents from the state and territory governments to identify, in particular, priorities for management, opportunities for joint investment and ongoing opportunities to improve reporting on investment.

Examples of joint investment are already occurring, and there is an opportunity to learn from these existing co-funding situations, prior to the expansion of such arrangements in other locations around the country. For example, a substantial investment has occurred in management of the Great Barrier Reef in recent years

There is an opportunity to learn from existing co-funding situations between federal and state or territory governments.

from both the federal and Queensland governments. Consultation undertaken for this project indicated some issues exist in the coordination and management of NRM activities when large sums of money are allocated to one area e.g. the capacity of local organisations to respond can be tested. Therefore, opportunities for improvement are likely to exist and should be identified prior to designing future investment programs.

4 Monitoring and reporting requirements across Australia

Key findings:

- Reporting burden is experienced by many regional NRM organisations, with federal government reporting through MERIT being one of several contributing factors. Resources to meet monitoring and reporting requirements are generally viewed by the regional NRM organisations as being inadequate.
- A review of the monitoring and reporting requirements across Australia found similar types of information are already required within NRM reports to the various governments. However, many different recording systems are required to be used and a wide range of outputs are required to be measured.
- Opportunities for the DoEE to align with the monitoring and reporting requirements of the state and territory governments and to help reduce reporting burden, exist around what is measured and making improvements to MERIT.
- A list of 25 standard outputs are commonly used by the federal and state governments, providing an opportunity for improved alignment across Australia in terms of what is required to be measured.
- Regional NRM organisations require guidance on what outcomes are being sought under federal government investment programs and how they should be reported in MERIT.
- MERIT is generally viewed as a good starting point for capturing NRM achievements around the country. It is widely acknowledged that the tool needs to evolve, particularly in terms of its purpose and scope, structure and functionality. Opportunities for improvement have been identified.

Recommendations:

- Amend the standard outputs in MERIT to better align with the list of standard outputs commonly used by the federal and state governments, but only after the federal government identifies which outputs (and associated data fields) are required to meet their future information needs i.e. reflect the focus of future investment and be useful for decision-making. Require only these outputs in MERIT.
- Develop high-level outcome statements for future investment programs as a way of communicating what the programs are aiming to achieve and to provide a framework to capture intended outcomes consistently in reporting. Use the Caring for our Country outcome statements as a guide.
- Limit outcomes reporting in MERIT to some discussion of progress towards outcomes on a specific list identified by the federal investment programs (to be tested later under long-term evaluations).
- Ensure all projects contain a budget for collecting outcomes data.
- Allow for the variability that exists across the country in how outcomes are measured and recorded.
- Include reporting on the "short-term results" that arise after an activity is implemented as a standard requirement of projects with timelines over three years. Activity and output reporting is adequate for shorter projects (e.g. 12-18 months).
- Update MERIT, in consultation with users, to reflect the reporting focus and capture the various opportunities for improvement e.g. a form per project (rather than activity), rationalise the data fields.
- Create a system and culture where excelling in NRM delivery is encouraged (and even rewarded).
 Clarify the purpose of MERIT as a tool that focuses on reporting of standard outputs and the link to long-term outcomes. Clearly articulate to users the monitoring and reporting requirements over time.
- Provide regular (twice yearly) training to (new) MERIT users through having a fixed annual schedule of online training events e.g. March and October. This provides a means of regular contact with users (for feedback) and an opportunity to introduce changes to the tool over time.
- Provide ongoing support to MERIT users (outside of training) in the form of a systematic call for questions and provision of feedback (e.g. online forum/seminar every quarter). This could also include a dynamic support log, where feedback is accumulated and can be viewed by users when required.
- Where regional NRM organisations are enlisted by the federal government to support other groups (e.g. a Landcare group) to meet their reporting requirements, ensure this is more formally recognised so that it can be adequately resourced.

4.1 OVERVIEW

The project identified the range of monitoring and reporting requirements placed on the regional NRM organisations around the country, with a focus on the requirements (if any) coming from state or territory governments. This section outlines these requirements and identifies the contribution the federal government's reporting requirements (in the form of MERIT) makes to the reporting burden experienced by many regions.

Opportunities for the DoEE to align with other existing monitoring and reporting requirements and improve their access to information on the outputs and outcomes being delivered around the country have been identified, particularly in terms of what data they are collecting (standard outputs) and how it is recorded and reported via MERIT.

4.2 REPORTING NRM ACHIEVEMENTS

REVISED SCOPE

The scope of this project was on the mandatory reporting requirements (to be met by regional NRM organisations) associated with the core investment programs funded by the state and territory governments. It was apparent early in the project, however, that many parts of the country had limited contributions from state and territory governments for delivery of NRM works by the regional NRM organisations (section 3.3) and therefore limited (if any) requirements around monitoring and reporting.

It was therefore justified to extend this scope slightly to capture the breadth of monitoring and reporting requirements that are placed on these regional organisations, rather than assuming their only requirements were coming from the federal government (via MERIT). A wide range of NRM reporting that is conducted around the country has therefore been considered.

THE REPORTING BURDEN

An outcome from improved alignment between the federal and state or territory governments' reporting requirements, was identified as a potential reduction in the 'reporting burden' assumed to be experienced by many regional NRM organisations. To validate this outcome, an initial step in the consultation process was identifying whether this reporting burden existed in each state and territory, and if yes, the source.

The project confirmed that reporting burden is experienced by regional NRM organisations across almost all states and territories, except for the Northern Territory and some isolated cases where regions receive limited funding and therefore have limited reporting demands placed on them.

Feedback during the regional consultation highlighted the following factors that contribute to the burden experienced:

Coordination and support role – for many regional NRM organisations, a proportion of their onground works are delivered through partner organisations or groups (e.g. community groups, Landcare groups). For example, in the ACT a high proportion of their National Landcare Programme (NLP) funding goes to community groups and there are other sub-contractor arrangements associated with other funding sources. A similar situation exists in other states and territories. This delivery model reflects the design and intent of federal government investment programs (such as NLP) that seek to implement on-ground works through multiple community groups and other groups. In this situation, the regional NRM organisations perform a coordination and support role, where they collect data and information from the various groups, collate and analyse it before reporting to investors. Depending on the number of groups involved, this can be a very labour intensive and time-consuming exercise. It was frequently identified by the regional NRM organisations as one of their main challenges with monitoring and reporting, and one they weren't resourced adequately for. It is recommended future investment program design by the federal government considers the flow on effects to reporting and if regional organisations are to manage a centralised reporting system, that they be adequately resourced to perform this role.

"Where an investment program has complexity such as lots of grants, by default, the associated reporting is burdensome".

Volume of reporting – irrespective of whether core investment programs from state or territory governments exist, there is often a large amount of reporting that is undertaken by regional NRM organisations. This was frequently raised as a source of the burden experienced. For example, in some regions of Western Australia many reporting demands (albeit smaller relative to MERIT) are associated with the alternative funding sources they receive. In South Australia, internal reporting was identified as the bulk of their reporting workload due to its frequency, with the requirement for outcome monitoring and reporting under the SA Natural Resources Management Act 2004 adding additional complexity. Other examples of reporting mentioned during the regional consultation

process included State of the Environment reporting, annual reporting to state and territory governments, reporting to Boards and statutory reporting as part of the South Australian levy system. Tasmanian regions had experienced a large volume of reporting due to their

Reporting burden is experienced by many regional NRM organisations. Federal reporting, through MERIT, is one of several contributing factors.

involvement in many small projects through leveraging funds. Due to the variety of reporting demands, this source of burden is unlikely to change through improved alignment between federal and state or territory government requirements. It is outside the scope of influence for the DoEE, but highlights the potential value that can be provided from federal reporting being as streamlined and efficient as possible.

Intensive nature of MERIT – MERIT was identified as a source of the reporting burden experienced by regional NRM organisations in several jurisdictions. Reasons provided included the tight timeframes, requirement to access data from third parties, internal review processes adding to the administrative workload, the large amount of detail required and it being a tedious and time-consuming process. The reporting requirements in MERIT are the same regardless of a project's size, which means the reporting requirements on smaller projects can seem excessive. Updating the MERI plans within MERIT every six months was also noted to be time consuming as it requires both operational staff and project managers. In some parts of the country (e.g. Northern Territory, ACT) MERIT is the predominant reporting system used, so it is reasonable that MERIT be a source of the burden experienced. However, even in some areas where other reporting requirements exist, MERIT is still viewed as a source of burden due to its intensive nature e.g. in South Australia and New South Wales (where the requirements under MERIT greatly exceed those currently required by the New South Wales government⁴). A detailed assessment of the challenges and opportunities for improvement around MERIT is provided ahead.

⁴ Although it was noted during regional consultation that greater requirements are expected from the NSW government in the future.

"The MERIT reporting timeframes mean pressure and stress is passed along the system to the groups that collect the data, which can strain relationships between these groups and our regional organisation".

- Low jurisdiction while regional NRM organisations frequently coordinate large projects, sometimes they are only a small financial contributor (e.g. through NLP) and therefore do not have a high level of jurisdiction over what is measured and how the outputs and outcomes of the projects are reported. Managing the discrepancies between what MERIT requires and what other partner agencies have collected and reported, can be challenging.
- Timing of reporting generally there are two peak reporting periods at the end of the financial year and at the end of the calendar year. During these periods, several different reporting requirements must be met (e.g. MERIT six monthly reports, annual reports for organisations, reporting to a range of funding providers). Concurrent reporting during these periods was noted as a key source of the reporting burden experienced by regional NRM organisations, with staged reporting (outside these periods) suggested as an opportunity for improvement. This burden was exacerbated in the Northern Territory due to the wet/dry season. The end of financial year reporting coincided with the peak delivery period (during the dry season) and the end of calendar year reporting coincided with the wet season when most people were on leave and unavailable. This was the dominant source of reporting burden in the Northern Territory. It is recommended the DoEE examine their requirements around the timing of their reports from regional NRM organisations, with a staggered approach potentially being one improvement for consideration.
- Variable reporting periods there is a discrepancy between reporting periods, with some reports requiring data to be analysed over a financial year and other reports requiring analysis over a calendar year. While New South Wales was the only jurisdiction that raised this issue as a cause of additional reporting burden (in terms of multiple analyses), it is expected to be relevant to other parts of the country. However, given calendar year reporting is often an internal regional organisation requirement, this source of burden is unlikely to change through improved alignment between federal and state or territory government requirements. It is outside the scope of influence for the DoEE.
- Differing outputs where standard outputs developed at the state government level don't align with those in MERIT, this creates additional work and was raised as an issue in Victoria and Queensland. There were many examples (albeit uncoordinated) where regions in Queensland and Victoria had attempted to translate the two sets of outputs relevant to them to make their reporting requirements clearer. This issue is discussed further ahead in terms of opportunities for aligning standard outputs.

REPORTING ASSOCIATED WITH CORE INVESTMENT PROGRAMS

As mentioned previously, core NRM investment programs funded by state governments were identified in Queensland, New South Wales and Victoria. An analysis was undertaken to identify the requirements regarding how the regional NRM organisations in these states *reported*⁵ their achievements under these programs.

Key findings from the analysis include:

- What is reported similar information is reported under each investment program. Typical information includes-
 - Data on outputs achieved (against the list of standard outputs relevant to the project or investment program⁶).

⁵ An analysis on the requirements around recording data and measuring data is discussed ahead.

⁶ Standard output lists are discussed further ahead.

- Spatial information on outputs.
- Commentary around progress towards outcomes being sought under the program.
- Financial data.

Less common information includes-

- Case studies
- Evaluation type questions such as key achievements, effectiveness, challenges, lessons learnt, risks.
- Scale of reporting typically at the site scale.
- Timing of reporting annual reporting is typical with some periodic progress reporting (e.g. six monthly reports). Time of year can vary e.g. August/September or end of financial year or end of calendar year.
- Who reports the recipient of the funding i.e. the regional NRM organisation.
- How reporting occurs various templates, forms and online reporting systems.
- Other requirements sometimes a monitoring and evaluation plan is required to be developed and a specific template or process needs to be followed.

The detailed findings of the analysis are available in Appendix 7.

There are many similarities between the federal government's reporting requirements under MERIT and the reporting requirements of the core investment programs being funded by the state and territory governments. Aside from the standard outputs (which

Similar types of information are required in state, territory and federal governments' reports on NRM project achievements.

are discussed in detail ahead) and the system used to submit the information (also discussed ahead), the reports ask for very similar types of information. There appears to be limited opportunity to improve alignment between the federal and state or territory government requirements regarding the reporting component of the process.

The only potential opportunity for improvement relates to the time of year that reports are required to be submitted, so that it doesn't directly coincide with other reporting demands and the peak delivery period in the Northern Territory.

REPORTING ON OUTCOMES

Concern was frequently raised in workshop discussions that environmental outcomes are not being adequately captured and reported on through MERIT (and other state government reporting tools). There is a general feel that NRM reporting is not "picking up the full story" for what is being achieved in the regions.

Outcomes are required to be measured under core investment programs through various descriptions and narrative to "tell the story". This is similar to the current requirements for capturing outcomes in MERIT. Examples include:

- Catchment Action NSW
 - Evaluation of progress towards meeting four year outcomes for each theme (Key Evaluation Questions around effectiveness, appropriateness, efficiency, sustainability from MER Plan).
 - 10-12 impact case studies showing how projects deliver outcomes against themes (outcome statements in MER Plan against four priority investment themes).

- NSW Environmental Trust general description of the three most important outcomes.
- NSW Saving our Species threat and population outcomes.
- Victorian Water Program
 - A reflection of the effectiveness of actions.
 - Four of the most significant or highest priority projects (case studies).
- QLD NRM Regional Investment Program and QLD Feral Pest Initiative
 - Description of achievements and outcomes.

There is a need to provide the regional NRM organisations with guidance on not only what outcomes are being sought through federal government investment programs, but how the DoEE expects them to be reported in MERIT. These two aspects are discussed below.

Firstly, in terms of the outcomes being sought, this is best communicated during the funding application phase, as has happened successfully for past federal investment programs.

"The Australian Government funding programs used to have a business plan that specified particular themes or objectives. This provided a framework for what outcomes they were after. Our funding applications could then demonstrate alignment with these outcomes and our regional NRM plan targets. A business plan hasn't been provided for the last round of Caring for our Country or the National Landcare Programme".

An example of where this has been done well in the past is the first phase of the Caring for our Country program, where five year outcomes were established for each of the six national priority areas as shown below.

Focus on developing high-level outcome statements that reflect the intent of federal investment programs.

It is recommended the DoEE develop high-level outcome statements for all their future investment programs as a way of clearly communicating the intent of the investment. These outcome statements should be upfront in any documentation that is provided to potential funding recipients during the funding application stage.



Caring for our Country framework.

NATIONAL PRIORITY AREA	EXAMPLE OUTCOMES
National Reserve System	NRS1: Expand the area that is protected within the National Reserve System to at least 125 million hectares (a 25 percent increase), with priority to be given to increasing the area that is protected in under-represented bioregions.
Biodiversity and natural icons	BNI1: By 2013 increase, by at least one million hectares, the area of native habitat and vegetation that is managed to reduce critical threats to biodiversity and to enhance the condition, connectivity and resilience of habitats and landscapes.
Coastal environments and critical aquatic habitats	CE1: Reduce the discharge of dissolved nutrients and chemicals from agricultural lands to the Great Barrier Reef lagoon by 25 percent.
Sustainable farm practices	SFP1: Assist at least 30 percent of farmers to increase their uptake of sustainable farm and land management practices that deliver improved ecosystem services.
Community skills, knowledge and engagement	CSKE1: Improve the access to knowledge and skills of urban and regional communities in managing natural resources sustainably and helping protect the environment.
Natural resource management in northern and remote Australia	NRA1: By 2013 protect important natural assets in northern and remote Australia, particularly the National Reserve System (and Indigenous Protected Areas within it).

Secondly, region's frequently provided feedback on the difficulties they have in reporting outcomes within MERIT. A common solution is for regions to attach supporting documents to their MERIT submission, to provide evidence for the outcomes achieved. However, there is support for the federal government to provide clear guidance on their preference for how outcomes should be reported.

"We've had feedback that providing a description about the contribution towards outcomes isn't adequate. But we're not sure what else they're looking for".

"In the Northern Territory, we're often looking for no change in condition (as our outcome) due to our pristine environment. This is different to most other outcomes reporting around the country".

"We're being asked to collect data on social and economic outcomes, but we don't have the necessary tools or techniques to do this, nor are we properly trained in these areas".

Measuring and reporting on outcomes is inherently complex. There is no clear or standard way to measure long-term outcomes. For example, there is large variation in how vegetation condition is measured around the country with various methods developed and adopted to suite different vegetation communities. Furthermore, there is often a time-lag between delivery of works and being able to measure outcomes. This means data is often unavailable within project reporting timeframes.

For these reasons, it is recommended outcomes reporting in MERIT be restricted to a very basic level. Each project report in MERIT should list which of the high-level outcome statements (those set by the federal government at the start of an investment program) apply, as context for the report. This would provide a

clear framework for how outcomes should be described and would promote consistency with the intent of the investment programs. Whether these outcomes eventuated could be assessed in detail at a later stage, as part of a more thorough project evaluation. The

Restrict outcomes reporting in MERIT to a very basic level.

findings from these longer-term evaluations could be entered back into MERIT as evidence of the actual outcomes achieved over time, if deemed valuable.

Consultation during the project highlighted a long-term aspirational goal for greater consistency in how NRM outcomes are measured (i.e. condition monitoring) across the country to better enable aggregated reporting (e.g. national State of the Environment reporting). In terms of capturing the data on outcomes and condition, establishing a single consistent set of measures is unrealistic in the short-medium term. Therefore, it will be important that the various methods of measurement currently in use, are identified and accepted within the evaluation process, at least until national measures are developed and become part of standard monitoring and reporting requirements. This work is currently progressing as part of the Australian Government's Essential Environmental Measures for Australia programme.

This proposed system of nominating federally approved outcomes within NRM reporting and conducting detailed evaluations later, is dependent upon the collection of outcomes data over time after projects deliverables are completed. It is essential that all federally funded projects

Ensure all projects contain a budget for collecting outcomes data. Accept regional variability in how outcomes are measured in the short-medium term.

contain a budget for collecting outcomes data and that this be audited as part of the evaluation process.

REPORTING ON SHORT-TERM RESULTS

In the absence of reporting on long-term outcomes, it is important that project reports capture the short-term and medium-term results arising after activities are implemented. This is a way of gauging whether the project is continuing along the trajectory towards long-term outcomes and provides confidence around the likelihood of project success in the future. Reporting on short-term and medium-term results should only be a requirement of projects with timelines greater than three years, with output reporting being adequate for shorter projects (e.g. 12-18 months).

Key short-term and medium-term results to report against include, noting that these will not be relevant for every project:

- **Existence** do the physical works still exist? (e.g. survival of plantings, retention of large woody debris in stream post flooding).
- Maintenance level have the works and/or the site been maintained to an acceptable standard? Are the works functioning as intended? (e.g. channels free of weeds, fishways operating as intended – no blockages, weed control around revegetation).
- Landholder support for works on private land, does the landholder continue to support the project and perform their required role? (e.g. preventing stock access to waterways and use of off-stream watering points).
- **Threat management** surveys of the presence and intensity of threats over time (e.g. pest animal densities, pest plant cover after treatment, volumes of debris/rubbish).
- **Capacity building results** surveys to detect improvements in KASA (knowledge, attitudes, skills, aspirations) and practice change adoption.
- Leveraging evidence of the original project work leading to any other NRM activities.
- Condition changes details of any changes in site condition observed or recorded over time. This will be most relevant to projects where the environment changes relatively quickly in response to NRM activities (e.g. vegetation changes post controlled burns, development of biofilms on large woody debris) and hence should be optional. This may include a range of possible surveys e.g. on the health of individual plants and vegetation communities (canopy cover, insect attack, recruitment levels, diversity and cover), the abundance and diversity of native fauna, fish and/or macroinvertebrate surveys, water quality measurements and the frequency of algal blooms.

It is recommended these be included as a standard part of NRM reporting to the federal government.

HOW CO-FUNDING AND IN-KIND CONTRIBUTIONS ARE ADDRESSED

Delivering on-ground works at a site can occur through pooling funds from various sources i.e. co-funding. Opportunities for co-funding vary across the country, with it being a common occurrence in many jurisdictions and less common or virtually non-existent in others (e.g. Northern Territory, Western Australia).

Where co-funding does occur, the reporting response varies greatly from region to region. Some reports capture outputs and outcomes collectively (i.e. irrespective of funding source), while others are specific to the investment program (i.e. outputs are split up to highlight which were funded per investor). The below table provides a summary of the co-funding situation and how it is addressed around the country.

Table 4-1: Co-funding frequency and reporting resp	onse
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LIMITED CO- FUNDING	CO-FUNDING WITH OUTPUT REPORTING SPLIT PER INVESTOR	CO-FUNDING WITH COLLECTIVE REPORTING OF OUTPUTS
Northern Territory	Most New South Wales regions (not all)	Most South Australian regions (not all)
Western Australia	Some Queensland regions	Australian Capital Territory
	Some Tasmanian regions	Some Queensland regions
	Victoria	Some Tasmanian regions

The variability in reporting under co-funding situations suggests there is an opportunity for the DoEE to provide clear guidance to the regional NRM organisations about the preferred method for reporting co-funding situations in MERIT. Workshop discussions highlighted that where NRM achievements under co-funding situations are divided up, there is a risk of information being lost in reporting. Failure to capture the "full story" was one of the most common causes of concern that regional NRM organisations have with MERIT. Splitting NRM achievements is therefore likely to exacerbate this issue and a more suitable option may be to capture all achievements from a given project, while acknowledging the full suite of resources used.

In-kind contributions are another form of co-funding albeit non-monetary. Comment was made during the regional consultation process that it was unclear how in-kind contributions (e.g. labour) should be included in NRM reporting. Concern was raised, particularly in Western Australia, that not including in-kind contributions was creating a false picture of the cost-effectiveness of investment and that this may be affecting federal investment decisions. Clear guidance is also needed from the DoEE to the regional NRM organisations about how in-kind contributions should be addressed in their reporting through MERIT. Inclusion of in-kind contributions in the full suite of resources used to achieve project objectives (mentioned above) may be one option to maximise investment transparency in MERIT reporting and ensure the "full story" is captured.

OTHER CHALLENGES

The regional consultation highlighted additional challenges regarding reporting⁷ on NRM achievements. These included:

- Feedback delays through Australian government Grant Managers feedback on MERIT reports can be lengthy (often six months after submission), which means feedback to on-ground staff can happen 12 months after work is undertaken. This was viewed (in South Australia particularly) as too long a timeframe to be useful and productive. It was again suggested that more staggered reporting periods may assist in reducing the "bottleneck" from all project reports being submitted on the same day through MERIT and therefore shortening the feedback period.
- High turnover and lack of consistency amongst Grant Managers Australian government grant managers are frequently changing in some regions (NSW and Tasmania), making it hard to form and maintain strong relationships in some cases. There is also variability between Grant Managers' expectations on reporting detail. This can be frustrating for regions when previously approved work is requested to be modified when a new Grant Manager begins.

⁷ Challenges associated with measuring and recording NRM achievements are discussed ahead.

"We've had four grant managers I think in 18 months and each time you have to have the same conversation with them to get them up to speed. It takes a lot of time away from what I should be doing".

"The changeover in Australian Government staff has resulted in a loss of understanding from them about what we do. Trust is now missing and as a result we're being asked to report in more detail than we have previously".

 Payment delays – comment was provided from Western Australian discussions that milestone payments (following acceptance by the Grant Manager of a MERIT report) can take a lot of time (several months in the below example). This had led to project partners not being paid and onground works being delayed in the past.

"So when you have the report completed by the due date and the Grant Manager accepts the report after the 3rd Thursday of the month, you sit waiting another month for the payment...and that's ok if it's not \$1.4 million. But when it is and you need to make scheduled payments to project partners (not for profit community groups) life becomes a little more challenging and sometimes planned ground works become delayed. I can recall one particular payment (~2014) being delayed five months".

Reporting on re-visited sites – comment was provided from the Northern Territory that uncertainty exists around how to report against sites that are being visited multiple times per year for follow-up treatment. For example, some weed control locations may be visited three times per year for follow-up spraying and there was uncertainty about how this should be reported to the federal government in progress reports. Guidance is needed from the DoEE to regional NRM organisations about the preferred method for reporting on follow-up work. This is discussed further ahead regarding potential communication improvements around MERIT.

OPPORTUNITIES

Opportunities for the DoEE regarding NRM reporting have been identified based on the above findings. These include:

- Outcomes reporting there is uncertainty and concern about with the way outcomes reporting currently occurs through MERIT. Provide clarity by developing high-level outcome statements as a way of communicating what federal investment programs are aiming to achieve and to provide a framework that promotes consistency in how intended outcomes are described in reporting. Limit reporting in MERIT to nominating outcomes from the list of outcome statements provided by the federal government (to be tested later under long-term evaluations). Ensure all projects contain a budget for collecting outcomes data and allow for variability across the country in how outcomes are measured.
- Reporting on short-term results in the absence of reporting on long-term outcomes, project reports should include evidence of the short-term (and medium-term) results that have occurred after activities are implemented. This should only be a requirement of projects with timelines greater than three years, with output reporting being adequate for shorter projects (e.g. 12-18 months).
- Co-funding and in-kind contributions there is a need for the Australian Government to clarify its position on whether leveraging resources for federally funded projects, through accessing co-funding and in-kind contributions, is encouraged. Related to this is the need to clarify how such contributions should be reported, including whether it is necessary to distinguish between them (co-funding and in-kind). There are (at least) two reasons to include this data in reporting. The first is that reporting collectively on activities and NRM outcomes for a given project (irrespective of funding/in-kind source) ensures the "full story" is captured. The second is that excluding them could result in serious under-estimates of the true cost of actions in a project.
- Provision of advice while it was widely acknowledged during the regional consultation that the Australian government team have been successfully engaging with the regional NRM organisations to improve their reporting requirements, there appears to be a further opportunity to provide guidance and advice to the regional NRM organisations on particular topics. For example, the preferred method for reporting co-funding situations and in-kind contributions, the outcomes being sought under federal government investment programs and the preferred method for how outcomes are reported against, and how to report against sites that are being visited multiple times per year for follow-up treatment. Given some advice is likely to be valuable to a range (if not all) regional NRM organisations and it is inefficient having one-on-one conversations with individual regions, it is recommended a process be established to provide regular advice to all regions based on their areas of concern. This could occur through a systematic call for questions or problems to be addressed with a response then sent out to all regions through a dynamic support log e.g. guidance document, spreadsheet or similar product that provides a cumulative record of the advice.

