

Ramsar National Report to COP14

Section 1: Institutional Information

Important note: the responses below will be considered by the Ramsar Secretariat as the definitive list of your focal points, and will be used to update the information it holds. The Secretariat's current information about your focal points is available at <https://www.ramsar.org/search?f%5B0%5D=type%3Aperson#search-contacts>

Name of Contracting Party

The completed National Report **must be accompanied by a letter** in the name of the Head of Administrative Authority, confirming that this is the Contracting Party's official submission of its COP14 National Report. It can be attached to this question using the "Manage documents" function (blue symbol below)

> AUSTRALIA

You have attached the following documents to this answer.

[Ramsar National Report Australia Letter re Submission 02.02.2021.pdf](#)

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Section 2: General summary of national implementation progress and challenges

In your country, in the past triennium (i.e., since COP13 reporting)

A. What have been the five most successful aspects of implementation of the Convention?

1)

> Ramsar site management: Australia has completed 26 Ramsar Information Sheet (RIS) updates for its Ramsar sites over this triennium which have been uploaded in the Ramsar Site Information System. Management planning for the Commonwealth's marine Ramsar estate has also been progressed. The Coral Sea Reserves (Coringa-Herald and Lihou Reefs and Cays) are integrated into the Coral Sea Marine Park Management Plan 2018; Ashmore Reef, now known as the 'Ashmore Reef Marine Park', is part of the North-west Marine Parks Network Management Plan 2018, and Elizabeth and Middleton Reefs is part of the Lord Howe Marine Park in the Temperate East Marine Parks Network Management Plan 2018. The CSIRO has prepared a vulnerability assessment methodology to guide Ramsar wetland managers investigate ecological changes that might occur at their Ramsar sites as a result of climate change. The guidance, supported by a case studies trialling the site-based methodology at the Muir-Byenup and Currawinya Lakes Ramsar wetlands, recognises the need for applied research and practical tools to support adaptation planning with most wetlands likely to be affected by climate change. The Regional Land Partnerships (RLP) component of the National Landcare Program is investing \$43 million in on-ground conservation projects at 33 Ramsar sites to restore and reduce threats to their ecological character. The Ramsar projects commenced in 2018 and will run until 2023. Site management actions encompass condition monitoring, weed and vertebrate pest management, water quality improvement, habitat restoration works and community engagement activities.

2)

> Coastal management: Several state and territory governments have developed and are implementing new marine and coastal management policies this triennium. The Marine and Coastal policy in Victoria underpinned by the Marine and Coastal Act 2018, enables ecosystem based management of coastal and marine wetlands and embeds climate change adaptation into coastal planning. New South Wales has implemented a new coastal management framework that protects coastal wetlands. The State Environmental Planning Policy (SEPP) Coastal Management 2018, enables an integrated and coordinated approach to land use planning, including mapping of, and controls to protect, coastal wetlands and areas of coastal vulnerability. The Coastal Management Manual assists local governments meet their responsibilities to implement the SEPP and prepare Coastal Management Plans under state legislation. Councils are in the process of preparing scoping studies for these plans. The Northern Territory's Coastal and Marine Management strategy adopted in 2019, is a 10 year plan designed to maintain the Territory's healthy and largely intact marine and coastal ecosystems. The Territory has also created a new marine park (the first in 30 years) Limmen Bight in the Gulf of Carpentaria to protect the rich seagrass meadows and coral fringed islands, important habitat for fish and migratory species and cultural values for the Marra people. Victoria's innovative Coastal Monitoring Program is training citizen scientists to use drones to monitor the coast. The drones collect high quality research grade data that is being used to build 3D models of the coast to help predict how beaches will respond to storms and rising sea levels for adaptation planning. See: <https://www.marineandcoasts.vic.gov.au/coastal-programs/victorian-coastal-monitoring-program>

3)

> New research: The values and benefits of Australia's wetlands are explored in a scoping study about the economic valuation methods used to assess the disaster risk reduction services provided by coastal wetlands, and through the development of experimental accounts for wetland ecosystems to support the new National Framework for environmental-economic accounting (EEA). The National Environmental Science program (NESP) invested around \$22 million in applied research at Ramsar and other wetlands over the life of the program to 2020, including projects to map mangrove extent environmental flow studies and ecological surveys of freshwater wetland river catchments and estuaries in Northern Australia; wetland-dependent species research in marine and freshwater environments; coastal wetland restoration in the Great Barrier Reef, restoration of shellfish reefs in South Australia and seagrass habitats in Western Australia and, new diagnostic and mapping tools to assist Ramsar and other wetland site managers monitor condition, manage weeds and control aquatic pests and target their site management efforts. A new longitudinal study has drawn on 30 years of Landsat data to map for the first time the density and distribution of Australia's mangroves forests. The mapping series created by researchers from Geoscience Australia tracks the multi-decadal changes in the density and distribution of mangroves in response to storm events and a changing climate. This new resource provides the opportunity to better understand the changing state of wetlands along Australia's coastline and an approach that could be applied on other regions.

4)

> Traditional knowledge: New partnerships are evolving with Traditional Owners to assess wetland ecosystem

health, undertake surveys and manage some of Australia's most remote wetlands in the Gulf of Carpentaria. Key projects include the joint nomination with pastoral leaseholders of a new site to the East Asian-Australasian Flyway (Leichhardt River to Gore Point Wernadinga Coast); mapping mangrove extent and condition; vertebrate pest control and co-managing a new Marine Park, Limmen Bight, in the Northern Territory to protect the coral fringed Maria and Beatrice Islands and rich seagrass meadows supporting dugong and sea turtles and three species of rare pipefish. Emerging partnership with Traditional Owners to manage cultural heritage values of the new Carapundy Swamp National park in channel country in north-west NSW. This significant 150,000 hectare acquisition by the NSW Government in 2020 includes the 58,500 hectare nationally important Bulloo Lake wetland, Caryapundy swamp and a suite of ephemeral and semi-permanent lakes that support thousands of waterbirds in wet years.

5)

> CEPA: A National Communications Strategy was prepared for Ramsar's 50th Anniversary and state and territory agencies and Ramsar site managers are being encouraged to stage celebratory events for World Wetlands Day and across the year. The Australian Government supported the design and production of a suite of promotional materials for wetland stakeholders to support Ramsar themed Anniversary events and published a new national Wetlands and Water webpage.