"I've been impressed with the Federal government officers. They have recognised the problems and have worked well with us as a region".

Program design and resourcing – the design of investment programs has a flow on effect to reporting in terms of its complexity and it is recommended these potential flow on effects be considered when designing future investment programs. Where the program design requires NRM delivery by a range of partners in a region, it is important that the coordination and support role the regional NRM organisations provide (as part of managing the centralised reporting systems) be recognised and adequately resourced.

- Timing of reports the submission of MERIT reports at the end of each financial year and calendar year coincides with many other reporting demands. It is recommended the DoEE examine opportunities to amend the timing of reports from the regional NRM organisations so that submission falls outside these intense reporting periods and is staggered (i.e. not all reports being submitted on the one day). This will provide benefits to the regions (e.g. additional time to access data from third parties) and benefits to the Australian government Grant Managers (e.g. faster report processing and approval times).
- Target exceedance there is limited incentive for regional NRM organisations to be innovative and potentially excel in their NRM delivery, as there is currently a perception in several regional NRM organisations that exceeding planned targets can have negative consequences. This seems to be driven by a few isolated and unusual instances. It is highly recommended that the DoEE work with the regions (particularly those that frequently exceed their targets e.g. rangelands regions) to amend the process for how target exceedance is dealt with and to create a system and culture of excellence to directly address this misperception.
- Consistent messages some regional NRM organisations are frustrated by the mixed messages from Grant Managers about monitoring and reporting expectations, which leads to inefficiency at the regional level. There is an opportunity for the DoEE to more clearly define and communicate their expectations regarding monitoring and reporting (including MERI planning) in a more consistent way.
- Improvements to MERIT discussed ahead.
- Alignment of standard outputs discussed ahead.

4.3 RECORDING NRM ACHIEVEMENTS

REGIONAL AND STATE OR TERRITORY RECORDING SYSTEMS

The project intended to identify any requirements placed on the regional NRM organisations regarding how NRM achievements are recorded, particularly from state and territory governments.

The project confirmed a wide range of recording systems are used around the country for capturing data on NRM achievements, both at the regional level and state or territory level. A summary has been provided below.

Identifying the full suite of recording systems used by regional NRM organisations was not within the project scope and this table represents a small sample of the systems being used by regions across the country. It is limited to those that were mentioned during the regional consultation process. The table does however, reflect the full suite of systems that are required to be used under the core NRM investment programs in Queensland, New South Wales and Victoria.

JURISDICTION	EXAMPLES OF REGIONAL RECORDING SYSTEMS	STATE OR TERRITORY GOVERNMENT RECORDING SYSTEMS*
Western Australia	Large spreadsheet systems Captured in Enquire then extracted and analysed in spreadsheet. Captured in GRID then extracted and analysed in spreadsheet.	GRID (expected to be used for recording data under the State NRM Program in the future).
Northern Territory	Miradi – data capture and analysis.	None
South Australia	Multiple systems such as online system developed by the Adelaide and Mount Lofty ranges region.	None
Queensland	Multiple systems such as spreadsheets and databases.	Enquire
New South Wales	Captured in IRIS and LMDV (spatial data recording) then extracted and analysed in spreadsheet.	None for Catchment Action NSW – reporting template only. None for Environmental Trust – online reporting form. Saving our Species online database.
Victoria	Multiple systems such as iMap, CAMS, Enquire, ArcMap.	NRMS (used to collate standard output data for all Victorian investment programs).

Table 4-2: Recording systems used at the regional (sample only) and state or territory level

JURISDICTION	EXAMPLES OF REGIONAL RECORDING SYSTEMS	STATE OR TERRITORY GOVERNMENT RECORDING SYSTEMS*
Australian Capital Territory	Collector mobile device App for ArcGIS used by delivery staff. Data stored online in ArcGIS account (ESRI), then extracted and analysed in spreadsheet.	None
Tasmania	Enquire, spatial web-based systems (LISTmap), off-line databases, Fulcrum, Collector App.	LISTmap - for some data only.

* For recording NRM delivery e.g. under core investment programs.

In several states and territories, MERIT is the only recording system any government requires regional NRM organisations to use. Where other state government recording systems exist, it is anticipated that use of these (or an updated system) will continue to be required of the regional NRM organisations in the future. There are expected to be limited opportunities for interoperability or for MERIT to replace these existing state government systems.

The opportunities for alignment between MERIT and the state government recording systems therefore revolve around what data is recorded. This is discussed ahead under Section 4.4.

Representatives from the DoEE's Environmental Resources Information Network (ERIN) indicated interest in creating connections between the state recording systems and MERIT, to enable data flow between them e.g. export functions to enable data to exit one system and enter another. To be of greatest value, this would require the recording systems to be relatively static, whereas some are currently in a state of change e.g. NSW uses many recording systems that relate to specific investment programs which change over time. Furthermore, the project did not detect any single recording system being frequently used across Australia, with high variability both within and between states. There is also variable capacity at a regional level to measure and record spatial data. Given this context, one option involves exploring a simple data recording protocol that would allow ready exchange of spatial data. For example, data could be recorded as a point, line or polygon with a basic set of attributes such as project number, proponent and type of activity. This has been included for consideration in the example MERIT project form provided in Appendix 8.

FEDERAL RECORDING SYSTEM (MERIT)

A considerable amount of feedback was provided on MERIT during the regional consultation process. This focused predominantly on areas for improvement but also acknowledged some of the benefits the tool provided.

"MERIT is a great way to ensure we get frequent and detailed reporting from our staff. It is an opportunity to really consolidate and tidy up our reporting and data".

"The level of reporting required through MERIT is appropriate for the funds we receive".

The suggestions provided by the regional NRM organisations have been sorted against a series of themes and are provided below.

Purpose of MERIT

It was acknowledged by several regions that MERIT was initially designed to perform several functions including being a project management tool, communication tool and reporting tool. There was frequent comment from the regional NRM organisations that MERIT was being used predominantly for reporting, but to a lesser extent for project management and virtually not at all for communication purposes.

This suite of functions has created some uncertainty amongst regional NRM organisations about what MERIT is trying to do and therefore how it should be used. As MERIT continues to evolve over time, there is an opportunity for the DoEE to reconsider the intent of MERIT and perhaps rationalise some of it's functions to focus on the future purpose of the tool. Clear communication to the regions, following any changes, should occur to ensure they understand the purpose of MERIT and how it is expected to be used under varying situations.

"We question what MERIT is trying to achieve: a project management tool, a data collation tool or reporting on how we deliver on outcomes tool".

"MERIT was meant to be a communication tool but it hasn't worked. This part has been taken over by social media. There is a tension between the federal government and the regional NRM organisations about how MERIT was meant to be used (and their expectations around this) and how MERIT is actually used, which is mainly for reporting".

Structure

The current structure of MERIT features a separate form per activity or action, and per site (and a separate activity form per target species, plan or type of debris removal within an activity or action). This structure has contributed to the reporting burden and difficulties for many regional NRM organisations, and has compromised some data quality (e.g. grouping of an activity across multiple sites to avoid multiple forms).

Many respondents commented that the current structure of MERIT seemed well suited to small projects with a limited scope, but posed problems for larger projects and programs with multiple NRM activities and/or sites. This often resulted in a single project requiring many forms, which not only increased the volume of reporting and how long it took to report, but also resulted in activities being disconnected within a project report.

"There are simply too many forms for one project. Even simple projects with one activity like weed control can have multiple forms if you're treating weeds over many sites. This makes it time-consuming".

"At the moment, a single threatened species can have multiple forms – one for the survey, one for weed control, one for agreements etc. When you consider how many threatened species we deal with, this leads to literally thousands of pages of reporting".

Risks from the current structure raised by workshop and interview participants were:

 Duplication –when different activities were completed in the same geographic area, the same data had to be recorded multiple times, and
Lost detail – often one form is completed per activity for all sites (to reduce the duplication just mentioned). Some regions indicated they had received feedback from the DoEE that this was acceptable, even though they had more detailed spatial information available.

Following discussions with the DoEE, two options were considered for improving the structure of MERIT:

- 1. having a form per outcome (rather than per activity) and
- 2. having a single form per project.

The pros and cons of the current form arrangement and these two options are presented below:

Table 4-3: Pros and cons of different form options in MERIT

	FORM PER ACTIVITY (CURRENT)	FORM PER OUTCOME (NEW OPTION)	FORM PER PROJECT (NEW OPTION)
Pros	Appropriate for small projects. Current users are familiar with this structure.	Focuses reporting on end point (outcome) i.e. what is important. Provides more direct reporting and information on DoEE's long term interests.	All project information in one place – single form. No risk of duplication/confusion.
Cons	Not appropriate for larger projects – multiple forms. Fragments information across locations in report – harder to grasp collective picture. Risk of duplication. Risk of lost detail in activities through aggregation.	Fragments information across locations in report – harder to grasp collective picture. Risk of duplication because one project can contribute to multiple outcomes, and a single activity can contribute to multiple outcomes. Risk of lost detail in outcomes through aggregation.	Form may need to include a lot of information. Type of information reported must extend to outcomes to capture the 'whole' project story. Allowing multiple activities at multiple sites may require significant restructure of MERIT.

Based on the consultation with the regional NRM organisations, having a single form per project appears to be the most feasible option for addressing the current issues raised about MERIT. While a form per outcome may be an improvement in some ways on the current situation, this approach could still result in information fragmentation, duplication and potential confusion.

"Under Caring for our Country the federal government used an excel spreadsheet. It was great because you could see everything in one spot. In MERIT you can only see one form at a time, which works ok for smaller projects, but if there are lots of different types of works (and lots of forms), then it gets harder to use".

Not only would a single project form provide usability benefits to the reporter but would also improve the quality of information received by the DoEE. However, to maximise the effectiveness of this approach, it is essential that the project form contains the following features:

Relationships between activities and outcomes are clearly documented.

- Monitoring details are explicit in terms of what will be measured at a given point in time and importantly, the results of monitoring.
- Externalities and assumptions are documented e.g. factors that could influence the relationship between activities and outcomes.

This option focuses reporting on what has happened on the ground (activities or standard outputs) and the contribution of these activities towards the outcomes being sought by the federal government.

These ideas are expanded in Appendix 8, including an example of how the form may work for larger projects with multiple activities and outcomes.

The workshop discussions also raised the need for greater consistency in where information is placed in the different parts of MERIT. Participants were concerned that the large number of potential locations to enter data and information (e.g. blogs, project text boxes, dashboard, activity sheets, project reports) means there is a risk that information is missed when the tool is interrogated. This risk is currently high as some regional NRM organisations indicated that there are conflicting messages from the different federal government departments about where information should be inserted e.g. where to provide the narrative that 'tells the story' of what the project is achieving. There is an opportunity to consolidate this information capture and for more consistent instruction to be given to users on where different information is recorded within MERIT.

Dashboard

While only one part (and presumably a small part) of MERIT, several comments were received about the dashboard not being useful. Feedback included it failing to reflect the information submitted in the reports in a useful way, that the outputs and outcomes weren't shown together on the dashboard which made it harder for the reader to keep track of how everything fit together, and that the biannual (six monthly) reporting timeframe was too coarse to be useful for project tracking through the dashboard, especially for 12 month projects. Some of these views may also reveal a poor understanding of the dashboard, both its purpose and design. It was frequently suggested during the regional consultation that the dashboard should be redesigned, and these discussions might also be a means of improving understanding of how the dashboard functions.

"The dashboard shows under achievement, then over achievement, which isn't useful".

"What you think you've put in doesn't come across very well as a report".

"The dashboard is a dangerous space as it is often misleading and isn't transparent".

Data fields required

It was repeatedly suggested by the regional NRM organisations around the country that the data fields in MERIT be reviewed and rationalised. Issues raised included:

Too much detail – the number of mandatory data fields required in MERIT is comparable to most other reporting tools used for state and territory government core investment programs. This feedback (from NSW and Victoria) may therefore relate to the full suite of data fields (including non-mandatory) which is substantial. At the moment, there are many types of data fields in MERIT and with each layer, an additional volume of reporting is added (as indicated by the below diagram).



Figure 4-1: Visual representation of the data field layers in MERIT

Furthermore, the structural issues with MERIT (discussed previously) and the need for repeat data entry is expected to exacerbate this issue. It is recommended only those data fields that are used for a specific purpose by the federal government be collected and all other non-mandatory data fields be removed from or hidden within MERIT.

- Variation in detail it was noted in WA that some outputs in MERIT require more detailed information than others. There was a call for greater consistency between the outputs in terms of the amount and type of information required. It is recommended this be considered as part of any output review process.
- Some outputs not captured while it was acknowledged that the MERIT team has actively worked on ensuring standard outputs reflect the full suite of NRM works undertaken around the country, there remain some works that don't 'fit' within the existing options. E.g. cutting grass in ACT is not really debris removal. It is recommended the MERIT team continue their work with the regions to tailor the output fields over time.
- Irrelevant data fields a common remark was that MERIT is capturing some data fields that are irrelevant and not useful. E.g. the condition of weeds (plant health) prior to treatment (non-mandatory field), photo points for pest animal management (non-mandatory). There was a strong preference in most parts of the country for the data fields within the community participation and engagement section of MERIT to be overhauled as a priority. The number of *new* and *Indigenous* participants and the number of hours' duration for an event (non-mandatory), were identified as particularly problematic to collect. There was general agreement that these data fields should instead be collecting information on the behaviour change or other associated outcomes from the event, rather than specific details around each event.
- Participant information per activity it was suggested the mandatory participant information field that is required across many activities should also be reconsidered, as it is not overly relevant and is difficult to collect for many of the activities e.g. number of new people participating in weed treatment, number of Indigenous people participating in erosion management, number of new people attending plant propagation. It is recommended the need for participant information to be collected across so many activities be examined as part of any rationalisation process.

- Clearer definitions there was a general call for clearer definitions for the various data fields within MERIT to help improve consistency in data recording. A common example provided was what constituted an "Indigenous on-country visit". Another suggested area for clarification was how pest animal management activities should be recorded e.g. direct area of impact or hectares managed through the NRM activities. It is recommended detailed definitions be developed within MERIT to improve the consistency of data collected, particularly for those areas that may currently be ambiguous. "The issue is the lack of description on definitions and thus it is very possible that people report differently because they have different understandings, thus the data captured is likely to be non-comparative".
- Over-stating outputs Victorian discussions highlighted one example where a data field is reported twice and therefore may result in outputs being over-stated – "type of industry being addressed" under both the community participation and engagement activity and the management practice change activity. Effort should be made to identify any similar situations and the data fields adjusted accordingly to avoid double-up.

Usability

A common complaint from the regional NRM organisations was that MERIT was slow, tedious and onerous to use. The underlying reasons for this feedback were explored with the workshop and interview participants. Discussions uncovered several opportunities to improve the usability or functionality of MERIT and it is recommended these be considered as part of any future updates to MERIT:

- Optional use of project management component most regions have their own internal project management tools and processes. If the project management component remains a part of MERIT, some regions (in Victoria particularly) would find it valuable to be able to opt out of the project management component, so they aren't duplicating their internal project management planning. It was acknowledged that some federal funding recipients (such as Landcare groups) are likely to receive greater value from the project management part of MERIT, than the regional NRM organisations.
- Switching between modes one comment was received from the Northern Territory about difficulty experienced in switching between modes in MERIT. "The forms in MERIT are fine as stand-alone forms, but when you're in one mode (such as reporting) you can't switch to another mode without the entire project report being disabled and then you need to wait for it to be amended by the MERIT administrative team". While it is unclear if this is a widespread issue, there may be an opportunity to improve how easily users can move between different parts of MERIT as part of any future updates.
- Word processing and formatting in terms of providing narrative or commentary in reports, feedback was received that the word processing capabilities and formatting in MERIT were very limited (on par with basic text files). This created some problems with users being unhappy with the look of their reports ("readability is poor") and therefore being negative about the reports they were submitting. It would be beneficial to examine opportunities for improving both the word processing capability and formatting within MERIT.
- Accessibility the value of MERIT to the regional NRM organisations would increase greatly if they could access their data from the system once it is entered. This was a common suggestion for improvement (NT, SA, NSW, VIC, QLD). For example, QLD participants commented that they can't easily amend their MERI Plan once it is submitted in MERIT, even though it is meant to be a dynamic document. The work load associated with MERIT reporting is likely to be viewed more positively by the regions in the future, if they can gain benefit from their own reporting efforts through greater access to the information they've supplied. Being able to print project reports in a useful

format was a frequently suggested solution and it is recommended the opportunities for incorporating this function in MERIT be investigated.

 IT limitations – it is important to recognise that IT limitations remain in some parts of the country, particularly remote areas. As MERIT is an online reporting system, this can pose difficulties for some users. Flexibility needs to be provided in these exceptional cases, particularly in terms of timelines around reporting.

Planning

Comment was received from WA that the planning component of MERIT could be improved by focusing on outcomes rather than outputs. Outputs can be very difficult to predict at the start of a project and therefore setting output quantities during the planning phase can lead to inaccuracies. Outcomes would be more realistic to estimate and more valuable in conveying the benefits of a project.

Communication

Feedback from regions across the country highlighted a preference for improved and ongoing communication from the federal government in relation to MERIT. There is some concern about how information recorded in MERIT is being used by the federal government to inform decision-making and risks around misinterpretation of data by investors and those using the Atlas of Living Australia. As part of rationalising the information collected in MERIT (discussed previously) it was suggested the federal government needed to clearly communicate why they were collecting particular information and how it would be used.

Another key area for improved communication related to changes being made to MERIT. Several comments were made during the regional consultation that changes had been made to data fields in the past, without informing regions prior to the reporting period. This was a source of frustration. Related to this, are the improvements that have been made to MERIT in the past in response to feedback, with it being clear through the consultation that some improvements were known by some regions and not by others e.g. specific fields to report "follow-up" weed control.

"We develop our systems in part to meet known reporting requirements. When these requirements change, particularly within the reporting period, it is difficult to amend project monitoring to meet the changed reporting requirements".

It is recommended any changes to MERIT are communicated by the MERIT team to all users. This could occur through a simple group email or via a more regular communication process (as mentioned previously – opportunities around provision of advice under section 4.2). Opportunities for the regions to provide feedback would also be welcomed.

Ongoing training and support

There was a high demand for ongoing training and support in the use of MERIT. Feedback from some regions suggested the help documents were not always clear and contained gaps in some aspects of the tool's use. It is recommended, especially given the potential evolution of the tool, that training and ongoing support in MERIT be provided to all users.

OPPORTUNITIES

Opportunities for the DoEE regarding recording of NRM achievements in MERIT have been identified based on the findings above. They are:

- Clarify the purpose of MERIT it is currently unclear amongst regional NRM organisations, what MERIT is intending to achieve. Recommendations from the project around the purpose and scope of MERIT include:
 - Project management tool the project did not consult with MERIT users outside the regional NRM organisations. Therefore, it is unclear how widely this part of MERIT is used by other groups e.g. Landcare groups. In the absence of this information, it is recommended the project management aspect of MERIT be retained, but that it be an optional component that regional NRM organisations can bypass (i.e. preventing double-up with their own organisational project management systems).
 - Reporting tool it is recommended MERIT focuses on collecting output data and short-term results, with outcomes reporting being limited to nominating relevant outcomes from a list of those sought under federal investment programs. This intent (and the underlying reasons) should be clearly communicated to all MERIT users.
 - Communication tool this part of MERIT appears to have limited adoption by the regional NRM organisations. However, it is unknown whether other funding recipients use the communication component of MERIT. Therefore, it is recommended it be retained as an optional component, with no expectations placed on regional organisations to use MERIT as a communication tool.

It is important that the federal government's expectations around the use of MERIT, under a range of situations, are clearly communicated to all users.

- Restructure MERIT forms to suit both large and small projects a major limitation of MERIT is its impracticality for large projects with many sites and/or NRM activities. There is an opportunity to improve the structure of MERIT by having a single form per project (rather than per activity). This would reduce the substantial reporting burden associated with completing multiple forms in MERIT for larger projects and would greatly improve the quality of information received by the DoEE. It would improve the 'interpretability' of MERIT reports by having all information related to a project in a single spot, therefore also improving the usability of the tool e.g. enabling easier printing of project reports for users.
- Clarify how co-funding and in-kind contributions should be reported (as discussed on page 29) reporting the full suite of resources required to deliver a project (irrespective of funding/in-kind source) ensures the "full story" is captured, and provides a more accurate estimate of the costs of specific activities within a project.
- Standardisation of data input there is an opportunity for more consistent instruction to be given to users on where different information is recorded within MERIT. This will lower the risk of key information being missed when the tool is interrogated.
- Conceal the dashboard the dashboard is intended as a quick reference tool for Australian Government Grant Managers to gauge the progress of projects. Feedback suggests it provides limited value to and is a source of concern for MERIT users. There is value in concealing this part of MERIT from funding recipients.
- Rationalise the data fields in MERIT there is an opportunity to review the current data fields in MERIT to improve the quality and value of information collected through the tool and the data recording efficiency for the user. The rationalisation process should be solidly based on the clarified purpose of the tool (mentioned previously) and the intended use of the information recorded. Only data fields that are used for a specific purpose by the federal government should be collected, with a

focus on greater consistency e.g. in the type and amount of information required for each NRM activity, and how data is recorded through clearer definitions for each data field. The MERIT team should continue to work with the regions over time to refine the data fields and ensure all outputs are adequately captured.

- Improve functionality and usability several opportunities exist to improve the functionality and usability of MERIT. It is recommended these be considered as part of any future updates to the tool – optional use of the project management and communications components, improvements to how easily users can move between different parts of MERIT, greater word processing and formatting capabilities, greater accessibility to information in the system for users, guidance to users on existing printing facilities, flexibility around reporting timelines for those experiencing IT limitations e.g. in remote areas.
- Improved and ongoing communication there is a preference for improved and regular communication from the MERIT team to the regions particularly about how information in MERIT is being used and what changes or improvements are made to MERIT (in advance of the reporting period). Opportunities for the regions to provide feedback would also be welcomed e.g. testing new project forms.
- Ongoing training there is some demand for additional advice and assistance in the use of MERIT. Opportunities to guide the regional NRM organisations (and others) will be essential as the tool evolves over time. It is recommended the MERIT team provide training opportunities for new MERIT users through scheduling regular (e.g. twice yearly) optional training events e.g. March and October. Another action to support this training and to harness the growing knowledge among current users is to create an 'on-line' user forum or reference group. This could help to create a community of MERIT users who could share their knowledge and skills with each other. The starting point for this forum could be to use the current FAQs as the basis but create ways for participants to post their own suggestions for how to address issues. The NRM organisation staff consulted for this project could be engaged as the first participants in this forum.
- **Spatial data protocol** explore a consistent identification protocol to allow ready exchange of spatial data between recording systems e.g. between State systems and MERIT.

4.4 MEASURING NRM ACHIEVEMENTS

REQUIREMENTS PLACED ON THE REGIONS

The project intended to identify any requirements placed on the regional NRM organisations regarding the measuring of NRM achievements, particularly from state and territory governments. This assessment considered *what* needed to be measured and *how* these measurements were taken e.g. methods, timing, locations, personnel.

Across Australia it was consistently found that the only requirement in relation to measuring was 'what' was measured i.e. the standard outputs and associated data fields required under the various investment programs. Outside of this, there was considerable freedom experienced by the regional NRM organisations about how measuring was conducted. As a result, there was variation amongst regions (even within a given state or territory) in terms of how they measured their NRM achievements. Many regions commented that increased consistency in data capture and methods used would be beneficial, but in most cases, they were relying on guidance from government about how this could best occur.

The standard outputs that need to be measured under state and territory government core investment programs are provided in Appendix 9.

ALIGNMENT OF STANDARD OUTPUTS

The project aimed to identify the common standard outputs, parameters and metrics being measured across Australia for NRM reporting to state and territory governments, and what opportunities existed for the DoEE to better align with these.

An analysis was conducted, whereby the standard outputs and associated parameters and metrics required from federal, state and territory governments were compared. A total of 300 outputs, with over 500 parameters and/or metrics were assessed from the following:

- MERIT (Federal Government)
- GRID (Western Australia)
- Enquire (Queensland)
- DELWP Standard Outputs (Victoria)
- Environmental Trust Project Measures (New South Wales)
- Standard Outputs Catchment Action NSW (New South Wales).

The assessment was conducted under a series of themes. These, along with their respective scopes, included:

- Project management planning, management, regulatory and administrative activities.
- Stakeholder and community communication, awareness raising, engagement, participation, training and capacity building activities.
- Structural works built infrastructure.
- Environmental works on-ground works through goods and services to modify environmental characteristics.
- Management services behaviour or management practice change.

 Assessment and monitoring – research, investigations, monitoring, assessment, evaluation and reporting.

The findings are summarised in the below table (with common outputs in bold font). The detailed list of outputs, parameters and metrics considered under the analysis are available in Appendix 9.