Two Anniversary editions of Wetlands Australia will be published on World Wetlands and World Water Day. Planning is also underway for Wetland webinars and conferences for the Anniversary and potential new site nominations. See:

<https://www.environment.gov.au/water/wetlands/world-wetlands-day>

<https://www.environment.gov.au/water/wetlands/wetlands-water>

B. What have been the five greatest difficulties in implementing the Convention?

1)

> South-eastern Australia experienced a severe and protracted drought over much of this reporting triennium, with 2019 the warmest and driest year on record (annual national mean temperature was 1.52 C above average, with rainfall below average across most of Australia, nationally averaged rainfall for the year at 277.6mm). As well as reduced freshwater availability, these climatic conditions triggered heatwave events and the onset of severe fire weather in 2019. The national accumulated Forest Fire Danger index was the highest since records began in 1950. Bushfires impacted large parts of south-eastern and south-western Australia over an unprecedented 5 months from August 2019 to January 2020. Expert assessment of bushfire affected regions has identified 16 freshwater fish and frog species at risk, as well as Sub-alpine peatlands and Temperate Highland Peat Swamps on Sandstone (Blue Mountains NSW) Alpine Sphagnum Bogs and Associated Fens (in ACT, NSW and Victoria). Post the fires, pulses of soil and ash from bushfire affected catchments are having instream and downstream impacts on freshwater aquatic fauna and coastal wetlands. Both the Macquarie Marshes and Gwydir Ramsar sites were also impacted by bushfires. In contrast to southern Australia, rainfall was above average for parts of Australia's northern tropics with Townsville experiencing its largest flood event on record in 2019.

2)

> Australia's coastal and marine wetlands face significant pressures from new and expanding port, industrial, urban and tourism developments. New surface water storage and irrigation projects pose threats for inland freshwater wetlands and river systems in QLD and NSW and, there is increasing pressure on groundwater systems in Western Australia. There are also potential risks from fast-tracking development (for example to support economic recovery following COVID19) especially where wetland ecosystems are still recovering from impacts of drought and bushfires.

3)

> Australia does not have a comprehensive national wetland inventory and has scant information on the spatial extent and cover of wetlands and the dynamics of loss and change. Despite advances with the availability of landsat data and new wetland mapping tools, comprehensive wetland mapping is not available in every state and territory to underpin national wetland mapping. These spatial constraints as well as agency capacity and suitable platforms to integrate and interpret the landsat data is the most significant challenge to progress development of a national wetland inventory. The National Mangrove mapping project (see 8.1) demonstrates how satellite derived data was used to map Australia's mangrove wetlands and increase understanding about wetland extent and change.

4)

> Australia's wetlands are extremely vulnerable to the impacts of climate change, including changes in rainfall, temperature, sea levels and extreme weather events like droughts, marine heatwaves and bushfires (all of which have been experienced this triennium). Wetland managers need the best available tools and regional climate science to help integrate climate change vulnerability assessments and adaptation planning into adaptive management cycles for wetlands. Developing this adaptive capacity is an ongoing challenge for Ramsar site managers and conservation agencies, especially where wetlands are already experiencing

climate change related impacts.

5)

> Effective national implementation of the Convention in Australia relies on harmonising the efforts of the Australian Government, eight State and territory governments, as well as local government (>500 councils), local and regional communities and private landholders. This presents particular challenges for policy coordination and securing dedicated resources for wetland conservation and management.

C. What are the five priorities for future implementation of the Convention?

1)

> Australia will implement rolling updates of Ramsar site information, in cooperation with Ramsar site managers, to meet Convention requirements for six yearly reviews. Revised national guidelines for site managers will be published to simplify the process for review of Ramsar site information and ensure consistency in practice. New national guidance will be developed for Ramsar Wetlands and Climate Change (see 2. below) and work on a national wetland inventory will be progressed supported by Geoscience Australia's Digital Earth Australia program.

2)

> Linking Ramsar site managers with the latest climate science, tools and knowledge for adaptation planning to address impacts of climate variability on ecological character of Ramsar sites and build resilience to manage for extreme climate events and shocks. Research is required to identify knowledge gaps about impacts of climate change induced events (bushfire, drought, marine heatwaves, storms and floods) on wetlands and for guidance to inform preparedness. Science products tailored for different regions about climate processes and drivers of change and how they influence climate variability (like predicted changes in rainfall) can help wetland managers and their communities understand and manage climate risks.

3)

> Securing national environmental research investment to meet priority wetland research needs, including: producing longitudinal ecological data sets for key freshwater catchments and estuarine ecosystems in Northern Australia (and other understudied regions) and improving understanding of groundwater/surface water connections; filling gaps in spatial wetland mapping coverage to support a national wetland inventory; undertake a strategic review of representativeness of the wetland estate (protected areas) to identify gaps and threats by wetland type; target biological and hydrological knowledge gaps for key wetland types; ensure the best available climate science and new monitoring tools and technologies for wetland site management and adaptation planning; and develop experimental environmental-economic accounts for the full suite of wetland ecosystem types.

4)

> Progressing Australia's Blue Carbon initiatives, including support for the International Partnership for Blue Carbon and development of a method for reintroduction of tidal flows to restore mangrove and tidal marsh wetland ecosystems for carbon abatement and project accounting purposes under the Emissions Reduction Fund. Australia will continue to build the evidence base about the benefits of coastal wetlands to enable climate mitigation and adaptation and expand demonstration projects to encourage uptake of coastal wetland restoration.

5)

> Developing mapping tools to assist water managers assess the beneficial impact of environmental watering on the ecological character of Ramsar wetlands in the Murray-Darling Basin, to assess the effectiveness of, and inform future review of the Murray-Darling Basin Plan, and its environmental watering strategies and regional watering plans.

D. Do you (AA) have any recommendations concerning priorities for implementation assistance and requirements for such assistance from the Ramsar Secretariat?

> Enhanced assistance for Oceania Contracting Parties given ongoing capacity constraints in many small island countries within Oceania. This includes supporting research on climate change impacts, wetland inventories (including assessment of blue carbon stocks) and regional capacity building initiatives.

E. Do you (AA) have any recommendations concerning implementation assistance from the Convention's International Organisation Partners (IOPs)? (including ongoing partnerships and partnerships to develop)

> IOPs continue to support research on migratory bird habitat requirements and critical sites, including site fidelity/requirements for species in the East Asian-Australasian Flyway. Updating Convention waterbird population estimates (for calculating 1% of bird population - Criterion 6) for the East-Asian-Australasian Flyway, using the latest population estimates.

F. How can national implementation of the Ramsar Convention be better linked with implementation of

other multilateral environmental agreements (MEAs), especially those in the 'biodiversity cluster' (Convention on Biological Diversity (CBD), Convention on Migratory Species (CMS), Convention on International Trade in Endangered Species (CITES), World Heritage Convention (WHC), and United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC)?

> Simplifying, harmonising and avoiding duplication in reporting. Collaborative work to raise wetland priorities in global biodiversity goals/targets (post Aichi). Working towards a core set of biodiversity goals/targets and reporting questions for all Conventions.

G. How is the Ramsar Convention linked with the implementation of water policy/strategy and other strategies in the country (e.g., on sustainable development, energy, extractive industries, poverty reduction, sanitation, food security, biodiversity) and how this could be improved?

> The environment, water and agriculture policy agencies within the Australian Government have been brought together following Machinery of Government changes at the national level to create one agency in 2020. The new Department of Agriculture, Water and the Environment should enhance coordination of national biodiversity, water, biosecurity, food security, fisheries and forestry initiatives and policies. Ramsar sites are protected under the national Environment Protection and Biodiversity Conservation Act, 1999, and at state and territory level through protected area, water resources and biodiversity legislation. Ramsar sites have been prioritised for funding for the National Landcare Program's Regional Land Partnerships (2018-2023). Work is ongoing to improve understanding environmental water requirements for Ramsar wetlands and link these with water policy and strategies (particularly water resource allocation and licensing) within state and territory jurisdictions, focused in the next triennium on the Murray-Darling Basin.

H. According to paragraph 21 of Resolution XIII.18 on Gender and wetlands, please provide a short description about the balance between men and women participating in wetland-related decisions, programmes and research.

> There is good female representation within the Australian and state/territory governments in decision-making roles and coordination of Ramsar implementation activities. The current Commonwealth Environment Minister responsible for the Ramsar Convention in Australia and the head of Australia's Ramsar Administrative Authority (RAA) are women. The RAA also holds the position of Commonwealth Environmental Water Holder, with responsibility for managing the provision of environmental water to wetland assets within the Murray-Darling Basin. Within the states and territories, three of the eight key Ramsar policy contacts are women. Currently only one of the responsible state and territory government agencies has a female head.

There is gender balance in the wetland research sector, shown through membership of the Australian Freshwater Sciences Society and many women leading wetland research at Australian Universities, including through the National Environmental Science Program (NESP). Of the 6 NESP Hubs, the Clean Air and Urban Landscapes Hub is led by a female professor and there are in excess of a dozen female scientists leading and delivering NESP research relevant to wetlands in Northern Australia and elsewhere.

Within Australia's wetland conservation programs, women are leading and implementing programs in all the peak non-government organisations, including CEO's of the Australian Conservation Foundation, Earthwatch Australia and Bush Heritage Australia as well as Managing Director of the Great Barrier Reef Foundation, Head of Conservation at Birdlife Australia, and the National Director Pew Charitable Trusts.

For the first time in 2021, Australia's State of the Environment report will have co-chief authors, bringing both female and Indigenous representation into the leadership profile and contributing across the twelve themes, covering coasts, inland water and marine ecosystems.

I. Do you (AA) have any other general comments on the implementation of the Convention?

> Ecological character: A key obligation of the Convention is maintaining ecological character and the wise use of wetlands. Traditional approaches to maintenance, restoration and human-induced change in ecological character are of limited utility in a world experiencing rapidly changing climatic conditions, global biodiversity loss and the consequent loss of ecosystem services. It would be beneficial to Contracting Parties if the STRP provide guidance on what it means to maintain ecological character under these conditions and to update advice on human-induced change in ecological character.

Data and data systems: There are currently large knowledge gaps in relation to wetland ecosystems and wetland dependent species in tropical and sub-tropical areas. There are also many developing countries that are data deficient in relation to their wetlands and biodiversity. The result is that global analyses can be biased or skewed in terms of our understanding of areas/habitats of most concern. The Convention also prescribes the use of centralised datasets (for example Waterbird Population Estimates) which are static, quickly become out of date and are not open to data provided by new technologies. Data systems which are usable, scalable and easy to update are essential to support and effective decision-making.

Partnerships: Greater efforts to motivate and inspire communities to change attitudes and behaviours are needed to halt the world-wide loss of wetlands and their biodiversity. Mobilising community and expanding awareness is important to complement the work of government and non-government partners.

J. Please list the names of the organisations which have been consulted on or have contributed to the

information provided in this report

> Australian Government Departments of Agriculture Water and the Environment, Prime Minister and Cabinet, Foreign Affairs and Trade, Infrastructure, Transport, Regional Development and Communications and Commonwealth agencies, including Geoscience Australia, Great Barrier Reef Marine Park Authority, Murray-Darling Basin Authority, National Indigenous Australians Agency, Australian Curriculum, Assessment and Reporting Authority. State and Territory Governments, including: ACT Environment, Planning and Sustainable Development Directorate; NSW Department of Planning, Industry and Environment; NT Department of Environment and Natural Resources; QLD Department of Environment and Science; SA Department for Environment and Water; TAS Department of Primary Industries, Parks, Water and Environment; Vic Department of Environment, Land, Water and Planning; WA Department of Biodiversity, Conservation and Attractions; and WA Department of Water and Environmental Regulation. Non-government organisations, including: the Australian Wetlands Network; Banrock Station; Conservation Volunteers Australia; Hunter Wetlands Centre Australia; Jerrabomberra Wetlands Advisory Panel; Sydney Olympic Park Authority; Mangrove Watch Australia; and Bribie Island Environmental Protection Association.

Section 3: Indicator questions and further implementation information

Goal 1. Addressing the drivers of wetland loss and degradation

[Reference to Sustainable Development Goals 1, 2, 6, 8, 11, 13, 14, 15]

Target 1

Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level.

[Reference to Aichi Target 2]

1.1 Have wetland conservation and the identification of wetlands benefits been integrated into sustainable approaches to the following national strategies and planning processes, including: {1.3.2} {1.3.3} KRA

1.3.i

Please select only one per square.

a) National Policy or strategy for wetland management	<input type="checkbox"/> X=Unknown <input checked="" type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
b) Poverty eradication strategies	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
c) Water resource management and water efficiency plans	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
d) Coastal and marine resource management plans	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
e) Integrated Coastal Zone Management Plan	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
f) National forest programmes	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
g) National policies or measures on agriculture	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
h) National Biodiversity Strategy and Action Plans drawn up under the CBD	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant

i) National policies on energy and mining	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
j) National policies on tourism	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
k) National policies on urban development	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
l) National policies on infrastructure	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
m) National policies on industry	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
n) National policies on aquaculture and fisheries {1.3.3} KRA 1.3.i	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
o) National plans of actions (NPAs) for pollution control and management	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant
p) National policies on wastewater management and water quality	<input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> Y=Not Relevant

1.1 Additional information

> a. The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) protects matters of national environmental significance (MNES), including: Ramsar wetlands; listed threatened species and ecological communities; migratory species; and Commonwealth Marine areas. The Act requires environmental assessment and approval of actions likely to have a significant impact on MNES and contains provisions for listing, recovery, management and conservation planning for MNES matters, including the Australian Ramsar Management Principles for Ramsar sites.