THEME	M A N D A T O R Y M E R I T O U T P U T	SIMILAR OUTPUTS USED ELSEWHERE	OTHER COMMON OUTPUTS
Project management	Indigenous employment and businesses	Indigenous employment is only measured in QLD (Enquire). Less detail is captured than MERIT – total number employed and number of hours per week for each project.	None identified.
	Management plan development	Commonly measured (GRID, Enquire, DELWP Standard Outputs and Environmental Trust project measures). Standard metric – number of plans .	
	Indigenous knowledge transfer (through partnerships)*	Partnerships are commonly measured (Enquire, DELWP Standard Outputs and Environmental Trust project measures). Standard metric – number of partnerships.	
	Conservation actions for species and communities	Agreements are commonly measured (Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – number of agreements and area under agreement .	
	Project administration	None identified	
	Community grants	None identified	
Stakeholder and community	Community participation and engagement	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – number of events and number of participants .	Awareness raising materials and products (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – number produced and to a lesser extent the number of recipients.

Table 4-4: Common standard outputs measured in Australia

THEME	M A N D A T O R Y M E R I T O U T P U T	SIMILAR OUTPUTS USED ELSEWHERE	OTHER COMMON OUTPUTS	
	Indigenous knowledge transfer	Sometimes measured (Enquire, Environmental Trust project measures). Standard metric – numbers of people involved in knowledge sharing opportunities.	Support to community groups and projects (Enguire, Standard	
	Training and skills development	Commonly measured (GRID, Enquire, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – number of events and number of participants .	(Enquire, Standard Outputs Catchment Action NSW). Standard metric – number of groups supported and number of projects supported.	
Structural works	Fencing	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – length (m) and area protected by fence (ha) .		
	Public access and infrastructure	This output covers many different parameters. Ecological infrastructure was the only parameter commonly measured (particularly instream habitat and fish passage) (GRID, Enquire, DELWP Standard Outputs, Standard Outputs Catchment Action NSW). Standard metrics – length of stream (km) with instream habitat improved, length of stream (km) opened-up for fish passage and number of fishways (or fish barriers removed).		
	Water management	This output covers many different parameters. The only common water management structures measured were channels , constructed wetlands ^ (Enquire, DELWP Standard Outputs) and water recycling structures including on-farm reuse systems (Enquire, DELWP Standard Outputs, Environmental Trust project measures). Standard metrics – length (km) of channel, number and area (ha) of constructed wetlands, number of reuse systems and volume of water recycled (kL or ML).	Off-stream watering sites (GRID, Enquire, DELWP Standard Outputs, Standard Outputs Catchment Action NSW). Standard metric – number installed.	
	Erosion management	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – area of land treated/protected (ha) and number of sites or control structures.		

THEME	M A N D A T O R Y M E R I T O U T P U T	SIMILAR OUTPUTS USED ELSEWHERE	OTHER COMMON OUTPUTS	
Environmental works	Debris removal	Commonly measured (Enquire, DELWP Standard Outputs, Environmental Trust project measures). Standard metrics – area treated (ha), weight of debris (kg or T).	Soil treatment (Enquire, DELWP Standard Outputs, Standard Outputs	
	Heritage conservation	Only measured in NSW (Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metric – area managed (ha).	NSW). Standard metric – area treated (ha).	
	Pest management	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Less detail is captured than MERIT. Standard metric – area treated (ha) .	Wetland connectivity (Enquire, Standard Outputs Catchment Action NSW). Standard metric –	
	Weed treatment	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metric – area treated (ha), with some distinguishing between initial and follow-up treatment.	area with connectivity reinstated (ha).	
	Site preparation	None identified		
	Revegetation	Commonly measured (GRID, Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metric – area (ha) .		
	Seed collection	Only measured in QLD (Enquire). Less detail is captured than MERIT – number of seedbanks developed.		
	Plant propagation	None identified		
Management services	Conservation grazing management	Only measured in VIC (DELWP Standard Outputs). Less detail is captured than MERIT – area of grazing (ha).	None identified.	
	Disease management	Only measured in WA (GRID). Less detail is captured than MERIT – control type and purpose.		
	Fire management	Commonly measured (GRID, DELWP Standard Outputs, Environmental Trust project measures). Standard metric – area burnt (ha) .		

THEME	M A N D A T O R Y M E R I T O U T P U T	SIMILAR OUTPUTS USED ELSEWHERE	OTHER COMMON OUTPUTS
	Management practice change	Commonly measured (Enquire, DELWP Standard Outputs, Environmental Trust project measures, Standard Outputs Catchment Action NSW). Standard metrics – area with improved practices (ha) and number of people adopting improved practices.	
Assessment and monitoring	Research	Commonly measured (GRID, Enquire, DELWP Standard Outputs). Standard metric – number of studies .	Information management systems (Enquire,
	Fauna survey – general	Sometimes general monitoring outputs are measured (GRID, Enquire). E.g. number of sites monitored, number of monitoring programs	DELWP Standard Outputs). Standard metric – number of systems .
	Flora survey – general	Sometimes monitoring structures are measured (Enguire, DELWP Standard Outputs), Standard	
	Pest animal survey	metric – number of structures.	
	Plant survival survey		
	Vegetation assessment – Cwth govt methodology		
	Water quality survey		
	Weed mapping and monitoring		
	Outcomes evaluation and learning (project)	Only measured in QLD (Enquire). Less detail is captured than MERIT – number of organisational learning reviews.	
	Progress outcomes and learning (stage)		

* also part of stakeholder and community theme (outside partnerships). ^ i.e. retention ponds in MERIT

The analysis has identified a common list of standard outputs as follows:

National list of common standard outputs

Project management

- 1. Management plan development (number of plans).
- 2. Partnerships (number).
- 3. Agreements (number and area (ha) under agreements).

Stakeholder and community

- 4. Community participation and engagement (number of events and number of participants).
- 5. Training and skills development (number of events and number of participants).
- 6. Awareness raising materials and products (number produced).
- 7. Support to community groups and projects (number of groups supported and number of projects supported).

Structural works

- 8. Fencing (length (m) and area (ha) protected by fence).
- 9. Instream habitat improvement (length (km) of stream with improvement).
- 10. Fish passage installation (length (km) of stream opened-up for fish passage and number of fishways or fish barriers removed).
- 11. Channels (length (km) of channel).
- 12. Constructed wetlands (number and area (ha) of constructed wetlands).
- 13. Water recycling structures including on-farm reuse systems (number of reuse structures or systems and volume of water (ML) recycled).
- 14. Erosion management (area of land treated/protected (ha) and number of sites or control structures).
- 15. Off-stream watering sites (number installed).

Environmental works

- 16. Debris removal (area (ha) treated and weight (kg) of debris).
- 17. Pest management (area (ha) treated).
- 18. Weed treatment (area (ha) with initial treatment, area (ha) with follow-up treatment).
- 19. Revegetation (area (ha) planted).
- 20. Soil treatment (area (ha) treated).
- 21. Wetland connectivity (area (ha) with connectivity reinstated).

Management services

- 22. Fire management (area (ha) burnt).
- 23. Management practice change (area (ha) with improved practices and number of people adopting improved practices).

Assessment and monitoring

- 24. Research (number of studies).
- 25. Information management systems (number). [Not recommended for inclusion in MERIT limited value].

These outputs appear appropriate, except for the number of "information management systems," which provides limited value. It is recommended this output is not considered for inclusion in MERIT.

Further analysis of these outputs in relation to spatial data collection is provided below. This suggests **most** of the common standard outputs have the capacity to be recorded spatially and many are likely to already have spatial data available in the states where they are currently measured and recorded.

Table 4-5 Spatial dat	a collection for	common standard	outputs
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	СС	DMMON OUTPUT	APPROPRIATE FOR SPATIAL DATA COLLECTION?	SPATIAL DATA ALREADY COLLECTED?
	1.	Management plan development (number of plans)	Yes – polygon of plan area	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) and WA (Grid).
iject managemer	2.	Partnerships (number)	No	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) – 'representative' location.
Proj	3.	Agreements (number and area (ha) under agreements)	Yes – polygon of agreement area	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) and NSW (Catchment Action).
	4.	Community participation and engagement (number of events and number of participants)	Yes – points showing where events held	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
Stakeholder and community	5.	Training and skills development (number of events and number of participants)	Yes – points showing where events held	Expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
	6.	Awareness raising materials and products (number produced)	No	Yes in VIC (DELWP Standard Outputs) – 'representative' location for target audience. Not expected in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
	7.	Support to community groups and projects (number of groups supported and number of projects supported)	No	Not expected [i.e. in QLD (Enquire) and NSW (Catchment Action].
Structural works	8.	Fencing (length (m) and area (ha) protected by fence).	Yes – polygon of area protected, lines showing fences.	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).

	COMMON OUTPUT	APPROPRIATE FOR SPATIAL DATA COLLECTION?	SPATIAL DATA ALREADY COLLECTED?
	 Instream habitat improvement (length (km) of stream with improvement). 	Yes – lines showing streams improved	Expected to be in QLD (Enquire) and NSW (Catchment Action).
	10. Fish passage installation (length (km) of stream opened- up for fish passage and number of fishways or fish barriers removed).	Yes – points showing structure sites, lines showing streams connected	Yes for structure sites but not for length of stream in VIC (DELWP Standard Outputs). Expected to be in QLD (Enquire) and NSW (Catchment Action).
	11. Channels (length (km) of channel).	Yes – lines showing channels	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire).
	12. Constructed wetlands (number and area (ha) of constructed wetlands).	Yes – polygon of wetland area	Yes in VIC (DELWP Standard Outputs) for points showing wetlands and expected to be in QLD (Enquire) and WA (GRID).
	 Water recycling structures including on-farm reuse systems (number of reuse structures or systems and volume of water (ML) recycled). 	Yes – points showing structure sites	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire).
	14. Erosion management (area of land treated/protected (ha) and number of sites or control structures).	Yes – polygon of area treated or protected, points showing structure sites	Yes in VIC (DELWP Standard Outputs) for points showing structures and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
	15. Off-stream watering sites (number installed).	Yes – points showing structure sites	Yes in VIC (DELWP Standard Outputs) for points showing structures and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
al works	 Debris removal (area (ha) treated and weight (kg) of debris). 	Yes – polygon of area treated	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire).
Environmen	17. Pest management (area (ha) treated).	Yes – polygon of area treated	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).

	COMMON OUTPUT	APPROPRIATE FOR SPATIAL DATA COLLECTION?	SPATIAL DATA ALREADY COLLECTED?
	18. Weed treatment (area (ha) with initial treatment, area (ha) with follow-up treatment).	Yes – polygon of area treated	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
	19. Revegetation (area (ha) planted).	Yes – polygon of area planted	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire), WA (Grid) and NSW (Catchment Action).
	20. Soil treatment (area (ha) treated).	Yes – polygon of area treated	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) and NSW (Catchment Action).
	21. Wetland connectivity (area (ha) with connectivity reinstated).	Yes – polygon of area with connectivity	Expected to be in QLD (Enquire) and NSW (Catchment Action).
t services	22. Fire management (area (ha) burnt).	Yes – polygon of burnt area	Yes in VIC (DELWP Standard Outputs) and expected to be in WA (Grid).
Managemen	23. Management practice change (area (ha) with improved practices and number of people adopting improved practices).	Yes – polygon of area with improved practice	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) and NSW (Catchment Action).
Assessment and monitoring	24. Research (number of studies)	Yes – polygon of study area	Yes in VIC (DELWP Standard Outputs) and expected to be in QLD (Enquire) and WA (GRID).

In terms of the 34 standard outputs within MERIT better aligning with this common list, the assessment found:

1. Many (slightly more than half) of MERIT outputs are not on the common list

These outputs should only be retained if they will remain a focus of federal government investment in the future and are deemed necessary to inform decision-making. About one third of these outputs related to surveys, which is a high level of detail to capture relative to other NRM activities where only a single output is recorded. These surveys may fit better as activities to inform the recommended "anticipated short-term results" section on MERIT project forms, rather than outputs to be recorded against. These outputs include:

тнеме	UNCOMMON MERIT OUTPUTS- CONSIDER REMOVAL
Project management	Indigenous employment and businesses, project administration, community grants
Stakeholder and community	Indigenous knowledge transfer
Environmental works	Heritage conservation, site preparation, seed collection, plant propagation
Management services	Conservation grazing management, disease management
Assessment and monitoring	Fauna survey – general, flora survey – general, pest animal survey, plant survival survey, vegetation assessment – Cwth govt methodology, water quality survey, weed mapping and monitoring, outcomes evaluation and learning (project), progress outcomes and learning (stage).

2. About one third of MERIT outputs already align with those on the common list

These outputs should be retained in MERIT, with amendments made (where necessary) to ensure the parameters and metrics identified in the common list are also required in MERIT. These outputs include:

ТНЕМЕ	COMMON MERIT OUTPUTS - RETAIN
Project management	Management plan development
Stakeholder and community	Community participation and engagement, training and skills development
Structural works	Fencing, erosion management
Environmental works	Debris removal, pest management, weed treatment, revegetation
Management services	Fire management, management practice change
Assessment and monitoring	Research

3. A small number of MERIT outputs could be re-worded to align better with those on the common list

The following amendments are suggested to improve alignment:

тнеме	MERIT OUTPUTS - CONSIDER AMENDING
Project management	Conservation actions for species and communities – consider changing to "agreements".
Structural works	Public access and infrastructure – consider changing to two outputs "instream habitat improvement" and "fish passage installation".
	Water management – consider changing to three outputs "channels", "constructed wetlands" and "water recycling structures including on-farm reuse systems".

4. Several outputs on the common list are not recorded in MERIT

Add these outputs into MERIT if they will reflect the focus of future federal government investment programs and be useful to inform decision-making.

тнеме	OUTPUTS NOT IN MERIT - CONSIDER INCLUDING
Project management	Partnerships - currently part of the "Indigenous knowledge transfer" output, but could be considered more broadly.
Stakeholder and community	Awareness raising materials and products, support to community groups and projects
Structural works	Off-stream watering sites
Environmental works	Soil treatment, wetland connectivity

This assessment focused on the common outputs being measured (at the state government level) in most parts of Australia as of June 2017. It is important to recognise that the standard outputs being used changes over time. For example, consultation undertaken for this project highlighted several parts of the country where state government standard outputs are currently being reviewed and refined e.g. Western Australia and New South Wales. Furthermore, this analysis has focused on the 300 (approximate) state government standard outputs. Most regional NRM organisations have developed their own, more detailed lists of standard outputs and these have not been considered, except to acknowledge that some will be the same as the above and many will be different.

The project has identified opportunities for the DoEE to align their standard outputs under MERIT with those being used elsewhere. However, in the context of a dynamic list of potentially thousands of outputs, parameters and metrics being used around the country, it is recommended as a pre-cursor to any changes, that the DoEE clearly identify which outputs will be key to meeting their future information needs. E.g. will the outputs likely reflect the focus of future investment programs and provide information that is needed to inform decision-making? Only those outputs that meet these criteria should be required in MERIT.

The regional consultation highlighted a willingness and capacity to adapt to changing reporting requirements

(which has occurred on many occasions in the past), as well as a desire for clarity around what information is required and how it will be used. It is therefore reasonable for the federal government to amend their standard output requirements and provide clear guidance to funding recipients on exactly what information needs to be measured in the future and how this will be used to contribute to improvements in natural resource

Only include outputs (and data fields) in MERIT that are useful for meeting the information needs of the federal government. Articulate in a transparent way to MERIT users, how the information will be used.

management. Any changes made to the standard outputs in MERIT should also inform any updates (rationalisation) of the data fields in MERIT (mentioned under Section 4.3).

The term 'standard output' is familiar to those involved in NRM monitoring and reporting (and has been used throughout this report). However, other terms llike performance measures, activities and deliverables are also in common use to describe works on the ground. Despite this variation in terminology for some reporting, this was not raised as a major issue during the consultation for this project. It is therefore acceptable for MERIT to retain its current terminology, while ensuring it remains clear about what information is being sought in reports to the federal government.

OPPORTUNITIES

Opportunities for the DoEE regarding measuring NRM achievements in MERIT have been identified based on the above findings. These include:

- Amend the standard outputs in MERIT to better align with the list of standard outputs commonly used by the federal and state governments, but only after the federal government identifies which outputs (and associated data fields) are required to meet their future information needs i.e. reflect the focus of future investment and be useful for decision-making. Require only these outputs in MERIT as part of NRM reporting.
- Provide clear guidance to funding recipients on exactly what information needs to be measured and how this information will be used.

4.5 ALIGNMENT A COMMON FOCUS

The various discussions conducted during the project, highlighted a common demand for improved alignment and consistency in relation to monitoring and reporting on NRM achievements. Examples included:

- The WA State Government continuing to work with the regional NRM organisations in Western Australia to confirm a list of standard outputs for consistent reporting under their State NRM Program.
- The Rangelands Alliance (a network of 14 regional NRM organisations covering the rangelands of Australia) working together to reduce duplication of effort and achieve more consistent data input to the MERIT system from projects operating over vast areas of the rangelands.
- The Wimmera Spatial Hub project, where the Wimmera CMA are working collaboratively with organisations that undertake NRM in the Wimmera to develop an efficient, standardised online data collection, mapping and reporting tool. This is intended to meet all the Wimmera CMA's reporting requirements including those from the Federal Government (MERIT), State Government (DELWP data standards) and all their partner agencies.

- The past, joint adoption of the online reporting tool, Enquire, by the Federal and QLD State Government being viewed as preferable (by some) over the current separate reporting systems.
- The NSW Local Land Services having a "central" corporate executive team that is working towards improved coordination, consistency and therefore efficiency across the 11 Local Land Service regions.

There appears to be a current appetite for alignment and consistency in many parts of the country. This suggests the timing is ideal for the DoEE to progress the opportunities identified in this report.

5 Conclusions

5.1 NRM FUNDING, PRIORITIES AND TARGETS

The greatest funding contribution from state and territory governments towards NRM activities, currently occurs in the eastern states. Here, the New South Wales, Victorian and Queensland state governments deliver funding to their regional NRM organisations under several large-scale, multi-year NRM investment programs. Only small amounts of funding from the state and territory governments, for on-ground delivery, is provided to regional NRM organisations in other parts of the country.

These core investment programs and the primary NRM strategies of each state and territory government contain several **common NRM priorities** including:

Enhancing the role of people in NRM	Threatened & i
Biodiversity conservation	Water resource
Weed and pest control	Native vegetati
Land and soil protection	Water quality in
Climate change (including renewable energy)	Marine manage
Aquatic environment protection (including environmental water delivery)	

Threatened & iconic species management Water resource management Native vegetation management Water quality improvement Marine management

The priorities are expressed in terms of either environmental topics or threats to be managed, with a small number of spatial assets specified. While no targets were documented directly under the investment programs examined, several targets exist within the state and territory government strategies for each of the above NRM priorities (see Section 3 for further details). A link exists between state and territory government strategies and investment programs, however this link is not explicit.

The analysis suggests that there is **good alignment between the federal, state and territory governments in terms of high-level NRM priorities**. This is, therefore, not a source of the reporting burden described by the regional NRM organisations. The common NRM priorities indicate that there are opportunities for alignment in the associated measures (i.e. outputs and data fields) required by the various governments. This is discussed further below.

5.2 OPPORTUNITIES FOR CO-FUNDING

As defined under the Australian Constitution, the DoEE's NRM investment programs are required to focus on matters of national environmental significance and fulfilling Australia's international obligations. Fortunately, these matters are aligned (to varying degrees) with the current⁸ NRM priorities of Australia's state and territory governments (Section 3.6). The project has therefore highlighted that **there is ample opportunity for federal government programs to complement state and territory government programs** so that outcomes from investment are maximised. In particular, opportunities for co-funding currently exist in Queensland, New South Wales and Victoria, where large-scale state government investment programs are being delivered. The priority areas for co-funding in these states (as defined by the joint interest of these states in matters of national significance) have been identified (see chapter 3).

Additional opportunities are likely to arise in the future, but identifying these relies on **regular communication between the DoEE and the various state and territory governments**. It is recommended

⁸ As of May 2017.

the DoEE initiate and implement a process for conducting such communication, especially given the apparent appetite amongst project participants for such a process.

Examples of joint investment are already occurring (e.g. Great Barrier Reef), and there is an opportunity to **learn from these existing co-funding situations**, prior to the expansion or commencement of such arrangements in other locations. It is recommended the DoEE conduct a review to identify the lessons from the federal government's existing and past co-funding efforts.

5.3 MONITORING AND REPORTING REQUIREMENTS

Reporting burden is experienced by many regional NRM organisations around the country. Federal government reporting (through MERIT) is one of several contributing factors for a variety of reasons e.g. tight timelines, need to access detailed data from third parties, differing information to what is collected regionally (in some cases) and it being a tedious process. However, other factors also contribute to the 'burden', with some being outside the DoEE's scope of influence e.g. large number of other reporting demands, provision of support to community groups for meeting their own reporting requirements and variable reporting periods requiring multiple analyses (calendar versus financial year).

The project aimed to identify opportunities for alignment between federal and state or territory government monitoring and reporting requirements (where they existed), as a way of reducing some of this burden and improving the DoEE's access to information on NRM achievements. A detailed assessment was undertaken around how the requirements compared between governments regarding the measuring, recording and reporting of outputs and outcomes (Section 4). This focused on federal government requirements and the requirements of the Queensland, New South Wales and Victorian state governments under their respective core NRM investment programs. The assessment found:

- Reporting similar types of information are already required within NRM reports to the various governments.
- Recording many different recording systems are required to be used to capture data and information. These are tailored to the specific requirements of each state government and it is anticipated that use of these (or an updated state system) will continue to be required in the future i.e. there are limited opportunities for interoperability or for MERIT to replace these.
- Measuring there are a wide range of outputs required to be measured by the various governments, with a small number of common outputs.

This suggests, that in terms of alignment with state government requirements and reducing reporting burden for regional NRM organisations, the main opportunities for the DoEE relate to what is measured (e.g. outputs) and making MERIT as efficient and user-friendly as possible. These opportunities are explained below.

STANDARD OUTPUTS

The comparative assessment of standard outputs required by federal and state governments, identified a common list of 25 standard outputs (Section 4.4). These may be considered the bare minimum to be measured by regional NRM organisations around Australia, except for the number of "information management systems" which is of limited value. **Opportunities for the DoEE to amend the standard outputs in MERIT, so they better align with this common list have been identified.** These include removing some outputs, adding others and amending some, where required (Section 4.4). However, given this common list will likely change over time and there are many other outputs being used by regional NRM

organisations around the country, it is important that any changes to the current suite of standard outputs in MERIT be based on a clear understanding of which outputs will likely reflect the future focus of federal investment programs and be useful for federal government decision-making. Only those outputs that meet these criteria should be required in MERIT. Clear guidance should be provided to MERIT users on exactly what output information needs to be measured and how the information will be used.

NRM OUTCOMES

Two key areas for improvement were identified during the project (Section 4.2). The first relates to the regional NRM organisations' understanding of what outcomes are being sought by the federal government. There was some feeling that communication on investment program themes, objectives and intended outcomes had been better in the past through the business plans that accompanied the calls for funding applications. The five-year outcomes established for each of the six national priority areas under the first phase of the Caring for our Country program, was frequently suggested as a good example of where intended outcomes had been clearly communicated. It is recommended this (or a similar) practice be readopted as part of clear and comprehensive communication around future investment programs and the outcomes they seek to achieve.

The second area for improvement is regarding how outcomes are captured in federal reporting. There is concern amongst the regions that outcomes are not being reported well and uncertainty exists about how best to do this. It is recommended **outcomes reporting in MERIT be restricted to a very basic level** due to the time-lag in data availability being at odds with project timelines. Project reports should nominate (from a federally endorsed list) which outcomes apply, as context for the report. Whether these outcomes eventuate, can be tested later as part of a regular and thorough project evaluation process. For this to be successful, **all projects must have a budget allocated for outcomes monitoring** after project deliverables are completed. The **variability that exists** across the country **in how outcomes are measured should be allowed for within the evaluation process**, rather than imposing an additional federal measurement method, that will lead to further monitoring and reporting burden.

As part of addressing both these areas for improvement, it is recommended the DoEE **develop high-level outcome statements for future investment programs** as a way of communicating what the programs are aiming to achieve and to provide a framework to capture intended outcomes consistently in reporting.

REPORTING ON SHORT-TERM RESULTS

In the absence of reporting on long-term outcomes, it is important that project reports capture the short-term results arising after activities are implemented. This is a way of gauging whether the project is continuing along the trajectory towards long-term outcomes and provides confidence around the likelihood of project success in the future. Reporting on short-term results should only be a requirement of projects with timelines greater than three years, with output reporting being adequate for shorter projects (e.g. 12-18 months). It is recommended the following **short-term results be included as a standard part of NRM reporting** to the federal government, noting that these will not be relevant for every project – existence of works, maintenance levels, landholder support, threat management, capacity building results, leveraging and condition observations and measures.