b. The new National Agreement for Closing the Gap includes targets to ensure Indigenous people maintain distinctive relationships with their lands and waters. These connections are recognised as a critical foundation to improve life outcomes for Indigenous people. See: <https://www.niaa.gov.au/indigenous-affairs/closing-gap>

c. p. The National Water Initiative (NWI) commits Australian governments to the sustainable use of water resources, using statutory water plans and entitlement systems to lock in water for the environment. A review of the NWI is underway to assess the effectiveness of water reforms and provide practical advice about ways to improve the NWI. See: <https://www.pc.gov.au/inquiries/current/water-reform-2020#draft>

d) and e) see section. 2 above. Actions and targets for coastal wetlands adjoining the Great Barrier Reef (GBR) are included in the Reef 2050 Plan. This includes implementation of the QLD government's Wetlands in the Great Barrier Reef Catchments Management Strategy 2016-2021. See: <https://wetlandinfo.des.qld.gov.au/resources/static/pdf/management/policy/wetlands-gbr-strategy2016-21v13.pdf>

f. Regional Forest Agreements (RFAs) between the Australian and State Governments have been extended and renewed, and include new clauses to set out how the ecological character of Ramsar wetlands are protected

in State Forest Management Systems.

g. The Australian Government's Agriculture Stewardship Package has three measures: an Agriculture Biodiversity Policy to develop a shared national vision about agriculture's role in improved biodiversity outcomes; a pilot Agriculture Biodiversity stewardship scheme providing incentives to reward and support on-farm practice change; and a voluntary Farm Biodiversity Certification scheme to certify and recognise best land and water management practices. See:

<https://www.agriculture.gov.au/ag-farm-food/natural-resources/landcare/sustaining-future-australian-farming>

h. Australia's Strategy for Nature 2019-2030 is the national biodiversity strategy and action plan. All governments report on progress to Environment Ministers and the CBD, including on measure (5E) for the 'retention, protection and/or restoration of wetlands systems to maintain or improve ecological integrity and ecosystem function'. See: <https://www.australiasnaturehub.gov.au/national-strategy>

A strategic work program for has been developed for wetlands in Queensland consistent with the national strategy.

i. The Supervising Scientist Branch undertakes research and ongoing environmental monitoring around the Ranger Uranium mine in the NT to ensure the environment, including downstream wetlands, remain protected from the effects of uranium mining.

n. Queensland's Sustainable Fisheries Strategy covers access and use of fishery resources. Data collected from electronic monitoring and artificial intelligence (AI) will be fed into AI libraries. There is a northern stock assessment underway for hammerhead sharks across northern Australia and The Gulf to address threats to this species. See: <https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/sustainable-fisheries-strategy-overview>

The Victorian Fisheries Authority Strategic Plan 2019-2024 supports healthy and sustainable fisheries. See: <https://vfa.vic.gov.au/operational-policy/strategy-and-policy/vfa-strategic-plan-2019-2024>

p. The National Water Quality Management Strategy (NWQMS) and its Australian and New Zealand Guidelines for Fresh and Marine Water Quality are applied by state and territory governments, responsible for the management of water and water dependent ecosystems.

Target 2

Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone.

[Reference to Aichi Targets 7 and 8], [Sustainable Development Goal 6, Indicator 6.3.1]

2.1 Has the quantity and quality of water available to, and required by, wetlands been assessed to support the implementation of the Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1, VIII.2) ? 1.24.

C=Partially

2.1 Additional Information

> Also see 1.c above. National Water Initiative

In the Murray-Darling Basin (MDB), an assessment of the quantity and quality of environmental water required to support wetland ecological functions is built into the Basin Plan 2012, including:

1. Ecological objectives and targets
2. Basin-wide environmental watering strategy (Strategy), to be implemented guided by (1)
3. Long-term regional watering plans to be implemented guided by (1) & (2)
4. Basin-wide annual watering priorities guided by (2)
5. Regional annual watering plans, guided by (2) & (3)

The environmental watering strategy was reviewed and updated in 2019 and includes the ecological objectives across the Basin for the next 3-5-years in line with the objectives and targets set by Plan.

Outcomes relate to Ramsar-listed wetlands, as well as wetlands of Basin-scale significance for waterbirds and migratory shorebirds.

To improve the understanding of Basin environmental water requirements, the Murray Darling Basin Authority (MDBA) funds annual aerial surveys of waterbirds, including at several Ramsar sites. The Authority also supports the Murray-Darling native fish survey which includes incidental monitoring of Ramsar sites (where these include instream values) and funds monitoring of shorebirds in the Coorong and Lakes Alexandrina and Albert Ramsar Site. An independent review of the freshwater Lakes Alexandrina and Albert was published in 2020. The review demonstrated the Lower Lakes were largely freshwater prior to European settlement and that environmental water is supporting the ecological values of the Ramsar wetland. The review highlights the challenges posed by climate change to maintaining these values into the future. See:

https://www.mdba.gov.au/sites/default/files/images/LowerLakesScienceReview_FINALREPORT_29Apr2020-web.pdf

Research by the NESP Northern Australia Environmental Resources (NAER) Hub is assessing the environmental water requirements of major river systems, the Fitzroy, Daly and Mitchell Rivers in Northern Australia and their valuable freshwater riverine and floodplain ecosystems. The freshwater flows of the Mitchell and other Gulf Rivers play an important role in the aquatic productivity of tidal and estuarine environments. This research is being synthesised to document links between flow and ecology for transferability to other northern wetland catchments. See: <https://www.nespnorthern.edu.au/projects/nesp/environmental-water-needs-fitzroy-river/>

<https://www.nespnorthern.edu.au/projects/nesp/environmental-water-needs-mitchell-river/>;

<https://www.nespnorthern.edu.au/projects/nesp/environmental-water-needs-daly-river/>

Victoria is undertaking new sustainable water strategies, commencing with Central and Gippsland regions, which commit to water sharing arrangements between consumptive and environmental uses, and must also consider cultural and recreational values. Six Ramsar sites will benefit from the environmental flows available under the Central and Gippsland strategy.

In Western Australia water allocation planning considers (across the state through 16 groundwater plans and six surface water plans) the ecological, cultural and social values of wetlands, including other public benefits and ecosystem services provided by wetlands. Water allocation planning protects wetlands by leaving water in surface water and groundwater systems to maintain wetlands and licensing water take ensure a low level of impact. Technical work to understand environmental water needs is undertaken to inform water allocation planning. For example in the Myalup area, the Department of Water and Environmental Regulation is undertaking hydrogeological investigations and numerical groundwater throughflow and seawater solute modelling to understand the dynamics of groundwater use and climate change on the Lake Preston component of the Peel-Yalgorup Ramsar site.

2.2 Have assessments of environmental flow been undertaken in relation to mitigation of impacts on the ecological character of wetlands (Action r3.4.iv)

C=Partially

2.2 Additional Information

> See also 2.1 above

The Living Murray (TLM) program monitors the condition of fish, birds and vegetation at icon sites along the River Murray annually. This monitoring provides an invaluable long term dataset, tracking the environmental condition of sites over time (see: <https://www.mdba.gov.au/sites/default/files/pubs/icon-site-condition.pdf>), as well as ecological responses to environmental water. Monitoring also underpins the publication of annual site condition report cards to communicate the benefits of environmental water to the public. See:

<https://www.mdba.gov.au/issues-murray-darling-basin/water-for-environment/water-over-time>

The objective of environmental water delivery is to protect and restore a subset of the Basin's water-dependent ecosystems, including maintenance of the ecological character of Ramsar wetlands. On an annual basis, the ecological requirements of key wetland sites are considered in decisions about how much and where to apply environmental water to ensure environmental water holders are prepared to deliver water under the range of possible climatic conditions from drought to flooding rains.

The Commonwealth Environmental Water Office (CEWO) Monitoring, Evaluation and Research Program (2019-2022), Flow-MER, evaluates the contribution of environmental water to the objectives of the Basin Plan, with the results assisting with adaptive management of the water holdings. See: <https://flow-mer.org.au/> For Ramsar sites in the Basin, the CEWO and Geoscience Australia are working together to describe the temporal and spatial characteristics of wetland inundation to determine and the additional impact of each environmental watering event from 2014-2018, as well as identifying potential changes in vegetation condition across each Ramsar site using an appropriate metric.

Victoria's WetMAP monitoring program has four themes (fish, frogs, waterbirds and vegetation) to demonstrate the benefits of environmental flows. Victoria has analysed 30 years of Landsat data to determine changes to wetland inundation patterns across the state.

At the Banrock Station Ramsar site, monitoring of floodplain biota has been supplemented with additional research into the invertebrate response to water management across floodplains. Preliminary data has shown an increasing diversity of species around environmental water sites including species that are currently undescribed to science. Fourteen additional flora species have been identified for the first time as part of vegetation monitoring around watered sites. This has included species that are listed regionally as near threatened (3), Rare (1) and vulnerable (2). Annual monitoring of the Regent parrot breeding colony has shown an increase following an extended period of decline suggesting a potential link to the delivery of Commonwealth environmental water within the site and the resumption of breeding.

In Western Australia a large number of environmental flow assessments and ecological water requirements studies have been undertaken to protect wetlands (both Ramsar and other wetlands). For example, in the Ord River system, a comprehensive environmental flows study was undertaken to define release rules from the Ord River Dam at Lake Argyle that would protect Ramsar site values, and was underpinned by a monitoring and management framework.

At the Hunter Estuary Ramsar Wetlands, a hydrology study of the Shortland wetland component guides placement of infrastructure and water flow decisions to ensure health of wetlands and protection of Ramsar site values.

2.3 What, if any, initiatives been taken to improve the sustainability of water use (or allocation of water resources) in the context of ecosystem requirements across major river basins (Resolutions VIII.1 and XII.12)? (Action 3.4.6.)

C=Partially

2.3 Additional Information

> See also 2.1 and 2.2 above

The Murray–Darling Basin Plan 2012 provides for additional water to be made available for the environment, based on an assessment of an ecologically sustainable level of consumption to support the protection and conservation of water-dependent ecosystems, and connectivity between ecosystems. The Basin Plan requires state Water Resource plans, where there is a surface water connection between two areas, to enable the coordination of environmental water. The Basin-wide environmental watering strategy (2019) identifies coordination arrangements for managing environmental water and quantifies expected outcomes beyond 2019 to ‘improve connections along rivers and between rivers and their floodplains’, as well as targets for the end of the system at the Murray Mouth. Basin annual environmental watering priorities include priorities to ‘support lateral and longitudinal connectivity along the river system’ and to ‘build ecosystem resilience by providing or enhancing connectivity’.

Increasingly, collaboration is seeing environmental water holders combine their water to achieve larger and more effective watering events. Recent drought conditions have required water holders to prioritise the delivery to target high priority sites and ensure the gains from past delivery of water are maintained. There has been a focus on delivery of water to maintain ecosystem functions and core wetland refuge sites, particularly Ramsar wetlands. This coordination is improving outcomes along the length of the River Murray and its tributaries, as water is used and reused across multiple sites, including Ramsar wetlands, before reaching the Coorong at the end of the river system. As an example, in the spring of 2019, delivery of environmental water benefitted over 5,000 km of rivers and creeks, from storages through the river system, providing water to wetlands along the way including six Ramsar wetlands, targeting parts of the Barmah Forest, Gunbower Forest, Central Murray Forests, Hattah-Kulkyne Lakes, the Riverland and the Coorong and Lakes Alexandrina and Albert Wetland.

The Southern Connected Basin Environmental Watering Committee supports the delivery of water for the environment across multiple environmental water holders and managers. For the northern Basin, this coordination occurs through other forums.

In Western Australia the Department of Water and Environmental Regulation is developing a water allocation plan for the Fitzroy River basin and its groundwater resources to ensure the unique environmental and cultural values of the Fitzroy River are protected. See: <https://www.water.wa.gov.au/planning-for-the-future/allocation-plans/north-west-region-allocation-plan/water-planning-in-the-fitzroy>

Kati Thanda–Lake Eyre Basin, covering almost one-sixth of Australia, is one of the world's largest internally-draining river systems extending through South Australia, the Northern Territory, Queensland, and a small part of New South Wales. Basin wide management of water resources is governed by the Lake Eyre Basin Intergovernmental Agreement Act 2001 (the Agreement). The Agreement provides for the development or adoption, and implementation of policies and strategies for water and related natural resources to avoid or eliminate so far as reasonably practicable adverse cross-border impacts. The Coongie Lakes Ramsar site receives flows from the Cooper Creek river system in Queensland and crosses the border into South Australia where it terminates. Lake Pinaroo is located in the north-west corner of NSW.

2.4 Have projects that promote and demonstrate good practice in water allocation and management for maintaining the ecological functions of wetlands been developed (Action r3.4.ix.)

A=Yes

2.4 Additional Information

> See also 2.1-2.3 above

The 2019 Basin-wide environmental watering strategy includes case studies on effective water use and management to maintain the ecological functions of wetlands. See:

<https://www.mdba.gov.au/publications/mdba-reports/basin-wide-environmental-watering-strategy>

The MDBA's Native Fish Recovery Strategy (2020) provides funding for projects that demonstrate good practice in wetland management to maintain their ecological functions and through ‘recovery reaches’.

See: <https://www.mdba.gov.au/issues-murray-darling-basin/fish-deaths/native-fish-recovery-strategy>

The Living Murray program is returning acquired water (almost 500 GL) and building structures to help deliver water to six sites over 37,000 hectares along the Murray River including Ramsar listed Barmah-Millewa Forests; Gunbower and Koondrook-Perricoota Forests; Hattah Lakes; Chowilla Floodplain (Riverland) and Coorong and Lakes Alexandrina and Albert.