MERIT

The federal government's online reporting system (MERIT) was generally viewed as a good starting point for capturing NRM achievements around the country. However, it was widely acknowledged that **MERIT needs to evolve** and there were many opportunities for improvement identified to make the tool easier to use and to be of greater value to both the DoEE and users (Section 4.3). These can be summarised as:

- Clarify the purpose of MERIT it is currently unclear amongst regional NRM organisations, what MERIT is intending to achieve. Clarify the purpose of MERIT as a reporting tool (with optional communication and project management functions) that focuses on standard outputs and short-term results, with outcomes reporting limited to a list of intended outcomes to be tested later through evaluation processes. Clearly communicate the federal government's expectations around how MERIT is used under a variety of situations.
- **Restructure MERIT forms to suit both large and small projects** have a single form per project (rather than per activity), that captures activities, short-term results and links to long-term outcomes.
- Clarify how co-funding and in-kind contributions should be reported allow for the full suite of resources required to deliver a project to be captured so that a more accurate cost estimate of delivery can be obtained. Encourage reporting on collective activities and NRM outcomes from a given project (irrespective of funding or in-kind source).
- **Conceal the dashboard** limit dashboard access to the intended recipients i.e. Australian Government Grant Managers.
- Rationalise the data fields in MERIT review the current data fields to include only those used for a specific purpose by the federal government. Focus on greater consistency e.g. in the type and amount of information required for each NRM activity, and how data is recorded through clearer definitions.
- Improve functionality and usability through the various opportunities identified e.g. optional use of the project management and communications components, improvements to how easily users can move between different parts of MERIT, greater word processing and formatting capabilities, greater accessibility to information in the system for users, guidance on existing printing facilities.
- Improved communication about changes let MERIT users know in advance when changes or improvements are made to the tool. Provide opportunities for the regions to give feedback on such changes.
- Training and ongoing support establish a process to provide regular advice and assistance to all
 regions in the use of MERIT. This includes specific training on the use of the tool at regular intervals
 and provision of additional advice based on the areas of concern raised by users. One option is to
 harness the enthusiasm of participants from this project to create an 'on-line' user reference group
 as a means of creating a community of MERIT users who could share their knowledge and skills with
 each other.
- Timing of reports examine opportunities to adjust the timing of report submissions to fall outside the intense reporting periods at the end of the calendar and financial year, and to have staggered submissions (i.e. not all reports being submitted on the one day). This will benefit the regions and the Australian Government Grant Managers.

OTHER OPPORTUNITIES

The project uncovered additional opportunities for improvement as follows:

- Spatial data protocol explore a consistent identification protocol to allow ready exchange of spatial data between recording systems.
- Program design and resourcing when designing investment programs consider the flow on effect to reporting in terms of its complexity. Where the program design requires NRM delivery by a large number of small community groups (or other groups) in a region, it is important that the coordination and support role the regional NRM organisations are required to provide (e.g. as part of managing the centralised reporting systems) be recognised and adequately resourced.
- **Target exceedance** amend the process for how target exceedance is dealt with and create a system and culture where excelling in NRM delivery is encouraged (and even rewarded).

5.4 **RECOMMENDATIONS AND NEXT STEPS**

The recommendations from the project (and associated next steps) can be summarised as:

INVESTMENT PROGRAMS

- Develop high-level outcome statements for investment programs as a way of communicating what the programs are aiming to achieve and to provide a framework to capture intended outcomes consistently in reporting. The outcome statements under phase one of the Caring for our Country program can be used as a guide of where this has been successful in the past.
- 2. Implement a process for regular communication between the DoEE and the various state and territory governments to identify future priority areas specifically for co-funding i.e. where there is a joint interest in national NRM priorities. Progress these opportunities where they arise.
- Conduct a review to identify the lessons from existing and past co-funding efforts between the federal and state or territory governments, particularly in relation to the coordination and delivery of large investments e.g. Great Barrier Reef.

MONITORING AND REPORTING REQUIREMENTS

- 4. Amend the standard outputs in MERIT to better align with the list of standard outputs commonly used by the federal and state governments, but only after the federal government identifies which outputs (and associated data fields) are required to meet their future information needs i.e. reflect the focus of future investment and be useful for decision-making. Require only these outputs in MERIT as part of NRM reporting (while still allowing for optional collection of additional data).
- 5. Limit outcomes reporting in MERIT to some discussion of progress towards outcomes on a specific list identified by the federal investment programs (to be tested later under long-term evaluations).
- 6. Include reporting on the "short-term results" that arise after an activity is implemented as a standard requirement of projects with timelines over three years. Activity and output reporting is adequate for shorter projects (e.g. 12-18 months).
- 7. Ensure all projects contain a budget for collecting monitoring data.
- 8. Allow for the variability that exists across the country in how outcomes are measured and recorded.
- 9. Update MERIT, in consultation with users, to reflect the reporting focus and capture the various opportunities for improvement e.g. a form per project (rather than activity), rationalise the data fields.
- 10. Create a system and culture where excelling in NRM delivery is encouraged (and even rewarded).

MERIT COMMUNICATIONS

- 11. Clarify the purpose of MERIT as a tool that focuses on reporting of standard outputs. Clearly articulate the monitoring and reporting requirements over time.
- 12. Provide regular (twice yearly) training to (new) MERIT users through having a fixed annual schedule of online training events e.g. March and October. This provides a means of regular contact with users (for feedback) and an opportunity to introduce changes to the tool over time.
- 13. Provide ongoing support to MERIT users (outside of training) in the form of a systematic call for questions and provision of feedback (e.g. online forum/seminar every quarter). This could also include a dynamic support log, where feedback is accumulated and can be viewed by users when required.

RESOURCING

14. Where regional NRM organisations are enlisted by the federal government to support other groups (e.g. a Landcare group) to meet their reporting requirements, ensure this is more formally recognised so that it can be adequately resourced.

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Appendix 1: Standard interview questions with state government representatives

Note: the below questions were adapted where necessary. For example, where substantial information was available online, some questions were not asked.

1. What are the core NRM investment programs that currently exist in your State/Territory, that are delivered by the regional NRM organisations?

For each investment program:

- 2. What is the start and end date of the program?
- 3. What is the amount of funding provided per year?
- 4. Which regions is the program delivered in?
- 5. What are the priorities for management under the program (i.e. assets)?
- 6. What targets have been specified?

I'd now like to talk to you about the monitoring and reporting the state/territory government requires from the regional NRM organisations under the program – particularly the aspects around measuring, recording and collating/reporting.

In terms of measuring:

- 7. What do the regional NRM organisations need to measure? i.e. indicators/metrics.
- 8. Where do these measurements need to occur? i.e. locations.
- 9. When do these measurements need to be taken? i.e. frequency, time of year.
- 10. Who needs to take the measurements? i.e. staff, contractors, community.
- 11. How do the measurements need to be undertaken? i.e. method.
- 12. Any other requirements around measuring?

In terms of recording the measured data:

- 13. What do the regional NRM organisations need to record? i.e. indicators/metrics.
- 14. Where does the data need to be recorded? i.e. system.
- 15. When does the data need to be recorded? i.e. frequency, time of year.
- 16. Who needs to record the data? i.e. staff, contractors, community.
- 17. Any other requirements around recording?

In terms of collating data and reporting back to the state/territory government:

- 18. What do the regional NRM organisations need to collate and report on? i.e. indicators/metrics, outputs, short-term outcomes, long-term outcomes, only actions funded specifically under the program.
- 19. What locations do they need to report on? i.e. scale sites, sub-catchments, catchments, regions.
- 20. When does the collating and reporting need to occur? i.e. frequency, time of year.
- 21. Who needs to undertake the collating and reporting? i.e. staff, contractors.
- 22. How does the collating and reporting need to be undertaken? i.e. method, system.
- 23. Any other reporting requirements?

Appendix 2: Standard agenda and interview questions for consultation with regional NRM organisations

Workshop agenda

Date: June 2017	Time:	
Location: Teleconferen	ice	

RMCG facilitator(s):

Participants:

Apologies:

Workshop purpose: to identify the range of monitoring and reporting requirements placed on your regional NRM organisation (particularly from State Government) and to identify any barriers and opportunities for improvement around measuring, recording and reporting on NRM achievements.

TIME (APPROX.)	ΤΟΡΙΟ
10 minutes	Welcome and introductions, project overview
15 minutes	Group discussion - the current situation with monitoring and reporting in your state/territory
20 minutes	Measuring NRM achievements
	 Discussion on how your organisation goes about measuring data (requirements placed on you, use of standard outputs)
	 Any problems or difficulties with measuring data?
	Any opportunities for improvement?
20 minutes	Recording data on NRM achievements
	 Discussion on how your organisation records data (requirements placed on you)
	Any problems or difficulties with recording data?
	 Any opportunities for improvement (including to MERIT)?
20 minutes	Reporting on NRM achievements
	Discussion on how your organisation reports on achievements (requirements placed on you)
	 How reporting occurs when co-funding exists?
	 What scale of reporting occurs? E.g. sites, sub-catchments, catchments, regions.
	 Any problems or difficulties with reporting?
	Any opportunities for improvement?
5 minutes	Final comments and next steps

Draft interview questions (for sole representatives in NT and ACT)

1. Do you experience reporting burden to investors?

Measuring NRM achievements

- 2. What are the requirements placed on your organisation around:
 - What is measured (indicators/metrics)?
 - When the measurements are taken (frequency, time of yr)?
 - Who takes the measurements?
 - How the measurements are taken (the method)?
- 3. Are there any other requirements around measuring NRM achievements?

Recording NRM achievements

- 4. What are the requirements placed on your organisation around:
 - What data is recorded? Is it all the indicators/metrics that are measured? Any other information?
 - Do you have a list of standard outputs?
 - Where the data needs to be recorded?
 - When the recording occurs (frequency, time of yr)?
 - Who needs to record the data?
- 5. Are there any other requirements around recording data on NRM achievements?

Reporting on NRM achievements

- 6. What are the requirements placed on your organisation around:
 - What is reported to investors? i.e. indicators/metrics for outputs, short-term outcomes, long-term outcomes, only actions funded specifically under a particular program (any lumping across programs?)
 - The locations and scales that need to be reported on? i.e. sites, sub-catchments, catchments, regions.
 - When the reporting occurs (frequency, time of yr)?
 - Who needs to undertake the reporting? i.e. staff, contractors.
 - How the reporting occurs? i.e. systems, templates.
- 7. Are there any other requirements around reporting on NRM achievements?

NRM priorities and targets

- 8. What are the key NRM priorities for your organisation at the moment?
- 9. Are these documented anywhere? (access to documentation if possible)
- 10. Have any key NRM targets been established for your organisation?
- 11. Are these documented anywhere? (access to documentation if possible)

Appendix 3: Summary of key findings from consultation with regional NRM organisations

Western Australia

Key points:

- There is substantial variability across WA in terms of natural systems, the internal capacity of regional organisations to do reporting and the internal reporting systems that are being used.
- Challenges include resource/capacity limitations and onerous reporting. Reporting burden is being driven by MERIT in conjunction with lots of smaller reporting demands (e.g. related to alternative funding sources). The regional NRM organisations are supporting community groups and other groups with their funding applications and reporting requirements, but are not funded to do this role. This adds to the burden.
- Measuring the required information on the MERIT outputs drive what is measured. Limited definitions in some cases may mean some data is captured differently. The other details around output measurements (i.e. how, where, when, who) vary across the state. Some regions use a MERI handbook developed internally, others use the methods developed by the Dept. of Parks and Wildlife, while others (e.g. rangelands) use different methods that reflect the scale of the landscape they are working in (helicopter monitoring). There is variability capacity amongst community groups and data quality may vary.
- Recording several systems are used to capture and analyse data prior to being entered into MERIT

 large spreadsheets, Enquire, GRID (GIS database that captures spatial data). Some regions have aligned data captured in GRID with MERIT outputs, but not all. GRID is more detailed than MERIT and reflects the information that WA wants to record. It may be used for reporting against the State NRM Program (WA Govnt) in the future but is currently used to varying degrees by the regions for their internal reporting. It allows continuous recording of spatial data over time.
- Reporting where multiple sources of funding exist⁹, some regions lump funding together when reporting on outputs/outcomes while others split the outputs per investor. Care is taken to avoid double-counting. MERIT does not provide a place to report in-kind contributions which creates a false picture of the cost-effectiveness of investment.
- MERIT
 - Works OK for small projects, but doesn't work well for large programs with multiple outputs, species etc.
 - The outputs need to be reviewed some data collected is not useful e.g. participant numbers should be changed to something that reflects behaviour change post event. Consistency needed across outputs in the level of detail they require e.g. weed treatment has quite specific detailed questions, while pest management is a more general suite of questions.
 - Predicting outputs as part of the project planning phase is very difficult focusing on outcomes would be more valuable and realistic to estimate.
 - \circ $\;$ Outcome statements need to be linked to outputs e.g. on the dashboard.

⁹ Not too common as there are some WA funding rules against leveraging funding between state and federal investment.

- The tick boxes don't reflect the effort required to achieve that output e.g. some take one days' effort, others 6 months effort.
- Concern over misinterpretation of data as it is transferred to Atlas of Living Australia and for broader decision-making around investment.
- Some areas are vague e.g. how in-kind contributions should be considered.
- Changes to MERIT by the DoEE need to be communicated early and not implemented on the eve of reporting due dates.
- There is a desire from some to work closely with the MERIT team as it continues to be developed (provide feedback from the regions to the MERIT team).
- Over-achievement against targets is not viewed as positive requires justification, can result in no more funding. There is a disincentive to over-achieve and be successful in NRM delivery.
- Outcomes are focused on in the planning phase, then outputs are the focus during delivery, with outcomes a focus again when end of program reporting occurs.

South Australia

Key points:

- In most SA regions, there are many types of reporting that occur including internal reporting, reporting associated with the levy system, reporting to a range of funding providers (including NRM Board, State Government) and federal reporting. Reporting through MERIT is often a small part of the larger reporting 'picture'.
- Reporting burden most of the workload comes from internal reporting. This is frequent and sometimes has straightforward systems and processes. But outcomes reporting (e.g. required under NRM Act) and evaluations of projects/programs/plans can be quite complex. MERIT reporting is a small part of the reporting workload, but the tight timeframes, requirement to access data from third parties and internal review processes make it very administrative and labour intensive. This means the quality of reporting can be basic and some regions go back and fix reports up (include more detail) for their own records after submission, when they have more time available. The MERIT reporting timeframes mean pressure/stress is passed along the system to the groups that collect the data, which can strain relationships between these groups and the regional organisations. The timing of MERIT and internal reporting is sometimes concurrent which adds further pressure.
- Challenges limited resources are a major challenge. There is a strong preference for more time to be provided for reporting or staggered reporting times, at least.
- Measuring the SA regions often have their own lists of standard outputs that are fit for purpose for their particular regions/organisations. Some parameters are measured differently in SA (e.g. vegetation measurements using the Nature Conservation Society of South Australia's Bushland Condition Monitoring method) compared to that required by MERIT. There is variability across the state in measuring methods (reflects landscape variability). There is a preference for consistency but work towards this has been very slow to date due to the complexities involved e.g. the broadest level of reporting under the NRM Act attempted to use the Wentworth Accounting method, but still seemed to produce results that were generally rejected by many scientists and technical staff. There is discussion at the rangelands level to have more consistency in how on-ground activities are accounted for (e.g. pest animal management).
- Recording many systems are being used. There is some preference for greater consistency. The
 online system created by the Adelaide and Mount Lofty Ranges region is viewed by many as being
 excellent and would be valuable to roll out to other regions in SA. There is no formal location for

condition data to be stored. IT limitations exist – some remote areas have paper based records. Contractors often provide data to regions and can be of varying quality.

- Reporting co-funding exists in most regions and in many cases (although not all) the funding is
 reported collectively i.e. outputs are not split up.
- MERIT
 - Is a great way to get frequent and detailed reporting from staff. It is an opportunity to really consolidate and tidy up reporting and data.
 - Capturing the wrong information check boxes don't capture all the data or ask for irrelevant data. Aggregation of data leads to lost detail "selling ourselves short". Narrative (predominantly in the form of attached supporting documents) is often provided to explain further. Needs to capture outcomes data. It would be good to reflect in new projects what has already been achieved (i.e. capturing legacy). Currently collects data that is inappropriate or not useful e.g. condition of weeds prior to treatment. Meaningful data needs to be collected at the start of the process.
 - Repetitive data entry is time consuming e.g. details on vegetation parameters (such as structural form) need to be repeated for multiple species and could be pre-coded possibly from the Atlas. The downloadable spreadsheets in MERIT which can be used to record this information and upload it in bulk have made it easier.
 - Structure of system needs to change from a form per activity to a form per threatened species or per project. E.g. at the moment a single threatened species can have multiple forms one for survey, one for weed control etc. Ideally it would be one form for the species. Leads to literally 1000's of pages of reporting. It would be useful to be able to record many on-ground outputs on the one form.
 - More detailed spatial data needs to be captured showing activities at individual/multiple sites. An easier GIS interface is required.
 - Scale issues Given scales of treatment, confusion exists around how to report against some outputs e.g. aerial spraying of weeds over 1000's ha, what is new area versus followup? The updated fields to capture new vs follow-up treatment are easy to miss.
 - Different measuring methods The regions find it hard to fit some SA data into MERIT (e.g. Bushland Condition Monitoring results). Condition data seems to be the most difficult. The only form in MERIT which will take condition data is associated with biodiversity fund projects which mandated specific condition data be collected.
 - The community engagement component has the greatest opportunity for improvement current measures are not useful or valuable.
 - Need to ensure employment of Indigenous people on a project is picked up this is one of the most important outcomes in the Alinytjara Wilurara region.
 - It would be valuable to get data back out of MERIT rather than being locked away (e.g. end of project or end of year reports in usable formats).
 - Questions raised over data accumulation in MERIT. Problems with duplications in accounting for the same area multiple times.
 - The 6 mthly reporting timeframe is too course for a 12 mth project the dashboard shows under achievement, then over achievement which isn't useful for tracking progress.
 - MERIT needs to be redesigned to be appropriate for large programs multiple outcomes and outputs. This is particularly important if the Australian Government is interested in the broader outcomes leveraged from their funded projects plus industry/levy funded activities.

- More guidance needed on how some activities should be accounted for (to improve consistency) e.g. direct areas of impact or hectares managed as a result of activities.
- Communication with Grant Managers feedback on MERIT reports often takes 6 mths from date of submission which means feedback is provided to on-ground staff 12 mths after works undertaken – this is too long a time-frame.
- Communication (in advance) is needed from the MERIT team to the regions when changes are made to parameters. Need communication from the MERIT team on how some of the information is being used – if at all?
- Outcomes preference for the federal government to provide an outcomes framework which specifies what national outcomes are being sought and then the way this is achieved can be left up to regions (allows for variability in local delivery where required). This has occurred in the past through the business plan released for funding programs, but has not occurred under the latest round of CFOC and NLP. It needs to be reintroduced.
- Questioning what MERIT is trying to achieve: a project management tool, a data collation tool or reporting on how we deliver on outcomes tool.

Northern Territory

Key points:

- Types of reporting reporting burden doesn't really exist MERIT is for core, baseline funding we
 receive. Using it to report to the board is fairly simple. Only other reporting we do is reporting on
 progress against NRM Plan to variety of stakeholders. We use Miradi (adaptive management
 software for conservation projects) which is a conservation management tool. It is based on the open
 standards for the practice of conservation. We can measure outcomes under the plan. The baseline
 funding mirrors some of our plan anyway.
- MERIT find it tedious, clunky, slow, time consuming difficult to tell the story in. MERIT and Miradi aren't transferable. We can manipulate Miradi but once data is in MERIT we can't touch it. The outputs are the same in Miradi as MERIT we can analyse things in Miradi. The dashboards in MERIT don't accurately reflect reporting. The forms in MERIT are fine as stand alone forms, but when you're in one mode (e.g. reporting) you can't switch to another mode without the entire project report being disabled and then you need to wait for it to be amended administrative problems. There is no formatting in MERIT or word processing readability is poor. What you think you've put in doesn't come across very well as a report. As a place to put in outputs, it works ok. Our difficulty in NT is that we could have 10 weed management sites in one project and therefore we need to fill in 10 forms time consuming. Don't feel confident we can put 10 sites on one map. We try to aggregate data sometimes but doesn't always work. Our projects cover lots of different things, so the community grants form is different to the other works forms hard to convey outcomes in.
- Under CFOC they used to have an excel spreadsheet it was great because you could see everything in one spot – in MERIT you can only see one form at a time – works ok for smaller projects but if lots of different types of works or lots of forms, then gets harder.
- We have some of our own internal standard outputs e.g. Weeds, fire, ferals and people. Use for reporting on planning e.g. ha's, no. weeds etc. We like to link these to our spatial data – we're in the process of mapping works now. Outputs in MERIT are ok – these are the main ones we use.
- Measuring we measure outputs. Templates say what we need to measure rest is up to us.
 Outcomes are descriptions but don't work in database we do surveys to check on condition of assets over time. But short term funding means we often can't see the change. We are a bit different

in that we are often looking for no change – pristine environments. We count ha, people etc. Use program logics and case studies to convey to other people what is happening.

- All work is seasonal in NT reporting is biannual, but major reporting and major work period aligns in June during dry season. This means the end of June reports usually come out in December (reporting is 6 mths behind). Also, everyone leaves around Christmas due to wet season, so if you have a question you need to wait 6 weeks. Barrier to reporting – no one here.
- Recording lots of our work is done by other organisations (contractors). We have internal reporting system for contractors – collect data from them on what they've done and it gets validated by us. Linked to their milestone reporting. It gets entered into our system and then sorted out and rolled up into MERIT.
- Problem things are continuing over time rarely done once and finished. Need to be careful that we don't duplicate our reported efforts e.g. report bi-annually but we may have a project that runs for 3-4 years that we're continually reporting on....what do we say this time round? We are reporting the same thing for one project cumulative or for a given period (confusion). We may do one big weed effort for example and then we go back, and go back again, and go back again (3 big efforts in a year). Hard to know what we should say we've done when going back to same sites.
- Terminology not really an issue.
- Resourcing a problem because all our work and reporting happens together not ideal. We need to
 design our activities to account for peak work/reporting periods.
- We find we need to justify the investment, but there is lots of stuff that doesn't fit into the boxes we've found best way is to attach a document.

Queensland

Key points:

Standard outputs

- Queensland developed Standard Outputs some time ago in collaboration with the Australian Government MERI team. They referred to the 'standard output codes' as being analogous to MERIT codes.
- The use of the standard outputs varies though most use them in some form and find they provide good metrics for the work they do
- One NRM indicated that they were considering moving away from using standard outputs
- There does not appear to be a governance and management process for the standard output hence they have not been revised for some time.

State requirements

 QLD Government uses Enquire. The NRMs have had to develop workarounds to translate between MERIT and Enquire (and in some cases their own systems of recording data). These vary from spreadsheets to entirely independent databases, or GIS-based systems

MERIT

- Several noted that they found the interface difficult to use and it was counter-intuitive
- They reported frustration at the way things are 'locked in' resulting in the need to seek permission to make even minor changes to a project. Seems contradictory to the idea that things like the monitoring plan needs to be adaptive.
- Several noted that the level of data required seemed to contradict the goal of reporting on landscape level changes. That is, needing to record things like attendance at a field day or number of trees planted – what are they measures of? There was a consensus that it was seeking too much detail. For example, in proportion to the funds involved in small grants programs, there was far too much time required on reporting
- Similarly, it is perceived that there is no allowance in MERIT for re-treatment of sites or the same person attending events multiple times (count them and their land once only or multiple times?)
- Some thought its strength was in recording short-term measures of progress or change
- Penny noted that the approach to improve the community grants data was a good example of the process and type of change needed.

Getting information and reports from MERIT

• The group recognized that there might be cases where detailed information was important (e.g. change in ecological conditions at a specific monitoring site), however they currently cannot easily get reports back from MERIT so there is little incentive to record this data.

Administration funding

• They have been instructed to record community support activities as administration (i.e. part of the 10% allowance). This misses the impact of that work which is working directly with community to drive on-ground change.

Co-funded projects

• Some NRMs did not split out the co-funding amounts while others did.

Reporting confusion can be linked back to confusion in program and project planning.

Unanticipated result (from teleconference):

In the initial discussion where we asked about the current challenges for reporting there seemed to be many cases where participants were keen to share not only their experiences but also the tools and systems they were using to record activity and manage projects in the field. It appeared that this type of sharing was novel and could result in some important sharing of resources and knowledge across the Queensland organisations.

New South Wales

Key points:

- There is a sense that the NSW government reporting requirements are about to become more comprehensive and that auditing procedures will be put in place to verify outputs and outcomes of projects and programs. Currently, the bulk of reporting burden is from federal reporting, but Catchment Action NSW reporting seems to be catching up.
- Most NSW Local Land Services (LLS) regions are using IRIS as their project management system.
 LMDV is frequently used as the spatial recording system.
- The State MERI team is currently reviewing and working on standardising NSW government standard outputs. This process also includes some capacity building in regions.
- Some regions have their own regional based lists of standard outputs, independent to NSW government outputs.
- Regions are given freedom on how they capture data for NSW government funded projects, however, increased consistency in data capture and methods is deemed beneficial. Guidance on this would be welcomed by the regions.
- Issues with MERIT and Australian government support:

- Difficulties experienced in measuring data for some outputs including number and type of participants in activities, differentiating "new" participants.
- Misalignment when it comes to scale; MERIT better accommodates recording of outputs of individual projects rather than from multiple projects across a whole region; regions are finding condensing region wide program outputs data to fit with MERIT metrics cumbersome.
- The number and detail of metrics at the activity level is high and deemed to be performance measurement overload.
- Uncertainty if this exhaustive data collection and presentation is hitting the mark in terms of gauging the success of projects.
- For example, the right data is not always being collected to inform project evaluation questions and there is a level of disconnect between data collection and ability to measure desired outcomes specified in project level MERI plans e.g. practice change; regions are working on improving these linkages.
- Clearer definitions are needed for some outputs too vague at the moment.
- There is an opportunity to rationalise the outputs list based on what the Australian government actually needs to know.
- Regional staff are frustrated that they are not receiving any reporting back from the Australian government so have difficultly appreciating the value of the onerous reporting requirements.
- Australian government grant managers in regions are frequently changing, making it hard to form and maintain strong relationships in some cases; there is also variability between regional officers' expectations on reporting detail.
- Annual reporting for internal organisational purposes is generally based on calendar year.
- Catchment Actions reporting for NSW government is due in October; outputs are recorded at site level within projects and then data is aggregated up to a theme level for the region.
- Peak times for projects based reporting is October, Jan-March and end of financial year.
- Regions handle reporting of outputs for projects with multiple funding sources differently; some lump together while others use different project codes and apportion accordingly; some set up separate projects in IRIS based on funding source.
- More consistency on reporting expectations and requirements between Australian government and NSW
 government would be very beneficial and reduce time and frustration around reporting.
- Better thinking on what needs to be measured and for what purpose should also reduce reporting burden.
- Concern that intermediate and longer term environmental outcomes (on the ground) are not being monitored or evaluated.