Partnership projects between the Australian, state and ACT Governments are being implemented as part of MDB reforms to modify infrastructure to better manage water quality and environmental flows, and benefit ecological and cultural functions of wetlands. (see 10.2 for projects)

The Murray-Darling Basin Balanced Water Fund, a cross sector partnership between the Nature Conservancy, Murray Wetlands Working Group and Kilter Rural is acquiring water for wetlands in the southern Basin (178 hectares watered to June 2019). These watering events increased bird diversity and abundance, benefitted the nationally threatened Southern Bell Frog and Eastern Regent Parrot, and enabled return of the locally extinct Murray Hardyhead. See: <https://www.natureaustralia.org.au/newsroom/water-fund-new-way-to-share-water-in-the-murray-darling/>

The ACT Water Resource Plan (2019) includes policies to maintain the functions of aquatic ecosystems,

protecting the ecological values and functioning of wetlands, and provision of water for the environment. The Plan's Environmental Flow Guidelines protect up to 90% of river flow of the Murrumbidgee River (ACT), taking a precautionary approach to water resource development on the premise that sustaining natural river function and water dependent biota requires a significant proportion of the natural river flow to be retained for environmental use. See:

https://www.mdba.gov.au/sites/default/files/pubs/ACT_water_resource_plan_part_1_Pt14_Redacted.pdf

The Victorian government provides for an environmental water reserve in its Water Act 1989, and has a strong framework around management and delivery of environmental water entitlements by the Victorian Environmental Water Holder, and protection of flows in unregulated systems (without large storages).

The CEWO and SA government are delivering water to the Banrock Station floodplain returning flows to the Box woodlands. Replacement of a key regulating gate and levy bank works has improved water delivery and enabled greater control and flexibility in managing water levels by means of a duel leaf gate installed in the rebuilt outlet regulator. This enables the wetlands to be maintained below pool height, reducing surface area and evaporative loss.

In Western Australia groundwater allocation limits and licensing on the Jandakot Groundwater Mound are managed in line with Ministerial Statement No. 688 under the Environmental Protection Act, to protect significant environmental values supported by the Mound – including Forrestdale and Thomsons Lakes Ramsar sites. Environmental water provisions (EWPs) for the lakes include a preferred minimum and an absolute minimum water level, to maintain habitat values for migratory birds and rare, threatened and priority flora and fauna. The EWP's are underpinned by surface and groundwater levels and quality monitoring, wetland vegetation and macroinvertebrate monitoring and annual reporting to the EPA.

2.5 Percentage of households linked to sewage system?

SDG 6 Target 6.3.1.

> 93

2.5 Additional Information

> By State and territory:

NSW 91.7%; Vic 88.9%; QLD79.5%; WA82.2%; SA76.6%; ACT96.5%;Tas69.9%; and NT 61.3%.

<https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-audit-2019>, p.599

2.6 What is the percentage of sewerage coverage in the country?

SDG 6 Target 6.3.1.

E=Exact number (percentage)

> 87%

2.6 Additional Information

> Approximately 87% of households nationwide

2.7 What is the percentage of users of septic tank/pit latrine if relevant to your country?

SDG 6 Target 6.3.1.

F=Less than (percentage)

> 13

2.8 Does the country use constructed wetlands/ponds as wastewater treatment technology?

SDG 6 Target 6.3.1.

A=Yes

2.8 Additional Information

> As well as effluent treatment, constructed wetlands are widely used in the ACT as a water pollution control measure and for their social amenity. The ACT Water Sensitive Urban Design code (WSUD code) is embedded within the Territory Plan. It requires new greenfield developments and redevelopments to achieve water pollution and flow impact mitigation through the integration of water sensitive urban design principles. This includes the construction of ponds and wetlands to provide stormwater detention and removal of pollutants from stormwater before they reach receiving waterways. The recent ACT Healthy Waterways program – a joint ACT Government/Australian Government program funded the construction of ~ 20 stormwater improvement assets (including ponds, wetlands, raingardens and channel restoration projects) throughout the ACT and surrounding area.

The Australian Government's Reef Trust is supporting Greening Australia's Reef Aid program transforming marginal cane land into biodiverse wetlands. The project aims to bring some natural balance back to 8 hectares of non-profitable cane land adjacent to Fig Tree Lagoon, providing much-needed habitat for local species and removing excess nitrogen and sediment from the water before it flows into the Mulgrave River and out to the Great Barrier Reef. See: <https://www.greeningaustralia.org.au/projects/transforming-marginal-cane-land-into-biodiverse-wetlands/>

Sydney Olympic Park's Water Reclamation and Management Scheme (WRAMS) was Australia's first large-scale

urban water treatment scheme. WRAMS recycles water from sewage and stormwater to supply irrigation, ornamental fountain and toilet flushing applications across Sydney Olympic Park and in the suburb of Newington. Office buildings, sporting and entertainment venues and Newington residences are all connected to this recycled water, which is supplied to customers through separate meters and at a lower cost than potable water supplied by Sydney Water.

WRAMS saves more than 850 million litres of potable water annually by avoiding its use for non-drinking purposes. In addition, the sewer-mining function of WRAMS treats approximately 550 million litres of sewage each year, which would otherwise be discharged to ocean outfalls.

2.9 Number of wastewater treatment plants (or volume treated exist at national level)?
SDG 6 Target 6.3.1.

Y=Not Relevant

2.9 Additional Information

> There are no national wastewater treatment plants. Australia's state, territory and local governments are responsible for wastewater treatment.

2.10 How is the functional status of the wastewater treatment plants? If relevant to your country
SDG 6 Target 6.3.1.

A=Good

2.10 Additional Information

> Wastewater treatment plants are subject to operating standards established and enforced by Australia's state and territory governments.

Of 1295 Wastewater treatment plants (as of November 2019) 1276 were operational, one was proposed, one was under construction, one was non-operational, and sixteen had been de-commissioned.

Source: National Wastewater treatment Facilities Database

<https://researchdata.edu.au/wastewater-treatment-facilities/1278436>

2.11 The percentage of decentralized wastewater treatment technology, including constructed wetlands/ponds is?
SDG 6 Target 6.3.1.

X=Unknown

2.12 Number of wastewater reuse systems (or volume re-used) and purpose?
SDG 6 Target 6.3.1.

> 314,844 Megalitres

2.12 Additional Information

> Supply (volume) of reuse water was 314,844 ML, with agriculture using (96,930ML) the primary key purpose
Source: Water Account, Australia 2017-18 ABS

In urban areas, the total volume of recycled water supplied in urban areas was 145,900 ML in 2018-19 reporting period. Supply of recycled water supply increased by 10% between 2018 and 2019 with the largest increases in recycled water production were reported for Adelaide, Melbourne and South East Queensland.

Source: Bureau of Meteorology 2020, National performance report 2018-19: urban water utilities, part A, Bureau of Meteorology, Melbourne.

http://www.bom.gov.au/water/npr/docs/National_Performance_Report_2018-19_urban_water_utilities_updated.pdf

2.13 What is the purpose of the wastewater reuse system if relevant to your country ?
SDG 6 Target 6.3.1.

R=Agriculture

2.13 Additional Information

Please indicate if the wastewater reuse system is for free or taxed or add any additional information.

> See 2.12 above for purpose - the primary purpose is agriculture.

Prices apply for recycled water to cover costs of production and supply but generally at a lower cost than potable water (90% of tier I in SA)

2.14 Does your country use a wastewater treatment process that utilizes wetlands as a natural filter while

preserving the wetland ecosystem?

A=Yes

2.14 Additional information: If Yes, please provide an example

> Dedicated wastewater ponds (lagoons) are used for primary, secondary and tertiary treatment. This includes filtering, sedimentation removal, breakdown of organic matter, de-nitrification and disinfection with use of wetlands primarily for the tertiary treatment component in wastewater treatment.

Trials of treatment wetlands and technologies to reduce nutrients and pesticides from farms in the catchments of the GBR have been funded by the Office of Great Barrier Reef (OGBR). Processes are underway to synthesise the data from these projects and lessons from these and other treatment trials in Queensland. This is expected to facilitate further future investment in wetland treatment systems.

Target 3

Public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands. {1.10}

[Reference to Aichi Targets 3, 4, 7 and 8]

3.1 Is the private sector encouraged to apply the Ramsar wise use principle and guidance (Ramsar handbooks for the wise use of wetlands) in its activities and investments concerning wetlands? {1.10.1} KRA 1.10.i

A=Yes

3.1 Additional Information

> The Queensland Government Wetlandinfo web portal provides a range of wetland information and a suite of wetland management tools and guides to encourage industry and private landowners to sustainably manage their wetlands. See: <https://wetlandinfo.des.qld.gov.au/wetlands/management/wetland-management/>

The 'Walking the Landscape' project involves synthesising catchment information and expert knowledge through facilitated workshops, with Traditional Owners, local area experts, government officers and land managers. This information is used to make 'catchment stories', delivered via esri map journals and can be used to prioritise management and encourage private landholders to implement on-ground activities and investments to benefit wetlands. Fifty-four catchment stories are available through WetlandInfo. See: <https://wetlandinfo.des.qld.gov.au/wetlands/ecology/processes-systems/water/catchment-stories/>

The Victorian Government undertakes research to inform the development of guidelines, tools and methods to manage Victoria's wetlands. See: <https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/managing-wetlands>

A long-term wetland intervention monitoring program is looking into different grazing regimes to better understand the potential benefits and impacts of grazing in wetlands to assist wetland managers to identify grazing options that maintain or improve wetland vegetation condition.

The Western Australian Government maintains a series of guides for management of wetlands including a 'Guide to Managing and Restoring Wetlands in Western Australia' (See:

<https://www.dpaw.wa.gov.au/management/wetlands/publications-and-links/218-a-guide-to-managing-and-restoring-wetlands-in-western-australia>), a checklist for preparing wetland management plans, a method for evaluating wetlands and a guideline for identifying and delineating wetlands

3.2 Has the private sector undertaken activities or actions for the conservation, wise use and management of {1.10.2} KRA 1.10.ii

Please select only one per square.

a) Ramsar Sites	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
b) Wetlands in general	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

3.2 Additional information

> a) Healthy Estuaries WA launched in June 2020, coordinates and implements common actions across six at-risk estuaries (including 2 Ramsar sites), building regional capability, promoting whole-of-industry engagement, and strengthening cooperative networks to share resources and knowledge. The program includes work to reduce nutrient inputs from priority catchments, use the latest science to monitor and

effectively manage waterways, and continue to build collaboration between community, scientists, government and industry. See: <https://estuaries.dwer.wa.gov.au/>
The Banrock Station Ramsar site, owned by Accolade Wines, has improved water management and expanded biodiversity monitoring to assess the influence the changed hydrology has on wetland biota.
Conservation Volunteers Australia (CVA) has delivered projects funded by private sector partners at 4 Ramsar listed wetlands- Towra Point Nature Reserve (Sydney NSW), Moreton Bay and the Broadwater (SEQ), Pitt Water Orierton Lagoon (TAS) and Hunter Estuary (Newcastle NSW) and also at 2 East Asian-Australasian Flyway sites, Shoalhaven Heads (Nowra NSW), and Casuarina Coastal Reserve (Darwin NT) at the Cheetham Wetlands Victoria.

At the Peel-Yalgorup system Ramsar site, the Wetlands and People project funded by the RLP is undertaking works within the Ramsar site and enabled improved management of over 300 hectares of adjoining private property with the support of local landowners. See:

<https://peel-harvey.org.au/local-landowners-support-environmental-work-in-our-ramsar-wetlands/>
b. The Native Fish Recovery Strategy (2020) encourages partnerships with the private sector including recreational fishers, agriculture groups, landholders, fishing businesses and tourism to support the conservation, wise use and management of wetlands in general, for example in establishment, management and monitoring of large scale restoration sites and recovery reaches. See:

<https://www.mdba.gov.au/issues-murray-darling-basin/fish-deaths/native-fish-recovery-strategy>
MangroveWatch, in partnership with Earthwatch Australia, is facilitating citizen science monitoring and community education in tidal wetlands of the East Coast of Queensland and the Gulf of Carpentaria. These programs are funded by Government and Corporate sponsorship.

In 2019, Earthwatch Australia initiated the 'Understanding Qld's Blue Carbon Resource Project' sponsored by Mitsubishi Development Pty Ltd . In 2020, Earthwatch Australia initiated the 'Wetlands not Wastelands in the Southern Gulf of Carpentaria' program in partnership with the Carpentaria Land Council Aboriginal Corp (CLCAC) sponsored by the Coca-Cola Australia Foundation.

New research by the NESP Tropical Water Quality (TWQ) Hub on the Great Barrier Reef reveals that tourism industry operators are undertaking restoration projects, motivated to improve coral cover and resilience of the reef, as well as stewardship and the opportunity for community education. Operators also identify challenges for involvement in reef restoration, including working within existing regulations and the uncertainties and impacts linked to future weather and climate events. See:

<https://nesptropical.edu.au/wp-content/uploads/2020/06/NESP-TWQ-Project-4.3-Technical-Report-2.pdf>

The Ginninderry development consortium in the ACT, is taking positive action to conserve Stream E in the Ginninderry Conservation Corridor adjoining the Murrumbidgee River. This degraded stream, hugely modified since European settlement, is the only waterway with permanent or near permanent flows into the Murrumbidgee within the Conservation Corridor.