Victoria

Key points:

DELWP Standard Outputs offer a standard unit of measurement that are used by all CMAs. Standard output data is collated into the central state GIS database. Currently there is disconnect between the reporting requirements for the Victorian (DELWP outputs) and Australian Government (MERIT) and each CMA has their own method for translating data between the two. For example, DELWP outputs will require the number of participants, while MERIT requires number of workshops <u>and</u> number of people. There is widespread support for better harmonisation between state and federal reporting systems; and strong support for adoption of the state standard outputs.

- The unit of data capture varies between DELWP outputs and MERIT. Victoria collects more detailed spatial data that is activities based e.g. points, lines and polygons to represent works, whereas the spatial representation in MERIT is output based and less specific. Better alignment of spatial resolutions would be good.
- There is duplication in MERIT and some outputs can be overstated due to the field set up. For example, when reporting on events MERIT requires a form to be completed for a field day, as well as a form for change in knowledge even though the outputs are the same for each.
- There are challenges in making MERIT work at all scales. It is ok for activity level, but doesn't work so well at a larger scale due to likely duplication of outputs and inconsistencies in spatial resolutions.
- It's common for CMAs to have their project management system, therefore MERIT is only used as a reporting tool by CMAs. This may differ for Landcare groups/networks that receive direct federal funding and use MERIT as both a project management and reporting tool. It would be good to have the ability to opt in, or out, of the project management function within MERIT. The self-assessment framework within MERIT could be used to identify organisations that need the project management tool.
- MERIT requires a high level of detail (e.g. no. of displays at an event; no. of unique materials produced; hours filing) and is generally beyond the detail CMAs collect themselves. There is sentiment that the connection between MERIT and the Atlas of Living Australia (ALA) is driving a level of exhaustive detail e.g. species lists.
- 'Work on Country' is poorly defined in both MERIT and the standard outputs.
- The front page of MERIT is resource intensive to update and it's suspected that it is not widely viewed.
- CMAs would like to know how the MERIT data is used.
- It is perceived (incorrectly) that project reports (in addition to activity reports) cannot be printed from MERIT. This process could be made easier and more guidance provided.

Australian Capital Territory

Key points:

- In addition to reporting through MERIT, ACTNRM undertakes high-level reporting to the ACT Government e.g., State of the Environment reports, Annual Reporting on ACT Government complimentary funding and achievement Results for the Commonwealth Regional Delivery commitment. However, it does not need to report outputs through any ACT Government reporting systems linked to investment programs (as occurs for example in NSW).
- A proportion of the on-ground works delivery in the ACT occurs through delivery partners. The ACT
 has a high proportion of their NLP funding going to community groups and there are other subcontractor arrangements associated with other funding. There is currently a centralised reporting
 system coordinated by the ACTNRM, where groups submit their data to the ACTNRM and they
 aggregate/analyse it prior to entry into MERIT.
- The level of reporting through MERIT is appropriate for the funds provided. The reporting burden comes from accessing, coordinating and aggregating multiple reports from delivery partners prior to reporting in MERIT. This burden is derived from the design of federal government investment programs (e.g. NLP) that are seeking delivery of NRM through multiple community groups and other groups which has a flow on effect to reporting i.e. lots of reports needing aggregation. Where a program has complexity (lots of grants), by default the associated reporting is burdensome.

- In the past, project partners reported directly into MERIT but this was less successful. To simplify
 this process and give the Regional Body (ACTNRM) the ability to audit delivery partner results a
 centralised system should continue. Where federal government investment programs require NRM
 delivery by multiple groups the MERI officer positions needs to continue to be funded to an
 appropriate level.
- Currently ACTNRM's internal process for reporting Program delivery partners enter data into a mobile app. (Collector) this has a database that includes all the mandatory fields of MERIT for each contracted activity (Revegetation, Weed Treatment etc) and allows recording of outputs, photos, GPS coordinates and narrative. This data is sent to the ACT NRM's online account with ESRI (Arc GIS online) which stores the information in a spatial format database. The data is then extracted and placed in Excel for collation and analysis, before entering the information into MERIT.
- ACT NRM has received agreement from the DoEE to only enter data into mandatory fields (in MERIT) due to their aggregation requirements. They simplify the data they provide to the highest degree possible. E.g. if there are four revegetation projects across four delivery partners, the data is aggregated into one MERIT activity form for revegetation. This collates number of plants, species etc and may include narrative showing specific examples of projects where valuable. The associated map includes points of interest showing where all on-ground works have occurred, but polygons and attribute table data is available to DoEE if required. DoEE indicated they weren't after this level of information at this stage. A MERIT form is not provided for each revegetation project (i.e. planting site). ACT NRM provide a similar MERIT form for erosion control, weed management, fire management etc.
- MERIT some of the data fields/requirements need to be changed. E.g. photo points for pest animal management aren't relevant nothing to photograph. The community engagement parameters need improving. Currently focus on irrelevant data (e.g. number of hours). Find it very difficult to tell the story in MERIT and reflect the impact that some delivery partners are having. MERIT isn't picking up the full picture around the Community Engagement impact that ACTNRM and their partners are having in this space. ACTNRM attach a document that has the information we'd like to communicate. Not all activities are available in MERIT (e.g. grass cutting isn't really debris removal), but this isn't a problem so long as it is clear what the deliverable was. MERIT works OK as a reporting tool, but hasn't worked as a communication tool (which was one of the original intents).
- No additional standard output list has been developed by ACT NRM.

Tasmania

Key findings

Current funding situation in Tasmania:

- There is little State government funding for on ground NRM projects in Tasmania.
- The vast majority of project related funding for on-ground works projects comes from Australian government and organisations including Forestry Tas, Hydro Tas, Tas Networks and local government.
- State government funding largely provides for governance support of NRM organisations rather than project funding. Opportunities do however come up for NRM bodies to access emergency response funding, for example, to do works on flooding or bushfire clean up and repair.
- NRM North noted that there will be State government funding of the Tamar Estuary and Esk Rivers program in 2017-18.

Issues with MERIT and Australian government support:

- Twice yearly reporting requirements of Australian government (into MERIT) is a substantial burden because funding is usually spread across many small projects e.g. small farm conservation grants, which makes data collation and entry quite onerous.
- Small projects have the same reporting requirements as large projects, which means the reporting requirements on smaller projects can seem excessive.
- Review of MERI plans and six-monthly reporting in MERIT doesn't correspond with the region's internal reporting cycles.
- MERI Plans for NLP projects are required to be revisited and updated every 12 months which is time consuming because it needs to involve operational staff and project managers.
- Up to three quarters of the reporting load stems from MERIT, acknowledging that the data and other information collated for this purpose is being value added and reused to meet other reporting requirements (e.g. case studies and communications products).
- There has been a change in focus of MERIT reporting requirements to include more detailed reporting on project outcomes (over past 2 or 3 years), when the main focus had been reporting on outputs.
- Relationships have needed to be formed with new Australian government representatives and this has
 also meant increasing the level of detail required to be provided in reporting. The changeover in staff has
 resulted in a loss of understanding from the federal government about what we do trust is now missing.
- Project managers are being asked to collect data on social and economic outcomes, for example, and don't have the necessary tools or techniques to do this nor are they properly trained in these areas.
- The rebadging required to accommodate program changes (from NHT, CfoC, NLP, NLP2) is a significant impost that requires adapting our systems without much lead time given.
- Regions would welcome ongoing training and support in use of MERIT. The HELP documents are not always clear and there are gaps in guidance on their use.
- The MERIT setup is targeted to report on specific discrete projects and the norm in Tasmania is for regions to be delivering many very small overlapping projects with multiple funding sources. Tasmanian projects can also involve support roles to local government, for example, and material outputs are difficult to report on.
- MERIT is deemed to be a good start in developing a robust reporting tool to collate and standardise outputs but it is poor in conveying outcomes more broadly.
- The project management component of MERIT does not work well for the regions they sit at a level above that, as they're managing multiple projects.
- There needs to be more standardisation of data input between regions and States to ensure that the MERIT data base can be interrogated sensibly. For example, information is placed in different parts of MERIT e.g. blogs, project text boxes, project reports, activity sheets etc. which means that when it is interrogated it is likely that things will be missed if everyone is not using these spaces consistently. This is likely because it is not being well communicated between federal government departments on what data and information should go where.
- Regions find it dangerous to rely on MERIT data alone and therefore collect their own more detailed information e.g. riparian vegetation works are not picked up in MERIT as it is rolled in with terrestrial projects. But riparian works help inform progress against waterway objectives e.g. water quality.
- The support for the spatial component of MERIT is good and responsive.
- It would be valuable for project deliverers to input spatial data on outputs directly into MERIT.
- The reporting process needs to incorporate more review, post reporting and collation of data throughout the execution of projects. Guidance and training on this would also be welcome.
- Multiple benefits over several activities within projects is difficult to capture using MERIT.
- The 1:1 relationship in the MERIT database between forms and activities is limiting e.g. rye grass control is entered as a weed control activity, but it may have been done to protect endangered saltmarsh – this bigger picture isn't picked up.
- Frustration occurs when changes are made to the MERIT system without correspondence to the regions.

- Improved definitions are needed e.g. what constitutes "on-country".
- The dashboard isn't useful doesn't tell the story, isn't transparent. It's a dangerous space as it is often misleading.

Measuring:

- There is a wide range of standard outputs used in Tasmania e.g. biodiversity and habit measures, and often these are collapsed to report on a single output in MERIT.
- For example, NRM North uses Enquire to report lots of individual outputs at the regional level and then the data is condensed to report in MERIT.
- Targets and actions tend to be set around capacity and practice change because there is no funding for detailed measuring of change in biophysical aspects.
- Regions are given freedom on how they capture data, however, increased consistency in data capture and methods is deemed beneficial. NRM Cradle Coast for example has strong in-house GIS expertise so tends to do more spatial mapping of on-ground works. Web based info formats are useful and used by other regions with less GIS capability.
- A range of methods are used, including photo point monitoring for pre and post works, fire mapping, and interviews for case studies. Guidance on this would be welcomed by the regions. For example, worked examples on measuring and recording formats would be useful to improve consistency on reporting of outcomes across the 56 NRM regions nationwide. Also further information on the purpose of measuring outputs and outcomes and more guidance on measuring techniques.
- NRM regions frequently coordinate large projects but sometimes they are only a small financial contributor (through NLP) and therefore will not have a high level of jurisdiction over what is measured and how the outputs and outcomes of the projects are reported.
- Through their partnerships, the regions sometimes play a capacity building role or policy changing role, with other delivery partners actually doing the on-ground works. This is difficult to get across in MERIT – the bigger picture benefit that is being worked towards by a collection of organisations. E.g. capacity building around stormwater, but the actual works are funded and implemented by local government.
- Provision of data capture tools would be beneficial e.g. a tool for measuring outcomes, engagement.

Recording and reporting:

- With respect to internal recording systems, some regions use dedicated contract and project management system software (e.g. Enquire) while others rely on Microsoft Office and other products such as Fulcrum.
- For spatial data recording only one region currently has full GIS mapping capability. Others rely on web based products such as Land Information Systems Tasmania (LIST) where you can draw, mark up and share maps with project partners and landholders.
- Regions handle reporting of outputs for projects with multiple funding sources differently; some lump together while others use different project codes and apportion funding and outputs accordingly.
- There is a service level agreement with state government where spatial data can be exchanged.
- Annual reporting for internal organisational purposes (to NRM Boards, on regional strategies) is generally based on calendar year.

Appendix 4: Core NRM investment programs

NEW SOUTH WALES

Three main NRM investment programs are administered by the Office of Environment and Heritage, with funding allocated to the 11 Local Land Service regions for delivery of on-ground work - Catchment Action NSW, Environmental Trust and Saving our Species (which is funded under the Environmental Trust). These are described below.

CATCHMENT ACTION NSW

The New South Wales Government has invested \$112 million over four years (from 2013/14) towards the Catchment Action NSW program. The program supports projects that deliver natural resource management and productive landscapes (Barilaro, J. 2013). It includes four priority investment themes (Local Land Services 2016):

- **Biodiversity conservation** aiming to:
 - improve the condition and extent of biodiversity conservation assets (Travelling Stock Reserves, riparian, aquatic and marine ecosystems).
 - Increase opportunities for people to look after these assets.
- Threatened species aiming to:
 - Improve the condition and extent of threatened species, populations and ecological communities by reducing threats and increasing habitat.
 - Increase opportunities for people to look after threatened species, populations and ecological communities.
- Aboriginal cultural heritage aiming to:
 - Improve the condition and/or extent of Aboriginal Cultural Heritage assets (Aboriginal sites, objects and the capacity of Aboriginal people in NRM).
 - Increase opportunities for people to look after these assets.
- Native vegetation aiming to:
 - Improve the condition and extent of native vegetation.
 - Increase the number of people managing native vegetation through a legally binding contract or agreement.

The Catchment Action NSW program contributes to the NSW 2021 Plan by protecting our natural environment (Goal 22) and increasing opportunities for people to look after their own neighbourhoods and environments (Goal 23).

ENVIRONMENTAL TRUST

The NSW Environmental Trust is an independent statutory body established by the NSW government to fund a broad range of organisations to undertake projects that enhance the environment of NSW. The Trust is

empowered under the Environmental Trust Act 1998, and its main responsibility is to make and supervise the expenditure of grants. The Environmental Trust is chaired by the NSW Minister for the Environment. Members of the Trust are the Chief Executive of OEH, and representatives from local government, the Nature Conservation Council of NSW and NSW Treasury (Office of Environment and Heritage 2017a).

The objectives of the NSW Environmental Trust are (Office of Environment and Heritage 2017a):

- encourage and support restoration and rehabilitation projects in both the public and private sectors that will, or are likely to, prevent or reduce pollution, the waste stream or environmental degradation, of any kind, within any part of NSW.
- promote research in both the public and private sectors into environmental problems of any kind and, in particular, to encourage and support:
 - research into and development of local solutions to environmental problems.
 - discovery of new methods of operation for NSW industries that are less harmful to the environment research into general environmental problems.
 - assessment of environmental degradation.
- promote environmental education and, in particular, to encourage the development of educational programs in both the public and private sectors that will increase public awareness of environmental issues of any kind.
- fund the **acquisition of land for national parks** and other categories of dedicated and reserved land for the national parks estate.
- fund the declaration of areas for marine parks and related purposes.
- promote waste avoidance, resource recovery and waste management (including funding enforcement and regulation, and local government programs).
- fund environmental community groups.
- fund the purchase of water entitlements for the purposes of increasing environmental flows for the state's rivers, and restoring or rehabilitating major wetlands.

The Trust includes 10 programs (Office of Environment and Heritage 2017a):

- Eco Schools funds schools to assist with environmental learning opportunities for students, teachers and the school community.
- Education (community and government) aims to support educational projects or programs that develop or widen the community's knowledge of, skills in, and commitment to, protecting the environment and promoting sustainable behaviour.
- Lead Environmental Community Groups aims to assist eligible lead environmental community organisations build the capacity of the NSW community to protect and conserve our environment.
- Protecting our Places aims to protect land that is culturally significant to Aboriginal people and to support education projects about the environment and its importance in Aboriginal life.
- Research aims to support applied research projects that help address environmental problems in NSW.
- Restoration and rehabilitation (community, State and local government) aims to facilitate projects run by community organisations and government entities working to prevent or reduce environmental degradation of any kind. Through these projects, we also aim to improve the capacity of communities and organisations to protect, restore and enhance the environment.
- Saving our Species Partnership Grants Program aims to encourage partnerships between government, the community, non-government organisations and industry to protect and conserve our

most vulnerable plants and animals. Partnerships facilitated by the program will collaboratively implement on-ground actions and monitoring actions consistent with threatened species conservation projects developed by the Saving our Species Program (described further below).

 Waste Less, Recycle More Initiative – is a mix of Environmental Trust and EPA programs that support and complement each other. They will provide a comprehensive approach to improve the management of waste materials throughout the NSW economy.

Between approximately \$16-17 million was allocated across these programs in the latest funding round through the grant process (Office of Environment and Heritage 2017a).

SAVING OUR SPECIES

The NSW Government has allocated \$100 million over five years (from July 2016) for the Saving our Species program. The program sets out the NSW Government's threatened species management plan and what needs to be done to achieve the overarching objective 'to maximise the number of threatened species that are secure in the wild in NSW for 100 years' (Office of Environment and Heritage 2017b).

Threatened species are managed in different ways under the Program depending on (Office of Environment and Heritage 2017b):

- Their ecology, habitat and distribution.
- Threats to their survival.
- How much we know about them.

All threatened species are allocated to one of six management streams, where information and critical management actions for each species are identified and collated. The management streams include (Office of Environment and Heritage 2017b):

- Site-managed species threatened plants and animals that can be secured by conservation projects at specific sites e.g. weeding, controlling erosion, revegetation.
- Landscape management species threatened plants and animals that need broad landscape scale conservation projects.
- Iconic species are important socially, culturally and economically, and the community expects them to be effectively managed and protected e.g. koala, malleefowl, southern corroboree frog.
- Data-deficient species threatened species that we need to know more about before we can secure them in the wild.
- Partnership species threatened species found mainly in other states and territories. The NSW Government partners with others to protect them.
- Keep watch species no immediate action is needed to protect these threatened species e.g. naturally rare species that have few threats or species that are more common than once thought.

QUEENSLAND

Two core NRM investment programs currently exist in Queensland. These are described below.

NATURAL RESOURCE MANAGEMENT REGIONAL INVESTMENT PROGRAM

The Queensland Government has allocated \$80 million over five years (2013-2018) to the NRM Investment Program to support improved NRM outcomes in the state. The NRM Investment Program is administered by the Queensland Department of Natural Resources and Mines.

Most funding is being provided to support strategic projects delivered through Queensland's regional NRM bodies. Projects undertaken by NRM bodies occur across the following themes (Department of Natural Resources and Mining, 2017):

- 1. Managing priority and invasive weeds
- 2. Managing priority and invasive pest animals
- 3. Restoring soil condition
- 4. Adoption of best practice landscape management
- 5. Restoration of native riparian vegetation along priority waterways
- 6. Restoration of native vegetation in priority wetlands
- 7. Engaged, knowledgeable and skilful communities.

In addition to supporting NRM body projects, the Program also funds state strategic projects such as the protection of the Great Barrier Reef. Included in the total funding allocation is \$30 million to protect the Great Barrier Reef. To date, eight projects have been funded to improve the quality of water entering the Great Barrier Reef and include (Queensland Government 2017):

- Spatial and scientific information management
- Catchment loads monitoring and catchment modelling
- Ground cover and riparian monitoring and reporting
- Wetland extent mapping
- Queensland wetlands program critical support
- Grazing and horticulture best management practice
- ReefBlitz event to promote citizen science and ecotourism opportunities in the Great Barrier Reef
- Training, extension and resources on wetlands in agriculture.

Other state strategic projects include:

- Funding to Queensland Water and Land Carers to assist with administrative costs and undertaking their advocacy role
- Funding to Rockhampton City Council for ex-tropical cyclone Marcia flood-recovery activities
- Funding to AgForward to undertake coal seam gas and agricultural land workshops and field days.

Additional funding has been allocated for riparian restoration to mitigate erosion risk in several creek catchments in the greater Brisbane area, through Healthy Waterways and Catchments.

Funding for state strategic projects is largely distributed through state agencies to assist program administration and provide support over the five years.

FERAL PEST INITIATIVE

The Queensland Feral Pest Initiative, administered by the state Department of Agriculture and Fisheries (DAF), supports weed and pest animal management projects. The Initiative aims to maximise direct investment in on-ground activities that achieve important, enduring and largely public orientated outcomes in relation to pest animals and weeds. The Initiative identifies the following objectives (Department of Agriculture and Fisheries, 2016):

- Building landholder skills and capability
- Building landholder, Indigenous and industry skills, knowledge, engagement and participation.
- Technically feasible projects, that provide value and facilitate local employment
- Projects continue to evolve by including measurable and reportable outcomes.

The funding follows a regional based service delivery model, with projects developed and managed regionally, typically by NRM groups, industry organisations, local governments or regional organisations of local governments or equivalent bodies.

One to three year projects are funded under the Initiative. Round 1 funding supported eight projects across two priority investment areas (Department of Agriculture and Fisheries, 2017):

- Queensland Government Wild Dog and Feral Cat Destruction Initiative (\$10 million)
- Australian Government Weed and Feral Animal Drought Assistance Program (\$10 million).

Round 2 funding commenced in 2016, with projects to be completed by 30 June 2019. Three investment priorities are included under Round 2 funding, as described beneath (Department of Agriculture and Fisheries, 2017):

1. Cluster fencing - \$5 million over three years (Queensland Government allocation)

This funding is allocated to support regionally agreed cluster fencing arrangements in areas with high wild dog density and/or evidence of high impacts. Projects are located in two priority areas affected by long term drought.

2. Regional Weed and Pest Animal Management Projects - \$1.84 million over three years (Queensland Government funding) and \$2 million (Federal Government funding)

State funding is focused on projects in rural areas where weed and pest animal impacts are having or have the potential to have significant economic and environmental impact.

Federal funding is allocated to projects for farmers in drought-affected regions to control established pest animals and weeds, as part of the Australian Government's Agricultural Competitiveness White Paper.

3. Supporting industry and local government to manage weeds and pest animals - \$1.9 million over three years (Queensland Government funding)

This funding is provided to regional local governments or industry organisations to employ staff to support and mentor landholders to increase and/or improve their pest management (weeds and pest animals) activities.

VICTORIA

Several core NRM investment programs currently exist in Victoria, with funding distributed to various groups, including the Catchment Management Authorities. These are described below.

VICTORIAN WATERWAY MANAGEMENT PROGRAM

The Victorian Waterway Management Program is based on an eight-year adaptive management cycle (fiveyear cycle for Melbourne Water) that comprises three main phases: strategy and planning; implementation and monitoring; and evaluation and reporting. As part of the program, the Department of Environment, Land, Water and Planning (DELWP) is responsible for establishing the state policy framework for waterway management.

Water for Victoria is the Victorian Government's new long-term plan for managing state water resources and provides a blue-print for investment in water-related activities and the water sector. The Victorian Government has committed to investing \$537 million over four years (2016-2020) to deliver *Water for Victoria*. Around \$222 million of that will help improve the health of waterways and catchments. Other investments include irrigation modernisation and improving on-farm water use (\$59.6 million), upgrades of rural water systems (\$58 million), preparing for floods and emergencies (\$25 million) and support for Aboriginal participation in water decisions and access to water (\$9.7 million) (DELWP 2017a).

The Victorian Water Program Investment Framework (VWPIF) assists in delivering, and reporting on, *Water for Victoria* over the four-year period. Various DELWP Programs sit within the VWPIF and these include:

- Waterway Health
- Environmental Water
- Our Catchments, Our Communities
- Sustainable Irrigation
- Floodplain Management

The programs vary in type and level of information required and each fund source addresses different policy and strategy obligations. The VWPIF brings together these fund sources to streamline the administrative burden and provide a long-term solution to funding arrangements (DELWP 2016). Six monthly and annual reports are submitted and reporting occurs against the DELWP Standard Outputs.

BIODIVERSITY ON-GROUND ACTION

The Victorian Government has committed \$25.66 million to support biodiversity and threatened species through community action grants, support programs and regional partnership approaches. The funding will focus on protecting and managing a range of native plants and animals, threatened species and habitats through increased engagement and alignment of natural resources, scientific, education and community sectors (DELWP 2017b).

Funding that has been committed to date as part of the Biodiversity On-Ground Action program, includes:

Threatened Species

Investment in this area will support critical activities to manage threats and facilitate new actions to assist with recovery of threatened species in the wild. In 2016, \$554,000 was allocated to deliver urgent activities.

An additional \$2 million will support intensive management actions to be delivered in collaboration with species' recovery teams for ten key threatened species (DELWP 2017b).

Regional Biodiversity Hubs

This involves agencies and organisations working together on large-scale projects to address threats to a range of important native species in priority areas across the state. To date, \$7.7 million has been allocated to 26 large-scale regional partnership projects to protect threatened plants and animals. Projects include removal of woody weeds and other pest plants; rabbit, fox and feral animal control; implementation of protection measures such as fencing from overgrazing; and selective fire management and habitat restoration (DELWP 2017b).

Community and Volunteer Action Grants

Grants have been distributed to support communities to conserve local biodiversity and threatened species on public and private land. Funding of up to \$1 million is available for the grants during 2017. Grants range from between \$5,000 to \$50,000 (DELWP 2017b).

THREATENED SPECIES PROTECTION INITIATIVE

A total of \$5.2 million has been allocated by the Victorian Government for the Threatened Species Protection Initiative to support immediate action on threatened species and habitat protection. The Initiative includes three main programs:

- 1. Community Volunteer Action grants over \$2 million has been distributed to small-scale, local threatened species projects that build community connections to the local environment. In September 2016, ninety-eight successful projects were announced as recipients of Round Two grant funding.
- 2. Critical Action and Strategic Partnerships grants \$3 million was provided to environmental agencies and organisations to undertake work that reduced threats to secure important sites for threatened species. This work funded 70 projects and is now complete.
- Crowdfunding a trial crowdfunding program was undertaken, whereby community could invest directly in threatened species conservation campaigns. It has offered community groups a unique opportunity to raise funds for additional threatened species actions, and have their fundraising efforts matched by the Victorian Government (DELWP 2017c).

REGIONAL RIPARIAN ACTION PLAN

The Regional Riparian Action Plan is a five-year plan to accelerate on-ground riparian management works to improve the health of riparian land along Victoria's regional rivers, estuaries and wetlands. Works include fencing to manage stock, revegetation programs, weed management and construction of off-stream watering systems.

An additional \$40 million is being provided by the state government for riparian works from 2015 to 2020 to implement the action plan.

Appendix 5: State and territory-level NRM priorities across Australia

Note for tables below: spatial assets (where they have been specified) are noted in the body of the table. Coloured cells indicate the topic or threat is a priority for the given investment program or strategy.

	STATE	N S W	N S W	NSW	N S W	WA	S A	ACT	ACT	ACT	TAS	QLD	QLD
	Source (Investment Program or Strategy)	Catchment Action NSW	Environmental Trust	Saving our Species	NSW 2021 Plan	WA NRM Strategy and State NRM Program	SA Strategic Plan 2011	ACT Nature Conservation Strategy 2013- 2023	Pest Animal Management Strategy 2012- 2022	Weeds Strategy 2009- 2019	Natural Heritage Strategy for Tasmania 2013-2030	Regional NRM Investment Program	Feral Pest Initiative
Priority (topic or threat)	Number of states and territories with this as a priority												
Biodiversity conservation	6 of 8	Travelling Stock Reserves			Private land			Focal landscapes - rural landscape, Cotter Catchment, Murrumbidgee River Corridor, urban landscape					
Threatened species including iconic species	7 of 8			Iconic species included	Iconic species included								
Aboriginal cultural heritage	2 of 8	Sites and objects											
Native vegetation	4 of 8				Private land								
Increase opportunities for people to look after environment (including capacity building)	8 of 8												
Aquatic environments (rivers, wetlands, coastal) including environmental water	7 of 8					Ramsar sites	River Murray	Murrumbidgee River					
Weeds and pests	6 of 8				Priority NPWS sites								Wild dogs, feral cats and feral pigs
Pollution reduction (including waste management)	1 of 8												

	STATE	NSW	NSW	NSW	NSW	WA	S A	АСТ	АСТ	АСТ	TAS	QLD	QLD
Climate	6 of 8												
change													
Planning	3 of 8												
Research	3 of 8												
including													
Marine	4 of 8											Great Barrier	
												Reef	
Land (soils)	6 of 8					High priority							
						agricultural land,							
						rangelands							
Water	5 of 8							Cotter					
Water quality	5 of 8					Peel-Harvey Vasse-		Murrumbidgee				Great Barrier	
Water quality						Wonnerup, Wilson,		River				Reef	
						Leschault, Hardy							
						Inlet and Swan-							
Inshore and	1 of 8					Dhufish							
demersal	1010					Dhansh							
finfish													
Freshwater fish	1 of 8					Sawfish in Fitzroy							
						River, pygmy perch							
						the southwest and							
						mussels in the							
						Helena River							
Phytophthora	1 of 8					Fitzgerald R.,							
(dieback)						Arid National Parks							
Remediating	1 of 8												
fire affected													
areas													
Flood recovery	1 of 8												
WORKS	2 - 6 0												
development	3018												
Fire	1 of 8												
management													
Sustainable	1 of 8												
practices by													
Industry	1 of 9												
Catchment													
Management													
Mining	1 of 8												
NRM based	1 of 8												
economic													
opportunities	1 - 6 0												
Groundwater	ιυιδ												

STATE	QLD	VIC	VIC	VIC	VIC	VIC	VIC	VIC	VIC	NT	NT
Source (Investment Program or Strategy)	Strategic Plan 2016-2030 (Dept. NR & Mines)	Our Catchments, Our Communities	Sustainable Irrigation Program	Victorian Waterway Management Program	Threatened Species Protection Initiative	Regional Riparian Action Plan	Biodiversity 2037 plan	Water for Victoria	Victorian Waterway Management Strategy	NT NRM Plan 2016-2020	NT Balanced Environment Strategy
Priority (topic or th	nreat)										
Biodiversity conservation											
Threatened species including iconic species											
Aboriginal cultural heritage											
Native vegetation											
Increase opportunities for people to look after environment (including capacity building)											
Aquatic environments (rivers, wetlands, coastal) including environmental water									Formally listed sites e.g. Ramsar, Heritage Rivers (aquatic environments).		
Weeds and pests											
Pollution reduction (including waste management)											
Climate change											
Planning											
Research including monitoring											
Marine											
Land (soils)											
Water resources											
Water quality	Great Barrier Reef										
Inshore and demersal finfish											
Freshwater fish											
Phytophthora (dieback)											
Remediating fire affected areas											
Flood recovery works											
Urban development											

STATE	QLD	vic	NT	NT							
Fire management											
Sustainable practices by industry											
Integrated Catchment Management											
Mining											
NRM based economic opportunities											
Groundwater											

Appendix 6: State and territory-level NRM targets across Australia

NSW 2021 PLAN

Targets and priority actions (in relation to NRM) have been identified for Goal 22 and 23 in the NSW 2021 Plan (Department of Premier and Cabinet 2011):

- Goal 22 Protect our natural environment
 - Target to protect and restore priority land, vegetation and water habitats including:
 - Manage weeds and pests at priority sites on NPWS parks and reserves.
 - Protect and conserve land, biodiversity and native vegetation through land acquisitions for permanent conservation measures, voluntary arrangements with landowners for conservation management of private land and improved sustainable management.
 - Protect rivers, wetlands and coastal environments through actively managing water for the environment.
 - Target Protect local environments from **pollution** through targeting illegal dumping and improving information on air quality.
 - Target Increase **renewable energy**.
 - Priority actions under Goal 22 specific to the regional NRM organisations in NSW (Local Land Services) include:
 - Regenerate degraded natural bushland including riverbanks and degraded waterways through a \$10 million fund.
 - Purchase and protect strategic areas of high conservation value and ensure more green spaces through the \$40 million Green Corridor Program.
 - Increase Aboriginal participation in natural resource management by supporting Aboriginal Green Teams and other groups.
 - Better protect threatened and iconic species such as koalas. Make it easier for community groups and businesses to get involved in threatened species conservation.
- Goal 23 Increase opportunities for people to look after their own neighbourhoods and environments
 - Target to increase the devolution of decision making, funding and control to groups and individuals for local environmental and community activities including catchment management and Landcare.
 - Target minimise impacts of climate change in local communities.
 - Priority actions under Goal 23 specific to the regional NRM organisations in NSW include:
 - Develop an action plan for spending \$500,000/year for four years on Landcare.
 - Increase number of volunteers undertaking bush regeneration projects.
 - Upgrade Catchment Action Plans in regions.

- Build the capacity of regional NRM organisations and agencies to undertake the Catchment Action Plan upgrades.
- Continue NRM investment through **Catchment Action NSW**.

SA STRATEGIC PLAN 2011

The SA Strategic Plan includes many targets under a series of visions that relate to the environment. Those that are within the delivery scope of regional NRM organisations include:

- Vision to look after the natural environment
 - Target 69 Lose no native species as a result of human impacts (baseline: 2004).
 - Target 70 By 2020, achieve a 25% increase in the protection of agricultural cropping land from soil erosion and a 25% improvement in the condition of pastoral land (baseline: 2002-03 and 2005-06 respectively).
 - Target 71 Maintain the health and diversity of South Australia's unique marine environments (baseline: 2011).
 - Target 72 Increase participation in nature conservation activities by 25% by 2015 (baseline: 2010).
- Vision to protect water resources
 - Target 75 South Australia's water resources are managed within sustainable limits by 2018 (baseline: 2003).
 - Target 76 Increase environmental flows in the River Murray by a minimum of 1,500GL by 2018 (baseline: 2003).
 - Target 77 South Australia maintains a positive balance on the Murray-Darling Basin Authority salinity register (baseline: 2008).

ACT NATURE CONSERVATION STRATEGY 2013-2023

The outcomes and targets specified in the Nature Conservation Strategy include:

- Outcome 1 Native vegetation and biodiversity is maintained and improved.
 - Target 1 The overall extent of lowland native vegetation across the ACT will be maintained, and the condition of lowland native vegetation communities will be improved.
 - Target 2 A measurable increase in connectivity between patches of native vegetation, non-native vegetation in urban areas, and riverine systems.
- Outcome 2 Landscapes are more resilient, including to climate change.
 - Target 3 A reduction in threats to biodiversity from weeds, pest animals and inappropriate fire regimes.
 - Target 4 Impacts from threatening processes, and climate change refugia in the ACT, are better understood and appropriately managed.
- Outcome 3 Community health and wellbeing is increased through use and appreciation of natural areas and 'green assets' in urban areas.
 - Target 5 An increase in the area of land under volunteer effort (by ParkCare, 'Friends of' or other volunteer groups) in management of the Canberra Nature Park.

- Target 6 Ten areas of conservation significance (including areas outside reserves) 'adopted' by ACT schools or higher learning institutions as sites for nature-based education.
- Target 7 Increased community understanding of, and support for, the protection of the ACT's biodiversity.

VICTORIAN BIODIVERSITY 2037 PLAN

Statewide targets have been set under the two goals within Biodiversity 2037:

- Goal Victorians value nature.
 - Statewide target By 2037,
 - All Victorians connecting with nature.
 - Five million Victorians acting to protect the natural environment.
 - All Victorian Government organisations that manage environmental assets contribute to **environmental-economic accounting**.
- Goal Victoria's natural environment is healthy.
 - Statewide target A net improvement in the outlook across all species by 2037, as measured by Change in Suitable Habitat, with the expected outcomes being:
 - That no vulnerable or near-threatened species will have become endangered.
 - That all critically endangered and endangered species will have at least one option available for being conserved ex situ or re-established in the wild (where feasible under climate change) should they need it.
 - A net gain of the overall **extent and condition of habitats** across terrestrial, waterway and marine environments.
 - Contributing targets (i.e. estimate of relative area required to deliver statewide targets)
 - 4 million hectares of control of **pest herbivores** (e.g. deer, rabbits, goats, feral horses) in priority locations.
 - 1.5 million hectares of control of **pest predators** (e.g. foxes, feral cats) in priority locations.
 - 1.5 million hectares of **weed control** in priority locations.
 - 200,000 hectares of revegetation in priority areas for connectivity between habitats.
 - 200,000 hectares of new permanently protected areas on private land.

NT NRM PLAN 2016-2020

There are nine programs under the NT NRM Plan, each with a goal (written in the form of a target) as follows:

- Program 1 Managing fire
 - Goal Within 10 years, all regions in the NT have an appropriate fire regime across more than 75% of their area.
- Program 2 Preventing and managing weeds

- Goal Within 10 years, all regions in the NT have coordinated approaches to weeds resulting in no introductions of new weed species or spread of existing weed populations.
- Program 3 Reducing the impacts of feral animals
 - Goal Within 10 years, all regions in the NT have a coordinated and strategic approach to feral animal management programs across more than 75% of their area.
- Program 4 Industry adoption of sustainable practices
 - Goal Within 10 years, more efficient and sustainable practices around utilisation and management of natural resources are adopted by industry bodies in the NT, ensuring that people's livelihoods and environmental conditions are benefitting from strong economic growth.
- Program 5 Water resources and soil management
 - Goal Within 10 years, all regions in the NT have increased knowledge that is being applied to both water resource planning and allocation, and soil management practices.
- Program 6 NRM based economic opportunities
 - Goal Within 10 years, the conservation economy and NRM based economic opportunities are supporting rural livelihoods in all regions in the NT.
- Program 7 Minimising ecological footprints of development
 - Goal Within 10 years, energy and water efficiency have improved to be equal with comparable areas in Australia and offsets are utilised for high priority NRM activities.
- Program 8 Managing and protecting key natural and cultural assets
 - Goal Within 10 years, 75% of sites of cultural and natural significance are being managed cooperatively, based on knowledge of values, threats and the best management practices.
- Program 9 Knowledge, capacity and engagement
 - Goal Within 10 years, all regions within the NT have an active group of NRM stakeholders who at least once a year review, analyse and adapt their work.

Appendix 7: Monitoring and reporting requirements associated with core NRM investment programs

REQUIREMENT	CATCHMENT ACTION NSW	ENVIRONMENTAL TRUST	SAVING OUR SPECIES
REPORTING			
Indicators and metrics that need to be reported*	All outputs achieved (against list of Standard Output codes from MER Plan). Map of location of all works. 10-12 impact case studies showing how projects deliver outcomes against themes (outcome statements in MER Plan against four priority investment themes). Evaluation of progress towards meeting four year outcomes for each theme (Key Evaluation Questions around effectiveness, appropriateness, efficiency, sustainability from MER Plan). Financial reporting.	All outputs achieved under each project objective – as per the Project Measures identified in the Monitoring and Evaluation Plan at the start of the project. A list of measures is provided in the Project Measures Table (tailored to each type of Grant). Commentary around progress towards the description of 'what project success looks like' from the M&E Plan. General description of three most important outcomes. Financial reporting.	 As per the Monitoring, Evaluation and projects: 1. Investment (short-term) e.g. \$, FT 2. Management activities - Outputs (3. Threat and population outcomes- Threat (medium-term) e.g. de survival, amount of sediment Site/population (long-term) e.g. condition, reproductive succe Project e.g. population outcom Species in NSW e.g. abundar NB: project outcomes are aggregated a standardised reporting on whether each Note: database reporting fields are shown the survival of the key evaluation question for all Sos species, habitat or threat responding to particular site or population?'
Location(s) and scale(s) of reporting^	Sites	No requirement to report location of works.	Management sites (as per report cards
Timing of reporting (frequency, time of year)	Annual, report template completed by regions over August and September. Submission of compiled report to OEH in October.	Progress reports periodically as per Grant Agreement. Final report at conclusion of Grant Agreement.	Annual
Who reports	Each LLS region.	The Grant recipient.	Funding recipient
How reporting occurs (method, system)	CA NSW Business Plan Reporting template (describes what they want to do) and CA NSW Annual Reporting template (to capture progress) provided from Executive Support Team. Completed templates from across LLSs are compiled and sent to OEH.	Progress and final reporting form to be completed (available online). Each form is tailored to an individual type of Grant.	Species report cards (stored online) – performance against outcomes and red Annual action plan – identifies the action given financial yr and the outcomes.
Other requirements		Must develop a Monitoring and Evaluation Plan (using a form provided) which includes risk assessment, communication plan, project plan, evaluation plan.	Very detailed processes established fo plan.
RECORDING			
Indicators and metrics that need to be recorded	As per reporting above.	As per reporting above.	As per reporting above.
Recording system	No state database. Regions extract data from their systems and send it to state government.	No specified requirement.	SoS database - holds all information at projects, e.g. management actions, site data, species expert information and a web-enabled and designed to allow an appropriate for their level of engagement
Scale of recording	Site scale (spatial data)	Site scale	Site scale
Timing of recording (frequency, time of year)	August	As per Grant Agreement.	Data must be entered by end of each f
Who records	Regional staff	The Grant recipient	Funding recipient
MEASURING			
Indicators and metrics that need to be measured	As per reporting above.	As per reporting above.	As per reporting above.
Timing of measurements (frequency, time of year)	No requirements – at time of implementation	Project measures table appears to include several stages for measuring and recording actual progress against projected progress.	Measure outputs at time of implementa Specific to project for outcomes – depe changes that can be detected.
Who measures	Delivery partners and regional staff	Grant recipient.	Funding recipient

Reporting Guidelines for conservation
Es (short-term) e.g. No. of Ha, km, days
ensity of pests or weeds, species
.g. species abundance, demography, ess, condition of habitat
nce and distribution (if available)
across the program through ch project has met its annual objectives.
own in MER guidelines on pg. 15.
S conservation projects is: 'is the o management as expected, regarding a
s)
uses traffic light system to evaluate ecords confidence level.
ions planned for implementation in any
or setting up monitoring and evaluation
and data relating to SoS conservation te maps, prioritisation data, demographic associated documents. The SoSDB is ny stakeholder to access and edit data as ent in the program.
financial year.
ation.
ends on species, threats, timing of

	CATCHMENT ACTION NSW	ENVIRONMENTAL TRUST	SAVING OUR SPECIES	
REQUIREMENT	(N S W)	(N S W)	(NSW)	
How measurements are taken	No requirements for specific methods.	Guide to monitoring ecological restoration projects – photo monitoring and plot monitoring (by Environmental Trust).	Expert opinion and review required in	
		Guidelines for monitoring weed control and recovery of native vegetation (NSW DPI 2009).		
		Guide to evaluating environmental education projects and programs (NSW Dept of Environment and Conservation 2004)		
Other requirements			Species Technical Group reviews pro receiving >\$20K/yr of SoS funding.	

* Considers outputs, short-term outcomes, long-term outcomes, specificity to program or combined with other funding.

^ e.g. sites, sub-catchments, catchments, regions.

REQUIREMENT	NRM REGIONAL INVESTMENT PROGRAM (QLD)	FERAL PEST INITIATIVE (QLD)
REPORTING		
Indicators and metrics that need to be reported	 Project logic demonstrating linkages to state outcomes. Six monthly progress report (biannual report) containing the following: Project status Breakdown of budget Summary of tasks and progress towards corresponding standard output. Reporting occurs against each output for each program. Outputs align with Qld Standard Output Codes. For each output, the following is reported: Detail on project output progress over the reporting period e.g. quantity, delivery partners, unintended outcomes, lessons learned, emerging issues, risks to future delivery etc. Significance of progress over reporting period e.g. farms improving practices, estimates of monetary savings, reduced risk to landholder from weed control activities, increased productivity etc. and anecdotal information from stakeholders where available. Financial contributions from partners Spatial data Final report at project completion submitted to Queensland Government. Example included: Achievements and outcomes, specifically outputs achieved for each program/activity – includes quantitative M&E targets and actual measures achieved Unintended outcomes Partnerships formed Lessons learned Implications for future direction Additional information included list of media articles Spatial data showing extent of revegetation and weed control works. Financial reporting for each program/activity 	Quantitative measures of increased viskills, knowledge and engagement and employment/engagement. Reportable outputs include: Cluster fencing Building long term capacity Co-contribution Events Training sessions Properties assisted Pest animal control – vertebr Pest plant control Property / reserve managem Employment Key achievements reports. Annual reports.
Location(s) and scale(s) of reporting^	Spatial data in the 6-monthly report showing investment/activity target area; point or polygon location of activities by type (e.g. pest plant control, soil conservation, training events).	Outcomes to be reported at a regiona
Timing of reporting (frequency)	6 monthly progress report, final report	Annual reports.
Who reports	Funding recipient.	Funding recipient.
How reporting occurs (method, system)	Online via Enquire. Offline forms are completed and uploaded to online system	

n MER process.

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volunteer, landholder and industry nd Indigenous

orates

nent plans

l level.

	VICTORIAN WATERWAY MANAGEMENT PROGRAM	BIODIVERSITY ONGROUND ACTION		
	(VIC)	(VIC)		
REPORTING				
Indicators and metrics that need to be reported*	 As per the VWPIF reporting guidelines, <u>six-monthly</u> reports require the following: Financial data Summary of activities completed to date Key achievements and highlights to date (for Environmental Water, Sustainable Irrigation and OCOC require per activity descriptions) Challenges and issues to date, and mitigation strategies A reflection of the effectiveness of actions underway or completed to date Indication of where a variation is required (to be entered into PIRS) Detailed project plan required for OCOC 	 The DELWP Output Data Standards apply to all DELWP NRM attributes are to be included in the output reporting: Spatial data Standard output data, including: Output ID (agency code & unique number) Corresponding Output Data Standards number Output title Output title Output type Activity type Year completed 		
	 Annual reports have the same reporting requirements as the six-monthly reports, with the following additions: A reflection of the effectiveness of actions underway or completed to date (for Environmental Water, OCOC and SIP only) Four of the most significant or highest priority projects (for fund source CW514-51, CW514-52 or CW514-53 only) Overall life to date project summary (for projects in 2nd year of implementation and above) Mid-term and final evaluation (for OCOC, Environmental Water and SIP only in 2018 and 2020 annual reporting years) Report on "people, participation and community" for Waterway Health, Environmental Water, OCOC and SIP only e.g. FTE, Indigenous employment. Case studies – for OCOC and SIP only Detailed financial breakdown for OCOC only. Pre-end of financial year reports require: Financial status, incl. actual revenue and unspent funds as of EOFY. 	 Fund source Project ID (for CMAs this is the PIRS number) Delivery agent River-related works Planned management outcome Planned management outcome direction of change Region, area or reach Specific attributes Outputs may include structural works (i.e. man-made structures and services such as weed control or rubbish removal); manage practice change); planning and regulation. The DELWP Output Data Standards identify additional attributes reporting on particular outputs. For example, for water storage output), the volume of stored water is required as a specific attrabove. 		
Location(s) and scale(s) of reporting^	Location data only required for OCOC case studies, where deemed relevant.	Location data required for each output.		
Timing of reporting (frequency, time of year)	All programs funded under the VWPIF are required to submit a six monthly and annual report. Pre-end of Financial Statements are required for all programs, except the Floodplain Management program.			
Who reports	CMAs	Funding recipients.		
How reporting occurs (method, system)	Reports submitted by electronic copy in PDF with separate excel for tabulated numerical data. Financial variations to be entered into PIRS.			
Other requirements	Reporting related to specific initiatives e.g. Regional Riparian Action Plans. CMA annual reports and corporate plans.			

I investments. The following

nge

es); environmental works (i.e. goods gement services (i.e. a behaviour or

tes that may be required for the e structures (reported as a Structure ttribute, in addition to those identified

Appendix 8: MERIT project form

BACKGROUND

This section provides an overview of what a project form in MERIT could include and an example of how it could be used for a large project with multiple activities (standard outputs) and outcomes.

The purpose of the form is to capture all the information that is needed by the Australian Government for each project funded under a federal investment program. Based on discussions with the DoEE, this primarily includes the project activities and how they contribute towards long-term outcomes being sought by the federal government.

There are five main parts of the proposed project form:

- 1. **Background:** including the project title and description, location, any relevant targets species and the Matter(s) of National Environmental Significance that apply to the project.
- Activity-outcome matrix: which shows the relationship between the NRM activities (standard outputs) undertaken during the project and the long-term environmental outcomes being sought under the federal investment program. This is the location where total standard outputs are tallied against planned outputs.
- 3. Activity progress: This is where standard outputs are recorded against planned outputs for each sixmonth stage, and a map of works is provided.
- 4. **Monitoring program and results:** which outlines what monitoring activities are to be undertaken over time. This is where actual monitoring activities are recorded against planned activities, and the findings from the monitoring are summarised, with reference to supporting evidence (e.g. survey results, photos).
- 5. The project outcome story: taking the form of a program logic for each outcome, this provides the 'big picture' story of how the project has contributed to (and is expected to continue contributing towards) long-term environmental outcomes. Information provided in other parts of the form is used to build this section. A concluding summary statement captures the degree of evidence that exists for the project contributing towards the intended outcomes and the risk factors that should be considered in follow-up evaluations.

To maximise efficiency and promote consistency over the lifetime of a project, it would be beneficial to have a strong link between the funding application, MERI Plan and project form regarding the information that is required on a project. In other words, the information required in the project form should also be required in the funding application and MERI Plan, with the project form being where the data is entered and conclusions are provided.

PROJECT FORM

Background (from approved funding application)

Project title:

Location: (could be a broad region or a specific environmental asset e.g. a wetland)

Target species (if applicable): (could be threatened species of focus or pest species to be managed)

Matter(s) of National Environmental Significance: (nominate relevant matter from drop down list)

Brief description: (single paragraph describing what the project is aiming to do)

Activity-outcome matrix (from approved funding application)

Activity (standard output)	Outcome (nominate fi federal list)	A rom	OutcomeB(nominatefromfederal list)	Outcome (nominate from federal list)	Total planned	Actual (automatically calculates from below)
Output X (nominate from federal list)		No	to which outp	uto		
Output Y (nominate from federal list)		co ou Se	ntribute to ea tcome (not quantitie e example below.	ich is).		
Output Z (nominate from federal list)						

Activity progress

Project stage 1 (0-6 mths)

Activity (standard output)	Planned	Actual	Comments (if discrepancy between planned and actual is significant this must be addressed in these comments)
Automatically filled from above table	From funding application		
Automatically filled from above table	From funding application		
Automatically filled from above table	From funding application		

Etc for relevant number of six monthly project stages

Insert map – include a label for each point, line or polygon that specifies the project number, proponent and type of activity that has been delivered (from a drop-down list).

Monitoring program and results (from approved MERI Plan)

Year	Description of monitoring or existing information	Planned (approx. timeline)	Actual (date)	Summary of findings (reference to attached supporting evidence)
0-1 (baseline condition)	Survey 1			
	Previous study	-	-	
1-2 (short-term results)	Survey 2			
2-3 (short-term results)	Survey 3			
5 (medium-term results)	Survey 4			

Etc for relevant number of project years

The project outcome story

Concluding summary statement: (single paragraph outlining degree of evidence of progress towards intended long-term outcomes and major risk factors that should be considered in follow-up evaluations)

Outcome	Outcome A (automatically filled in from above)
	↑
Short-term & medium-term results	Post-activity results from monitoring undertaken in years 1-2 until project completion date
	↑
Activities	Results of actual standard outputs delivered through the project
	↑
Baseline condition	Benchmark (pre-activity) results from monitoring undertaken in year 0-1

Etc for relevant number of outcomes

EXAMPLE PROJECT FORM

Background (from approved funding application)

Project title: Gunbower Creek riparian and aquatic habitat reconnection and restoration project.

Location: Gunbower Creek bordering the Gunbower Forest Ramsar Site.

Target species (if applicable): Weeds of National Significance (Blackberry and Willows).

Matter(s) of National Environmental Significance: Ramsar wetlands of international importance, listed threatened species (Murray Cod).

Brief description: The project aims to reconnect and restore the riparian and aquatic habitat along a portion of Gunbower Creek to protect the environmental values of the Creek and provide ecological connectivity in a highly altered landscape. It involves installing fish passage on Thompson Weir, treating infestations of blackberry and willows, erecting stock proof fencing and installing off-stream watering points, revegetating riparian areas and training local landholders in practices to reduce off-site impacts from their properties e.g. nutrient and sediment loads, weed dispersal.

Activity-outcome matrix (from approved funding application)

		Outcomes	Total planned	Actual	
Activity (standard output)	Reduce the impact of invasive species	Sustain environmental values in Ramsar wetlands	Farmers to increase uptake of sustainable farm and land management practices		calculates from below)
Fish passage installation		x		1 fishway	1 fishway
Weed treatment	x	x		50ha	51ha
Fencing		x	x	10km	9.5km
Off-stream watering sites		x	x	16 sites	14 sites
Revegetation	x	x		30ha	29ha
Training and skills development			x	5 events 100 participants	5 events 80 participants

Activity progress

Project stage 1 (0-6 mths)

Activity (standard output)	Planned	Actual	Comments
			(if discrepancy between planned and actual is significant this must be addressed in these comments)
Fish passage installation	0	0	
Weed treatment	10ha	12ha	
Fencing	1km	200m	Slow uptake by landholders. Communication plan should improve this.
Off-stream watering sites	2	1	Second point was unnecessary
Revegetation	5ha	5ha	
Training and skills development	2 events	2 events	
	40 participants	33 participants	

Etc for relevant number of six monthly project stages

Map showing location of each type of activity.



Monitoring program and results (from approved MERI Plan)

Year	Description of monitoring or existing information	Planned (approx. timeline)	Actual (date)	Summary of findings (reference to attached supporting evidence)
0-1 (baseline condition)	Fish survey (upstream and downstream of Thompson Weir)	1 (Sep)	1 (Oct)	The survey found similar numbers of native fish upstream and downstream of the weir, but a different suite of species. No Murray Cod were found. See fish survey report attached (Smith, R. 2017).
	Riparian vegetation and weed survey	1 (Sep)	1 (Sep)	The survey indicated moderate to poor riparian vegetation condition. There was a low diversity and cover of native species, with a high prevalence of weeds (including blackberry and willows) at the survey sites. See vegetation survey report attached (Smith, K. 2017).
	Private land weed survey	1 (Sep 2017)	1 (Sep 2017)	Most survey sites contained a moderate cover of weed species. However, only a small number of locations contained blackberry and willows. See private weed survey report (Smith, K. 2017).
	Survey of stock access to waterway	1 (Sep 2017)	1 (Sep 2017)	50% of the riparian length surveyed had open access to stock, with many sites showing evidence of pugging on the bank and faecal matter entering the waterway. See survey report attached (Smith, J. 2017).
	Water quality sampling	1 (Sep 2017)	1 (Sep 2017)	Sampling indicated high nutrient concentrations. See report attached (Smith L. 2017).
	Aquatic macroinvertebrate survey	1 (Oct 2017)	1 (Oct 2017)	The survey found a moderate number of macroinvertebrates, but a low diversity of species. See report attached (Smith, P. 2017).
	Landholder survey of farm management practices	1 (Sep 2017)	1 (Sep 2017)	The survey found one quarter of landholders had developed and implemented Whole Farm Plans including installing irrigation reuse systems, adopting sustainable irrigation practices and other land management practices e.g. pest plant and animal control, stocking levels, using land within capability limits. Another quarter were in the process of developing Whole Farm Plans and about half had clear opportunities to improve their practices. See report attached (Smith, T. 2017).
1-2 (short- term results)	Nil – delivery focus	0	0	
2-3 (short- term results)	Fishway structural compliance and functionality assessment	1 (Sep 2019)	1 (Dec 2019)	The fishway was deemed to be structurally compliant and functioned as intended. Surveys found a diverse range of fish of varying sizes were using the fishway from September through December 2019.

Year	Description of monitoring or existing information	Planned (approx. timeline)	Actual (date)	Summary of findings (reference to attached supporting evidence)
	Riparian weed treatment survey	1 (Sep 2019)	1 (Sep 2019)	Initial weed treatment was successful over 95% of the treated area. Follow up treatment will occur in the coming months.
	Assessment of fencing/OSWP maintenance and use	1 (Sep 2019)	1 (Sep 2019)	All fences and off-stream watering points remained and had been adequately maintained. There was no new evidence of stock accessing the waterway where infrastructure had been installed.
	Revegetation survey – plant survival, maintenance.	1 (Sep 2019)	1 (Sep 2019)	Due to the dry conditions, the plant survival rate was approximately 60%. Remaining plants appeared healthy and were growing. No maintenance issues were identified.
	Post training capacity building survey	1 (Sep 2019)	1 (Sep 2019)	Surveys of participants indicated 80% felt they had an increased understanding of sustainable farming and land management practices, with 50% indicating they were planning on making changes to their farming systems in the next six months.
	Other observations	Ongoing	Sep 2019	Even with the dry conditions, the areas where stock had been fenced off from the waterway had greater groundcover than unfenced areas.

Etc for relevant number of project years

The project outcome story

Concluding summary statement: there is a high-degree of evidence that the activities undertaken throughout the project have reduced the impact of invasive species along Gunbower Creek, and will continue to do so as the native vegetation becomes established within the riparian zone (and out-competes weeds). However, there is a risk of weed re-invasion in the future and this should be assessed over time.

Outcome	Reduce the impact of invasive species
	↑
Short-term results	99% of the area treated for weeds was free of the target species at project completion.
	70% of revegetation was growing at project completion (providing long-term competition for weeds).
	Regeneration of native species was observed in some weed treatment areas (providing competition for future weed germination).
	↑
Activities	51 ha of weed treatment
	29 ha of revegetation
	↑
Baseline condition	Riparian vegetation was in moderate to poor condition, with a high presence of blackberry and willows. Isolated patches of these weeds also occurred on nearby private land.

Concluding summary statement: there is a high-degree of evidence that the activities undertaken throughout the project will sustain the environmental values in the Gunbower Forest Ramsar wetland. This includes improving access to habitat for native species such as the nationally significant Murray Cod and improving the quality of habitat (both instream and riparian) associated with the Gunbower Creek that borders the Ramsar floodplain wetland.

Outcome	Sustain environmental values in Ramsar wetlands
	↑
Short-term results	A diverse range of fish of varying sizes use the new fishway, opening up 50km of Gunbower Creek to native fish passage. Local anglers have begun catching Murray Cod in locations where they have been absent in recent years.
	99% of the area treated for weeds was free of the target species at project completion.
	70% of revegetation was growing at project completion, across almost 30 native species.
	All fences and off-stream watering points were being used and maintained by landholders, with almost 10km of Gunbower Creek being free from direct stock impacts. Greater groundcover was observed in areas free of stock access.
	Community members reported anecdotal evidence of reduced algal blooms during the dry period, compared with previous similar climate and flow conditions.
	↑
Activities	1 fishway
	51 ha of weed treatment
	29 ha of revegetation
	9.5km of fencing
	14 off-stream watering sites
	↑
Baseline condition	The passage of native fish along Gunbower Creek was impeded, with the native fish assemblage appearing to differ on either side of the Thompson Weir.
	Riparian vegetation was in moderate to poor condition, with a high presence of blackberry and willow. Isolated patches of these weeds also occurred on nearby private land.
	Half of the Gunbower Creek had been directly impacted by stock, with the water containing unnaturally high nutrient levels. There was a low diversity of aquatic macroinvertebrates.

Concluding summary statement: through the project activities local landholders have improved their understanding of sustainable farm and land management practices. There has been an increased adoption of some of these practices during the project (as evidenced by the improved management of stock impacts along 10km of Gunbower Creek). Adoption of other improved practices is expected to continue after project completion. Changes in land ownership poses a risk to future changes being made.

Outcome	Farmers to increase uptake of sustainable farm and land management practices
	↑
Short-term results	All fences and off-stream watering points were being used and maintained by landholders, with almost 10km of Gunbower Creek being free from direct stock impacts. 80% of participants felt they had an increased understanding of sustainable farming and land management practices, with 50% indicating they were planning on making changes to their farming systems in the following six months.
	↑
Activities	9.5km of fencing 14 off-stream watering sites
	5 events with 80 participants
	↑
Baseline condition	Isolated patches of blackberry and willows occurred on private land.
	Half of the Gunbower Creek had been directly impacted by stock.
	Most landholders along the Creek had opportunities to improve the sustainability of their farming and land management practices.
Appendix 9: Standard outputs used by federal and state governments

Note: states and territories not mentioned in the analysis do not have their own specific list of standard outputs that are required to be reported against by the regional NRM organisations.

TROJECT MANAGEMENT THEME (Scope: planning, management,			
Output	Parameter and/or metric	Source	
			Conclusion: Similar outputs around Indigenous employment in QLD. Outputs relating to Indigenous individuals or employment are
Indigenous employment and businesses	Number of Indigenous people employed PT (rangers)	MERIT - DOEE	highlighted green below.
	Number of Indigenous people employed F1 (rangers) Number of Indigenous people employed PT (not rangers)	MERIT - DOEE MERIT - DOEE	
	Number of Indigenous people employed FT (not rangers)	MERIT - DoEE	
	Number of new Indigenous businesses	MERIT - DOEE	
	Number of contracts established by Indigenous businesses	MERIT - DOEE	
Management plan development	Type of plan	MERIT - DoEE	Conclusion: Several outputs relate to developing management plans. These are highlighted blue below.
	Name of plan	MERIT - DOEE	The metrics are similar between them.
	New or revised ? Area covered (km2)	MERIT - DOEE MERIT - DOEF	
	Participant information?	MERIT - DOEE	
Works planning and risk	Participant information?	MERIT - DOEE	
Site monitoring plan		MERTI - DOEE	Conclusion: Several outputs relate to
Indigenous knowledge transfer (see stakeholder and community			partnerships. These are highlighted
tab for further metrics)	Number of formal partnerships established	MERIT - DoEE	orange below.
Project administration	Type of administration activity	MERIT - DoEE	
	Participant information?	MERIT - DOEE	
Community grants	In this reporting period, has there been an expression of interest process for awarding Community Grants?	MERIT - DOEE	Construitore Council autority relate to
Conservation Actions for Species and Communities	Type of agreement mechanism	MERIT - DoEE	Conclusion: Several outputs relate to agreements (in QLD, NSW and VIC). The number and area covered by the agreement are the consistent metrics used. These are highlighted in grey below.
	Number of agreement mechanisms	MERIT - DOEE	
	Area under agreement (ha)	MERIT - DOEE	
Planning	Participant information? What is being planned	MERIT - DOEE	
rialiting		GRID-John Holley	
Best management practice codes or guidelines completed	Number	Enquire - QLD	
Regional strategies, investment plans reviewed or revised	Number	Enquire - QLD	
Catchment or sub-catchment plans or strategies completed	Number	Enquire - OLD	
Property or reserve management plans	Number completed	Enquire - QLD	
	Area (ha) covered	Enquire - QLD	
Recovery or management plans for threatened species or			
ecological communities	Number completed	Enquire - QLD	
ecological communities Other resource management plans	Number completed Number of species or communities covered Number completed	Enquire - QLD Enquire - QLD Enquire - QLD	
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STAKEHOLDER AND COMMUNITY THEME (Scope: communication, awar	eness raising, engagement, participation, training, capacity bu	ilding).	
Outsut	Parameter and for metric	Fourse	
			Conclusion: Many outputs relate to community
			participation, engagement and awareness raising.
			Metrics generally include number of events and
			number of participants. Another common related
			output involves awareness raising materials and products (including number produced and to a
			lesser extent the number of recipients). Outputs
Community participation and engagement	Number of events	MERIT - DoEE	relating to these are highlighted green below.
	Type of event	MERIT - DOEE	
	Purpose Industry addressed	MERIT - DOEE MERIT - DOEF	
	Delivery partners	MERIT - DOEE	
	Participant information	MERIT - DoEE	
			Conclusion: This output is not widespread. QLD has
			Numbers of people involved in knowledge sharing
	Number of Indigenous on-country visits with older and		opportunities is most common metric. Outputs
Indigenous knowledge transfer	younger people together	MERIT - DOEE	relating to these are highlighted blue below.
	Were Indigenous decision makers involved in this activity?	MERIT - DOEE	
	Number of datasets collected and shared publicly	MERIT - DOEE MERIT - DOEE	
	Number of formal partnerships established	MERIT - DOEE	applicable to project management theme
			Conclusion: This is a common output. Metrics
			generally include number of events and number of
Training and skills development	Tuno of course	MERIT DOFF	participants. Outputs relating to these are
Training and skills development	Number of participants who completed course	MERIT - DOEE MERIT - DOEF	nignlighted orange below.
	How have learned skills been applied to this project	MERIT - DOEE	
	Participant information	MERIT - DoEE	
			Conclusion: Only other common output relates to
			provision of support to community groups and
Capability enhancement activity	Number?	GRID	italics below.
	Number (electronic media, hard copy products, other, verbal		
Awareness raising developed products	communications)	GRID	
Land/water managed using Traditional Knowledge	Area (km2)	Enquire - QLD	
Awareness raising events (such as demonstrations, field days)	Number of events	Enquire - QLD	
Publications (written products such as brochuse)	Number of participants attending	Enquire - QLD	
Publications (written products such as brochures)	Fistimated number of recipients	Enquire - QLD	
Displays (for use at events)	Number developed	Enquire - QLD	·
Media opportunties (resulting in newspaper articles or radio/television			
appearances)	Number	Enquire - QLD	ļ
Websites	Number developed or significantly enhanced	Enquire - QLD	
Training sessions	Number of website hits	Enquire - QLD	
Training sessions	Number of participants	Enquire - QLD	
	Number of workbooks, course notes or other materials		
Training materials	developed	Enquire - QLD	
Tarining analian far Indianana anala	Quantity distributed	Enquire - QLD	
training sessions for mulgenous people	Number of Indignous participants	Enquire - QLD	
Indigenous training/mentoring	Number of training events	Enquire - QLD	
	Type of training event	Enquire - QLD	
	Number of mentoring relationships	Enquire - QLD	ļ
Organicational capacity building documents	Type of mentoring relationship	Enquire - QLD	
Decision making	Number of Traditional Owners involved in decision making	Enquire - QLD	
	Number of decision making meetings held	Enquire - QLD	
Support to community groups	Number of community groups assisted	Enquire - QLD	
A	Number of FTE active community support positions	Francisco (A) D	
Support to community projects	Jacintators of coordinators) Number of projects supported	Enquire - QLD Enquire - QLD	
	Number of people within a Traditional Owner group learning		
Learning from Traditional Owners	knowledge on country	Enquire - QLD	
	Number of young people on country that are learning from		
	their elders	Enquire - QLD	<u> </u>
Traditional Owners learning and sharing	other Traditional Owners on country	Enquire - QLD	
	Number of non-Indigenous people sharing and learning on		
	country	Enquire - QLD	Į
Traditional knowledge recording events	Number of recording events	Enquire - QLD	
Traditional place based activities	Number of story tellers involved in project Place based activities not involving opground works	Enquire - QLD Enquire - QLD	Į
Traditional non-place based activities	Non-place based activities not involving onground works	Enquire - QLD	
Engagement events	Number (workshops, field days etc)	DELWP Victorian Standard Outputs	
	Length (hrs)	DELWP Victorian Standard Outputs	l
Publications	Number	DELWP Victorian Standard Outputs	1
Mandatory Measure	Number	NSW Environmental Trust Proiect Measures	
Consultants/contractors epgaged by Trust Funds	Number of individuals	NSW Environmental Trust Project Measures	
Constraints/contractors engaged by Trust Fullus	Combined hours contributed	NSW Environmental Trust Project Measures	
Non-Trust funded staff involved	Number of individuals	NSW Environmental Trust Project Measures	
	Compared nours contributed	NSW Environmental Trust Project Measures	<u> </u>
Volunteers involved	Combined hours contributed	NSW Environmental Trust Project Measures	
Primary school students involved	Number of individuals	NSW Environmental Trust Project Measures	
	Combined hours contributed	NSW Environmental Trust Project Measures	l
Secondary school students involved	Number of individuals	NSW Environmental Trust Project Measures	
	Number of individuals	NSW Environmental Trust Project Measures	<u> </u>
Tertiary students involved	Combined hours contributed	NSW Environmental Trust Project Measures	
Organisations engaged	Number	NSW Environmental Trust Project Measures	
Training sessions conducted	Number	NSW Environmental Trust Project Measures	
People receiving a qualification under the AQTF through this project	Number	NSW/ Environmental Trust Dation	
People trained	Number	NSW Environmental Trust Project Measures	l
Awareness raising events	Number	NSW Environmental Trust Project Measures	
Attendees at awareness raising events	Number	NSW Environmental Trust Project Measures	
Educational products/ resources developed	Number	NSW Environmental Trust Project Measures	
Individuals potentially reached	Number		
Mandatory Measure People sharing, giving or receiving, traditional Aboriginal knowledge and		NSW Environmental Trust Project Measures	<u> </u>
Caring For Country	Number	NSW Environmental Trust Project Measures	
Awareness raising events such as demonstrations, field days or study	Number of success		
tours conducted	Number of events	Catchment Action NSW	
Written products such as brochures, newsletters, posters or fact sheets	Number		
developed		Catchment Action NSW	1
events conducted	Number	Catchment Action NSW	
Community arouns or projects assisted	Number	Catchment Action NSW	ł

STRUCTURAL WORKS THEME (Scope: built infrastructure).			
Output	Parameter and/or metric	Source	
			Conclusion: Fencing is a common output.
			Metrics focus on length and area protected.
			Outputs relating to fencing are highlighted
Fencing	Length (km)	MERIT - DOEE	green below.
	Purpose of fence	MERIT - DOEE	
	Participant information	MERIT - DOEE	
			Conclusion: This output covers many
			different parameters. Ecological
			infrastructure was the only common type of infrastructure, particularly instream habitat
			and fish passage (QLD, NSW, VIC, WA).
			Outputs relating to public access and
Public access and infrastructure	Number of access structures installed	MERIT - DOEE	infrastructure are highlighted blue below.
	Type of structure installed - boardwalks; bollards and barriers;		See detailed structural works table below
	trafficways; signage; other.	MERIT - DOEE	for further evidence.
	Area protected by access management structure (ha)	MERIT - DOEE	
	Type of infrastructure - debris management structure; ecological		
	infrastructure (e.g. fish ladders, under/over traffic passageways);		
	recovery facilities: visitor facilities e.g. toilets, bins, tables: other.	MERIT - DOFF	
	Number of installations	MERIT - DOEE	
	Participant information	MERIT - DOEE	
			Conclusion: This output covers a lot of different parameters. Common water
			management structures were channels and
			constructed wetlands (i.e. retention ponds
			in MERIT) (QLD, VIC) and water recycling
			(including on-farm reuse systems) (QLD,
			MERIT?) were found with off-stream
			watering sites the only common one (WA.
			QLD, VIC, NSW). Outputs relating to water
Water management	Name of waterbody	MERIT - DoEE	management are highlighted orange below.
	Type of waterbody	MERIT - DOEE	See detailed structural works table below
	What water management structures are currently in place	MERIT - DOEE	ion farther evidence.
	Number of new water management structures	MERIT - DOEE	
	Area of catchment managed as a result of this activity	MERIT - DoEE	
	What is extracted/imported water being used for	MERIT - DoEE	
			Constant on Freedom control to a community
			Conclusion: Erosion control is a common
			Metrics focus on number of structures, area
			protected and length. Outputs relating to
Erosion management	Area of erosion being treated (ha)	MERIT - DOEE	erosion are highlighted grey below.
	Length of stream/coastline treated (km)	MERIT - DOEE	
	Participant information	MERIT - DOEE MERIT - DOEE	
Stabilisation works	Туре	GRID - John Holley	
	Purpose	GRID - John Holley	
Fencing	Type	GRID - John Holley	
Infractructure	Purpose of tence	GRID - John Holley GRID - John Holley	
	Purpose	GRID - John Holley	
Soil erosion control through engineering works	Area (ha) of land treated and/or protected from soil erosion	Enquire - QLD	
	Number of sites treated with works	Enquire - QLD	
Exclusion fencing	Area (ha) of land treated for soil erosion through fencing	Enquire - QLD	
Works related to improved surface water management	management	Enquire - OLD	
	Length (km) of drain established or improved	Enquire - QLD	
	Area (ha) of land treated for rising groundwater through		
Works related to improved groundwater management	groundwater pumping	Enquire - QLD	
Stabilisation of stream beds	Length (m) of stream bed stabilised	Enquire - QLD	
Stream bank stabilisation through stock management (off-stream			
watering points)	Number of off-stream (alternative) watering sites installed	Enquire - QLD	
	Length (km) of stream bank protected from stock	Enquire - QLD	
In-stream nabitat Fish barriers removed/modified	Number of artificial fish barriers removed and/or modified	Enquire - QLD Enquire - QLD	
isi barrers removedy modified	Stream length (km) upstream opened to fish passage	Enquire QLD	
Animal effluent control works	Number of effluent control works for animal waste on properties	Enquire - QLD	
Constructed wetlands	Number of landholders implementing effluent control works	Enquire - QLD	
constructed wetrands	Area (ha) of constructed wetland	Enquire - QLD Enquire - QLD	
On-farm reuse system	Number of reuse systems constructed	Enquire - QLD	
	Volume (ML) of water saved per year	Enquire - QLD	
Drainage diversion	Number of land managers who have adopted drainage diversion	Enquire - QLD	
Improved/nined channel	Volume (ML) of water saved per year	Enquire - QLD Enquire - QLD	
mproved piped channel	Volume (ML) of water saved per year	Enquire - QLD	
Groundwater bores capped	Number of bores capped	Enquire - QLD	
Ca	Volume (ML) of water saved per year	Enquire - QLD	
Stormwater reuse systems	Number of new reuse systems Volume (ML) of water saved per year	Enquire - QLD Enquire - QLD	
Management of significant species	Area (ha) protected by fencing specifically for significant species/ e	Enquire - QLD	
Channel	Length (km) installed, maintained, modified or removed	DELWP Victorian Standard Outputs	
Water storage	Number of structures	DELWP Victorian Standard Outputs	
Irrigation structure	Area (ha)	DELWP Victorian Standard Outputs	
			Includes mix of erosion control,
			infrastructure and water management from
Waterway structure	Number of structures	DELWP Victorian Standard Outputs	merit
Terrestrial structure	Number of structures	DELWP Victorian Standard Outputs	
Fence	Length (km)	DELWP Victorian Standard Outputs	
Visitor facility	Number	DELWP Victorian Standard Outputs	
Road	Length (km)	DELWP Victorian Standard Outputs	
Crossing	Number	DELWP Victorian Standard Outputs	
renting	Area protected by tencing (ha)	NSW Environmental Trust Project Measures	
Devices, systems or products installed to improve water quality	Number	NSW Environmental Trust Project Measures	
Land stabilised by installing erosion control measures	Area (ha)	NSW Environmental Trust Project Measures	
Conservation and efficiency improvements	Volume of water saved (kL)	NSW Environmental Trust Project Measures	
Stormwater recycling Stream bank protected by overlation fonding services	Volume recycled (kL)	NSW Environmental Trust Project Measures	
Stream bed stabilised	Length	Catchment Action NSW	
Stream bank protected from stock	Length	Catchment Action NSW	
In-stream habitat established	Length	Catchment Action NSW	
Fish passage established		0 · 1 · · · · · · · · · · · · · · · · ·	
Stream Ded Stabilised Sites	Length (km)	Catchment Action NSW	
Off-stream (alternative) watering sites	Length (km) Number Number installed	Catchment Action NSW Catchment Action NSW Catchment Action NSW	
Off-stream (alternative) watering sites Fish barriers modified and/or removed	Length (km) Number Number installed Number	Catchment Action NSW Catchment Action NSW Catchment Action NSW Catchment Action NSW	
Off-stream (alternative) watering sites Fish barriers modified and/or removed Fencing specifically for significant species/ecological community	Length (km) Number Number installed Number	Catchment Action NSW Catchment Action NSW Catchment Action NSW Catchment Action NSW	
Off-stream (alternative) watering sites Fish barriers modified and/or removed Fencing specifically for significant species/ecological community protection	Length (km) Number Number installed Number Area protected	Catchment Action NSW	

Water management outputs					
		GRID - infrastructure			Catchment Action
MERIT	Enquire - QLD	(general output)	DELWP	NSW Enviro Trust	NSW
'Barrage / Weir (with fish ladder)'			Weir		
'Barrage / Weir (without fish ladder)'					
'Channel – constructed'	Channel improvements or				
	piping		Length channels		
'Channel - natural'					
'Check valves'					
'Dam'			Number		
'Desalination plant installation'					
'Dike / Flood levee'					
'Drin irrigation'					
	Surface drains and drainage				
'Flow interception structures (eg. contour banks)'	diversion				
'Elow splitters'			Outlet		
'Flume'			outiet		
'Groundwater numn (wind solar other)'	Land treated for rising				
Groundwater pump (wind, solar, other)	groundwater through				
	groundwater ninough				
	groundwater pumping				
lineed for setes					
Ininged hap gates					
Pipes					
ID-III standard				De las esteres es	
Pollution trap				Devices, systems or	
		1		products installed to	
(0				Improve water quality	
'Pump'			Number		ļ
'Retention ponds'					
	Constructed wetland	Constructed wetland	Constructed wetland		ļ
'Sluice gate'					
'Stilling / Retarding structures'					
'Tidal gate'					
'Vanes'					
'Water recycling facility installation'					
water recycling facility installation	Reuse systems		Reuse system	Stormwater recycling	
'Water supply tank'			Tank		
'Water treatment facility installation'					
'Water treatment facility upgrade'					
Makes consitive when design installation!					
water-sensitive urban design installation					
ath as			Irrigation		Off-stream
other	Off-stream (alternative)		infrastructure - gravity	Conservation and	(alternative) watering
	watering sites installed	Stock trough	or pressurised	efficiency improvements	sites
	watering sites installed	Stock trough	or pressurised	efficiency improvements	sites
	watering sites installed Effluent control works for	Stock trough	or pressurised	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties	Stock trough	or pressurised	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties	Stock trough	or pressurised Sump	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	sites
	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	sites
Public access and infrastructure outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	sites
Public access and infrastructure outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	
Public access and infrastructure outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	sites
Public access and infrastructure outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier	efficiency improvements	sites
Public access and infrastructure outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier DEL WØ	efficiency improvements	sites
Public access and infrastructure outputs MERIT outputs	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier DELWP	efficiency improvements NSW Enviro Trust	catchment Action
Public access and infrastructure outputs MERIT outputs Boardwalks' Boardwalks' Boardwalks'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP	efficiency improvements NSW Enviro Trust	Catchment Action
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bave'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boalards & barriers' 'Constructed parking bays' 'Evening styles gates & erids'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier DELWP	efficiency improvements NSW Enviro Trust	Catchment Action
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boalards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Fermed trafficwavs'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road	efficiency improvements NSW Enviro Trust	Catchment Action
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signape' Signape' Si	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Dther (nearly in potes)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Fencing, styles, gates de grids' 'Signage' 'Other (specify in notes)' 'Dubris magagement structures'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Crossing	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fercing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders,	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD Installed Inst	Stock trough GRID - infrastructure (general output)	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Forned starting bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures'. 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD Enquire - QLD Enquire - QLD Enquire - QLD	Stock trough GRID - infrastructure (general output) Eich burger	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Crossing	efficiency improvements NSW Enviro Trust	Catchment Action NSW
Public access and infrastructure outputs MERIT outputs Boardwalks' Boardwalks' Fonder structed parking bays' Fencing, styles, gates & grids' Fencing, styles, gates & grids' Formed trafficways' Signage' Other (specify in notes)' Debris management structures' Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc.)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes	efficiency improvements Image: State	Catchment Action Catchment Action NSW In-stream habitat established
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Fiormed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes	efficiency improvements NSW Enviro Trust	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Ferned trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Wateouw dia data	efficiency improvements Image: State	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Formed trafficways' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures	efficiency improvements NSW Enviro Trust	Sites
Public access and infrastructure outputs MERIT outputs Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Fencing, styles, gates & grids' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Chute Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens,	efficiency improvements Image: State	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Ferneing, styles, gates & grids' 'Formed trafficways' Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, carboaction term in the memory of	efficiency improvements NSW Enviro Trust	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fernion, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat	Stock trough GRID - infrastructure (general output) Fish bypass	or pressurised Sump Trough Chute Regulator Fish barrier DELWP DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile	efficiency improvements NSW Enviro Trust	Catchment Action SW In-stream habitat established Fish passage established
Public access and infrastructure outputs MERIT outputs Boardwalks' 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Chute Road Crossing Crossing Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements Image: State	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Bollards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements Image: State	Sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Sondrude & barriers' 'Constructed parking bays' 'Ferned trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements	sites sites Catchment Action NSW Lin-stream habitat established Fish passage established
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements Image: state	sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Sourcted parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements Image: State	sites sites Catchment Action NSW In-stream habitat established Fish passage established Fish parriers modified
Public access and infrastructure outputs MERIT outputs Boardwalks' Boalards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Fencing, styles, gates & grids' 'Fencing' 'Debris management structures' 'Cological infrastructure (e.g. fish ladders, under/over traffic passageways etc) '	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements	sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Ferned trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' 'Native plant nursery'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements	sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Fencing, styles, gates & grids' 'Formed trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' 'Native plant nursery' 'Injured fauna hospital'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements Image: state	sites
Public access and infrastructure outputs MERIT outputs Boardwalks' Boardwalks' Tonstructed parking bays' Formed trafficways' Formed trafficways' Signage' Other (specify in notes)' Debris management structures' Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' Native plant nursery' Injured fauna hospital' Injured fauna necovery facility'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Road Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements	sites
Public access and infrastructure outputs MERIT outputs Boardwalks' Boalards & barriers' 'Constructed parking bays' Fencing, styles, gates & grids' 'Ferneding, styles, gates & grids' 'Formed trafficways' Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' 'Native plant nursery' 'Injured fauna hospital' 'Injured fauna necovery facility' 'Visitor facilities (e.g. toilets, bins, BBQ, tables &	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped Enquire - QLD In-stream habitat Fish barriers removed/modified	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Crossing Road Crossing Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field	efficiency improvements	sites
Public access and infrastructure outputs MERIT outputs 'Boardwalks' 'Boardwalks' 'Bolards & barriers' 'Constructed parking bays' 'Ferned trafficways' 'Signage' 'Other (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' 'Inder (specify in notes)' 'Debris management structures' 'Ecological infrastructure (e.g. fish ladders, under/over traffic passageways etc) ' 'Inder fauna hospital' 'Injured fauna necovery facility' 'Visitor facilities (e.g. toilets, bins, BBQ, tables & benches, etc.)'	watering sites installed Effluent control works for animal waste on properties Groundwater bores capped	Stock trough GRID - infrastructure (general output) Fish bypass Nesting boxes	or pressurised Sump Trough Chute Regulator Fish barrier DELWP Crossing Crossing Terrestrial habitat e.g. nest boxes Waterway structures e.g. carp screens, fishway, large wood, rock seeding, sill, pile field Visitor facility	efficiency improvements	sites

ENVIRONMENTAL WORKS THEME (Scope: on-ground works through	ugh goods and services to modify environmental characteristics).		
Output	Parameter and/or metric	Source	
Debris removal	Removal method	MERIT - DOEE	Conclusion: Debris or rubbish removal
	Weight (t)	MERIT - DoEE	is a common output (QLD, VIC, NSW).
	Area (ha)	MERIT - DOEE MERIT - DOEE	weight of debris. Outputs relating to
	Participant information	MERIT - DOEE	debris are highlighted green below.
Heritage conservation	Name of site	MERIT - DOEE	Conclusion: A less common output
	Heritage list the site is on	MERIT - DOEE	number sites managed. Outputs
	Level of heritage listing	MERIT - DoEE	relating to Aboriginal heritage are
	Contribution to existing conservation/ management plans Expected heritage outcomes	MERIT - DOEE MERIT - DOEF	highlighted blue below.
	Expected ultrange outcomes' Expected outcomes/ impacts to local community	MERIT - DOEE	
	Participant information	MERIT - DOEE	
Pest management	Activity partner Treatment objective	MERIT - DOEE MERIT - DOEE	Conclusion: Pest plant and animal management is a common output (WA
	Total treatment area (ha)	MERIT - DOEE	QLD, VIC, NSW). Metrics focus on
	Type of treatment event	MERIT - DOEE	method of treatment and area treated
	Target species	MERIT - DOEE	animals are highlighted orange below.
	Priority status	MERIT - DoEE	
	Pest management method Number of individuals or colonies killed	MERIT - DOEE MERIT - DOEE	
	Fence length (km)	MERIT - DOEE	
	Area protected by fence	MERIT - DOEE	
	Fence purpose Participant information	MERIT - DOEE MERIT - DOEF	
Weed treatment	Treatment objective	MERIT - DOEE	
	Area treated (ha)	MERIT - DOEE	
	Nain activity partner	MERIT - DOEE MERIT - DOEE	
	Target species	MERIT - DOEE	
	Treatment method	MERIT - DOEE	
Site preparation	Ground preparation works	MERIT - DOEE	
	Area prepared (not mandatory)	MERIT - DOEE	
	Weed treatment objective	MERIT - DOEE	
	Type of treatment event	MERIT - DOEE	
	Main activity partner	MERIT - DOEE	
	Target species Treatment method	MERIT - DOEE	
	Participant information	MERIT - DOEE	
Revegetation	Species planted	MERIT - DoEE	Conclusion: Revegetation is a common
	Number planted	MERIT - DOEE	output (WA, QLD, VIC, NSW). Propagating plants and collecting seed
	Stock type	MERIT - DOEE	is less common (QLD). Metrics for
	Structural layer	MERIT - DOEE	revegetation focus on area mostly,
	Mature height Vegetation at time of planting	MERIT - DOEE MERIT - DOEE	plants, kg of seed used and percentage
	Revegetation method	MERIT - DOEE	survival. Outputs relating to
	Landscape connectivity	MERIT - DOEE	revegetation are highlighted grey
	Area of revegetation works (na) Participant information	MERIT - DOEE MERIT - DOEE	below.
	Number plants propagated	MERIT - DOEE	
Seed collection	Participant information	MERIT - DOEE	
Seed conection	Species	MERIT - DOEE MERIT - DOEE	
	Weight of seed collected (kg)	MERIT - DoEE	
Plant propagation	Participant information Species propagated	MERIT - DOEE MERIT - DOEE	
Animal pest control	Control type (baits placed, shooting, trap set)	GRID - John Holley	Conclusion: Only other common
	Purpose	GRID - John Holley	outputs relate to soil treatment (in
Planting	Purpose Number of plants per meter sourced	GRID - John Holley GRID - John Holley	QLD, VIC and NSW) and wetland
	Dollar value cost per seedling	GRID - John Holley	highlighted in italics below. Other
Weed control	Control type (biological, chemical, fire, manual, other)	GRID - John Holley	outputs are used, but none that are
Coastal vegetation	Purpose Area (ba) of coastal pative vegetation protected	GRID - John Holley	used consistently around the country.
Wetland vegetation	Area (ha) of coasta harve vegetation protected Area (ha) of wetland native vegetation protected	Enquire - QLD	1
Riparian vegetation	Area (ha) of riparian native vegetation protected	Enquire - QLD	
Terrestrial vegetation	Streambank length (km) of riparian vegetation protected Area (ha) of terrestrial native vegetation protected	Enquire - QLD Enquire - QLD	[
Enhanced coastal vegetation	Area (ha) of coastal native vegetation enhanced/rehabilitated	Enquire - QLD	
Enhanced wetland vegetation	Area (ha) of wetland native vegetation enhanced/rehabilitated	Enquire - QLD	
Enhanced riparian vegetation	Streambank length (km) of riparian vegetation enhanced/rehabilitated	Enquire - QLD Enquire - QLD	
Enhanced terrestrial vegetation	Area (ha) of terrestrial native vegetation enhanced/rehabilitated	Enquire - QLD	
Native plantation	Area (ha) planted to native plantation	Enquire - QLD	
Coastal species	Area (ha) planted to coastal native species	Enquire - QLD Enquire - QLD	
· · ·	Area (ha) of this vegetation that are locally occurring natives	Enquire - QLD	
Wetland species	Area (ha) planted to wetland native species Area (ha) of this vegetation that are locally occurring natives	Enquire - QLD	ļ
Riparian species	Area (ha) planted to riparian native species	Enquire - QLD	1
	Area (ha) of this vegetation that are locally occurring natives	Enquire - QLD	
Riparian species - stream bank enhanced Terrestrial species	Stream bank length (km) of riparian vegetation planted to riparian native species Area (ha) planted to terrestrial native species	Enquire - QLD Enquire - QLD	Į
	Area (ha) of this vegetation that are locally occurring natives	Enquire - QLD	
Exotic vegetation	Area (ha) of exotic vegetation established	Enquire - QLD	
wewanas protectea/ connectivity reinstated Breeding programs	Areu (nu) uj weudnas with connectivity reinstated Number of breeding programs developed	Enquire - QLD Enquire - QLD	
Translocation programs	Number of translocation programs developed	Enquire - QLD	
Seedbanks	Number of seedbanks developed	Enquire - QLD	
rest plant control	Area (ha) of pest plant control measures implemented Area (ha) of pest plant control that represent initial treatment	Enquire - QLD Enquire - QLD	
Weed spread prevention	Number of weed seed or plant disease wash down facilities established or renovated	Enquire - QLD	[
Pest animal control - vertebrates and invertebrates	Area (ha) of pest animal and disease control measures implemented	Enquire - QLD	
Other treatment of soils	Area (na) of soil treatment for other than erosion or acid sulfate soils	Enquire - QLD	
Riparian debris removal	Length (km) of waterway with debris removed	Enquire - QLD	
Debris removal	Kilograms (kg) of debris removed Area (ha) of land with debris removed	Enquire - QLD Enquire - QLD	
	Kilograms (kg) of debris removed	Enquire - OLD	ł

ENVIRONMENTAL WORKS THEME (Scope: on-ground works through	ugh goods and services to modify environmental characteristics). CONTINUED		
Vegetation	Area established, maintained or modified	DELWP Victorian Standard Outputs	
Weed control	Gross area (area searched for target weeds and treated where present)	DELWP Victorian Standard Outputs	
	% of polygon treated	DELWP Victorian Standard Outputs	1
Pest animal treatment	Gross area (area searched for target species and treated where present)	DELWP Victorian Standard Outputs	
	% of polygon treated	DELWP Victorian Standard Outputs	1
Over-abundant wildlife control	Gross area (area searched for target species and treated where present)	DELWP Victorian Standard Outputs	
	% of polygon treated	DELWP Victorian Standard Outputs	1
Threatened species response	Area over which response was undertaken (ha)	DELWP Victorian Standard Outputs	1
Emergency species response	Area over which response was undertaken (ha)	DELWP Victorian Standard Outputs	
Soil treatment	I ocation (and area?) where treatment was done	DELWP Victorian Standard Outputs	
Farth works	Area over which works were undertaken (ba)	DELWP Victorian Standard Outputs	
Rubbish removal	Gross area (area searched for rubbich and treated where present)	DELWP Victorian Standard Outputs	
Rabbish removal	% of polygon treated	DELWP Victorian Standard Outputs	
Project area	No polygon neated	DEEWT Victorian Standard Outputs	
Mandatani Maasura	Hectares	NSW Environmental Trust Project Measures	
	11	NSW Environmental Trust Project Measures	
Area regenerating		NSW Environmental Trust Project Measures	
Area revegetated	nectares	NSW Environmental Trust Project Measures	
and/or	Number	NSW Equironmontal Trust Project Measures	
	(g)	NSW Environmental Trust Project Measures	
Amount of seed distributed for direct seeding	Kilograms	NSW Environmental Trust Project Measures	
Survival rate of plantings	Percentage	NSW Environmental Trust Project Measures	
Area of primary weeding	Hectares	NSW Environmental Trust Project Measures	
Area of secondary weeding (follow-up)	Hectares	NSW Environmental Trust Project Measures	
Area of maintenance weeding (Not funded by the Trust)	Hectares	NSW Environmental Trust Project Measures	
Area of habitat corridors (terrestrial or aquatic) established	Hectares	NSW Environmental Trust Project Measures	
Area of connected habitat (terrestrial or aquatic) linked	Hectares	NSW Environmental Trust Project Measures	
Environment type (primary)	Select from drop down list		
Mandatory Measure		NSW Environmental Trust Project Measures	ļ
Environment type (secondary)	Select from drop down list	NSW Environmental Trust Project Measures	ļ
Threatened species	Yes/No	NSW Environmental Trust Project Measures	
and/or	species/polulation name	NSW Environmental Trust Project Measures	
populations interventions	Location	NSW Environmental Trust Project Measures	
	Yes/No	NSW Environmental Trust Project Measures	
Endangered ecological communities (EEC) involved	EEC's name	NSW Environmental Trust Project Measures	
	Location	NSW Environmental Trust Project Measures	
Invasive species	Yes/No	NSW Environmental Trust Project Measures	
Invasive species targeted	species' name	NSW Environmental Trust Project Measures	
Focus species for which habitats will be improved	Primary species' name	NSW Environmental Trust Project Measures	
Area of Aboriginal owned land or sites of cultural significance	United		
restored or rehabilitated	nectares	NSW Environmental Trust Project Measures	
Area cleaned up through waste removal	Hectares	NSW Environmental Trust Project Measures	
Total waste removed or reduced	Tonnes	NSW Environmental Trust Project Measures	
Method of waste removed or reduced	Select from drop down list	NSW Environmental Trust Project Measures	
Improvement in water guality	Percentage	NSW Environmental Trust Project Measures	
Reduction in greenhouse gas emissions	Tonnes of CO2 equivalent	NSW Environmental Trust Project Measures	
Terrestrial native vegetation enhanced/ rehabilitated	Area	Catchment Action NSW	Note: these appear to be based on
Coastal native vegetation enhanced/ rehabilitated	Area	Catchment Action NSW	measures in Enguire
Wetland native vegetation enhanced/ rehabilitated	Area	Catchment Action NSW	· · · · · · · · · · · · · · · · · · ·
Planted vegetation that are local natives - wetland	Area	Catchment Action NSW	1
Wetlands with connectivity reinstated	Aren	Catchment Action NSW	1
Riparian native species planted	Area	Catchment Action NSW	
Aboriginal cultural values managed	Area	Catchment Action NSW	
Aboriginal sites managed	Number	Catchment Action NSW	
Pest plant control measures implemented	Area	Catchment Action NSW	
Pest plant control that represents initial treatment	Area	Catchment Action NSW	
Pest animal control (vertebrate) measures implemented	Area	Catchment Action NSW	
Past animal control (vertebrate) that represents initial treatment	Area	Catchment Action NSW/	
Soil treatment for other than erosion or acid sulphate soils		Catchment Action NSW	l
Son a content for other than croston of acta salonne shins		CONCERNMENT ACTION NO V	

MANAGEMENT SERVICES THEME (Scope: behaviour or manage	ment practice change).		
Output	Parameter and/or metric	Source	
			Conclusion: Grazing management is only reflected in Victoria's outputs - see green highlighting
Conservation grazing management	Land management issue	MERIT - DoEE	below.
	Area managed (ha)	MERIT - DOEE	
	Type of stock	MERIT - DOEE	
			Conclusion: Disease management is only reflected in WA's outputs -
Disease management	Target species	MERIT - DOEE	see blue highlighting below.
	Area quarantined/treated (ha)	MERIT - DOEE	
	Number of individuals/colonies quarantined or treated	MERIT - DOEE	
	Disease management method	MERIT - DoEE	
	Participant information	MERIT - DOEE	
			Conclusion: Fire management is included in WA, VIC and NSW outputs. Area affected is the common metric. See orange
Fire management	Reason for burn	MERIT - DOEE	highlighting below.
	Area of fire ground (ha)	MERIT - DOEE	
	Participant information	MERIT - DOEE	
			Conclusion: improved management practices are reflected in the outputs of QLD, VIC and NSW. Area with improved change is most common metric. NB: QLD has many detailed outputs. See grey hiel/lighting
Management practice change	Industry	MERIT - DOEE	below.
	Reason for changing management practice	MERIT - DOEE	
	Public good outcomes	MERIT - DOEE	
	Change facilitation strategy	MERIT - DOEE	
	Area covered by change (ha)	MERIT - DOEE	
	Number of farming entities adopting change	MERIT - DoEE	
	Number of people influenced by change	MERIT - DOEE	
	Area of land directly benefiting from change (ha)	MERIT - DOEE	
	Expected productivity outcomes	MERIT - DOEE	
Disease control	Control type	GRID - John Holley	
	Purpose	GRID - John Holley	
Fire control	Control type (burn-off, firebreak, other)	GRID - John Holley	
	Purpose	GRID - John Holley	
Improved irrigation practices adopted	Area of land (ha) with improved practices	Enquire - QLD	
	Number of land managers using improved practices	Enquire - QLD	
Nutrient management	Area of land (ha) with improved practices	Enquire - QLD	
	Number of land managers using improved practices	Enquire - QLD	
Soil management	Area of land (ha) with improved practices	Enquire - QLD	
	Number of land managers using improved practices	Enquire - QLD	
Herbicide management	Area of land (ha) with improved practices	Enquire - QLD	
	Number of land managers using improved practices	Enquire - QLD	
Pesticide management	Area of land (ha) with improved practices	Enquire - QLD	
Cround course monocoment	Number of land managers using improved practices	Enquire - QLD	
Ground cover management	Area of land (na) with improved practices	Enquire - QLD	
Grazing by livestock	Area	DELWR Victorian Standard Outputs	
Agricultural practice change	Area	DELWP Victorian Standard Outputs	
Water delivered or removed	Number of sites	DELWP Victorian Standard Outputs	
	Area	DELWP Victorian Standard Outputs	
Fire applied	Area	DELWP Victorian Standard Outputs	
Organisations or stakeholders adopting improved land			
management practices	Number	NSW Environmental Trust Project Measures	
Ecological burns	Hectares	NSW Environmental Trust Project Measures	
Land where improved irrigation practices have been adopted	Area	Catchment Action NSW	

ASSESSMENT AND MONITORING THEME (Scope: research, investigations,	nonitoring, assessment, evaluation, reporting).		
Output	Parameter and /or metric	Source	
		Jource	Conclusion: Common output.
			Metric focuses on number of studies. Outputs relating to research are highlighted green
Research	Participant information	MERIT - DOEE	below.
			Conclusion: Monitoring (survey) outputs are quite general in othe states. See cells highlighted blue
Fauna survey - general	Survey methodology	MERIT - DOEE	below.
	Species Participant information	MERIT - DOEE MERIT - DOEE	
Flora survey - general	Survey methodology	MERIT - DOEE	
	Species Porticipant information	MERIT - DOEE	
Pest animal survey	Species	MERIT - DOEE	
	Sampled area (ha)	MERIT - DOEE	
	Assessment methodology Population density	MERIT - DOEE MERIT - DOEE	
	Participant information	MERIT - DOEE	
Plant survival survey	Counting method Species	MERIT - DOEE	
	Number planted	MERIT - DOEE	
	Seed sown (kg)	MERIT - DOEE	
	Number surviving Survival rate (%)	MERIT - DOEE MERIT - DOEF	
	Mature height (<2m, >2m)	MERIT - DOEE	
	Participant information	MERIT - DOEE	
Vegetation assessment - Cwth govt methodology	Type of assessment event Type of site	MERIT - DOEE MERIT - DOEF	
	Sampling point ID (m)	MERIT - DOEE	
	Evidence of exotic fauna	MERIT - DOEE	
Water quality survey	Water body name	MERIT - DOEE	
	Type of water body	MERIT - DOEE	
Weed mapping and monitoring	Effectiveness of previous treatment (%)	MERIT - DOEE	
	Weed cover (ha)	MERIT - DOEE MERIT - DOEE	
	Participant information	MERIT - DOEE	
			Conclusion: Evaluation outputs are not common. See orange cells
Outcomes evaluation and learning (project)	Environmental outcomes Social outcomes	MERIT - DOEE MERIT - DOEE	below.
	Economic outcomes	MERIT - DOEE	
	Notifiable Workplace Health and Safety Incidents	MERIT - DOEE	
	Effectiveness of project	MERIT - DOEE MERIT - DOEE	
	Efficiency of project	MERIT - DOEE	
	Appropriateness of methodology	MERIT - DOEE	
	Risk management	MERIT - DOEE	
	Lessons learnt	MERIT - DoEE	
Progress outcomes and learning (stage)	Progress against planned activities and outcomes	MERIT - DOEE	
	Environmental outcomes	MERIT - DOEE	
	Social outcomes	MERIT - DoEE	
	Economic outcomes	MERIT - DOEE	
	Adaptations and variations	MERIT - DOEE	
	Notifiable Workplace Health and Safety Incidents	MERIT - DOEE	
	Lessons learnt Improvements or changes	MERIT - DOEE MERIT - DOEE	
Investigations	What is being investigated	GRID - John Holley	Conclusion: Only other common output is regarding information management systems (number) (QLD and VIC). These are highlighted in italics below. Othe outputs are used, but none that are used consistently around the country.
Resource condition monitoring	Purpose What is being monitored	GRID - John Holley	
	Purpose	GRID - John Holley	/
Organisational learning reviews/evaluation	Number completed	Enquire - QLD	
Stormwater quality control devices	Number of stormwater quality control devices constructed Weight (kg) of material prevented from entering waterway per year	Enquire - QLD Enquire - OLD	<u> </u>
Studies to monitor RCTs	Number of studies completed	Enquire - QLD	
	Number of sites monitored	Enquire - QLD	
New monitoring programs Enhanced monitoring programs	Number of new programs established Number of existing monitoring programs enhanced	Enquire - QLD Enquire - QLD	
Reports	Number of reports completed	Enquire - QLD	
Models or information management systems	Number developed	Enquire - QLD	
Inventory data collected Synthesis models	Number of science synthesis models developed for aquatic ecosystem	Enquire - QLD Enquire - OLD	
Aquatic ecosystems	Area of aquatic ecosystems assessed and prioritised	Enquire - QLD	
Cultural sites	Number of cultural heritage sites/locations recorded	Enquire - QLD	
Assessments Monitoring structure	Number (cultural, ecological, property, soil, water etc) Number	DELWP Victorian Standard Outputs	
Information management system	Number	DELWP Victorian Standard Outputs	
Innovative technologies or methods as a result of the research	Number	NSW Environmental Trust Project Measures	
Other events that will result in presentation of the research	Number	NSW Environmental Trust Project Measures	
Publications developed			
Post graduate students involved	Number Number of individuals	NSW Environmental Trust Project Measures	
n ost Brannare strineurs involven	Combined hours contributed	NSW Environmental Trust Project Measures	
Primary potential end user / target audience for applying the outcomes of			
this project Secondary potential end user / target audience for applying the outcomes	lext description	NSW Environmental Trust Project Measures	
of this project	Text description	NSW Environmental Trust Project Measures	
Primary Investigation Focus	Text description	NSW Environmental Trust Project Measures	1

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