The Australian Government has engaged 50 Service Providers through the Regional Land Partnerships Program to deliver on-ground environment and sustainable agriculture projects. Service Providers may work with the private sector in the delivery of conservation activities.

3.3 Have actions been taken to implement incentive measures which encourage the conservation and wise use of wetlands? {1.11.1} KRA 1.11.i

A=Yes

3.3 Additional information

> The Australian Government's Agriculture Stewardship Package includes: a pilot stewardship program to support and reward primary producers, incentive payments for adoption of improved biodiversity practices on farms, including wetlands and waterways; and, a voluntary Farm Biodiversity Certification scheme that will allow farms implementing sustainable resource use and best management practices can be certified and recognised for these measures. See: <https://www.agriculture.gov.au/ag-farm-food/natural-resources/landcare/sustaining-future-australian-farming>

The Native Fish Recovery Strategy (2020) includes incentive measures that encourage the conservation and wise use of wetlands, through funding of the recovery reach program.

The NSW Biodiversity Conservation Trust supports private land conservation of significant wetlands with conservation agreements providing landholders with annual funding for managing wetlands on their property and protecting these areas for a minimum of 15 years or, in some cases, permanently. The 2019 Tenders included wetlands in the Central west Rivers and the 2020 tender process is invited bids from landholders in the Northern Inland, aimed at conserving the floodplains of the region.

See: <https://www.bct.nsw.gov.au/>;

<https://www.bct.nsw.gov.au/news-stories/white-leeds-station-managing-and-protecting-ecosystems-far-west-nsw>

The Western Australian Department of Biodiversity Conservation and Attractions has conducted an incentives program for private landholders with high ecological values wetlands on their properties since 2006. The Healthy Wetland Habitats program has assisted over 100 landholders with managing threatening processes by conducting weed and disease control, revegetation, feral animal control and fencing to control stock access into wetlands

In June 2018 QANTAS became the first corporate investor for a reef-credits scheme designed to provide

ecosystem service payments in exchange for making changes to reduce nutrient, pesticide and sediment runoff to the Great Barrier Reef. One of the first projects to produce Reef Credits was the Babinda Reef Project – a pilot Carbon and Reef Credit project developed by Australian company Green Collar and Jaragun Natural Resource Management that rebuilds wetlands and replants endangered rainforest, allowing nature to filter the water before it reaches the Reef. HSBC is another corporate investor in reef credits paying a cane farmer to improve fertilizer management practices to prevent 3,000kg of nitrogen from entering the wetlands and reef catchments. See: <https://terrain.org.au/reef-credits/>; <https://greencollar.com.au/reef-credits/>

3.4 Have actions been taken to remove perverse incentive measures which discourage conservation and wise use of wetlands? {1.11.2} KRA 1.11.i

Z=Not Applicable

Target 4

Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.

{Reference to Aichi Target 9}

4.1 Does your country have a comprehensive national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands? {1.9.1} KRA 1.9.i

A=Yes

4.1 Additional information

> Pest species are commonly recognised, both nationally and internationally, as a threat to wetlands. At the national level, the Weeds of National Significance (WoNS) list identifies thirty two weeds that have been prioritised based on their invasiveness, potential for spread and environmental, social and economic impacts. Escaped garden plants, some of which are now classified as WoNS, are listed as a Key Threatening Process under the national Environment Protection and Biodiversity Conservation (EPBC) Act 1999.

Eight other Key Threatening Processes listed under the EPBC Act may impact the ecological character of wetlands, being:

- Dieback caused by the root-rot fungus (*Phytophthora cinnamomi*);
- Infection of amphibians with chytrid fungus resulting in chytridiomycosis;
- Invasion of northern Australia by Gamba Grass and other introduced grasses;
- Predation by European red fox;
- Predation by feral cats;
- Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs
- The biological effects, including lethal toxic ingestion, caused by Cane Toads (*Bufo marinus*) and
- Novel biota and their impact on biodiversity.

The Australian Bureau of Agricultural Resource Economics and Sciences (ABARES) prepared the national priority list of exotic environmental pests and diseases (not presently in Australia) with 40 species across eight thematic groups, some of which may pose a threat to the ecological character of wetlands if the species was to establish in Australia, listing terrestrial, freshwater and marine species, diseases and pathogens. The list is used to communicate the risk and to guide action to prevent them entering or establishing in Australia. See: <https://www.agriculture.gov.au/biosecurity/environmental/priority-list>

Australia also maintains a number of other lists at the national and jurisdictional level that may have implications for species within wetlands including Notifiable Animal Diseases, Reportable Diseases of Aquatic Animals and National priority plant pests. The Strategic Approach to the Management of Ornamental Fish in Australia lists the known ornamental fish in Australia, and, and live importation of ornamental fish and other species is regulated by the EPBC Act.

At the jurisdictional level, each state and territory government in Australia has a number of established pest animals and weed lists under their legislation and land managers are responsible for control of these pests on their land. Some pests are wetland species (for example, water buffalo and the red-eared slider turtle) while others, such as feral pigs, are found particularly in association with wetlands and riparian ecosystems.

4.2 Have national policies or guidelines on invasive species control and management been established or reviewed for wetlands? {1.9.2} KRA 1.9.iii

A=Yes

4.2 Additional information

> The Intergovernmental Agreement on Biosecurity (IGAB) (2019) is an agreement between the Commonwealth, state and territory governments to minimise the impact of pests and disease on Australia's economy, environment and the community. The control and management of invasive species in wetlands is captured under this agreement. Schedules under the IGAB identify priority areas for collaboration, such as surveillance and diagnostics, engagement and communications, and biosecurity research, development and extension, and span both primary production and environment sectors. The national biosecurity website provides guidance for land managers to assist management of pest and weed risks to land and waterways

(including wetlands) access to identification tools and expertise. <https://beta.biosecurity.gov.au/environment>
The Australian Pest Animal Strategy (2017-2027) and Weeds Strategy (2017-2027) provide the national framework for addressing pest animals and weeds. Key Threatening Process listed under the Environment Protection and Biodiversity Conservation Act 1999 may have a national Threat Abatement Plan. Threat Abatement plans relevant to wetlands include:

- 2018 plan for disease in natural ecosystems caused by *Phytophthora cinnamomi*. Several Ramsar sites are affected by dieback caused by the root-rot fungus.
- 2017 plan for predation, habitat degradation, competition and disease transmission by feral pigs (*Sus scrofa*).
- 2016 plan for infection of amphibians with chytrid fungus resulting in chytridiomycosis.
- 2015 plan for predation by feral cats - 2015
- 2012 plan to reduce the impacts on northern Australia's biodiversity by five listed grasses, covering gamba grass, para grass, olive hymenachne, mission grass and annual mission grass. Ramsar wetlands in northern Australia are threatened by these grasses.
- 2011 plan for the biological effects, including lethal toxic ingestion, caused by cane toads
- 2008 plan for predation by European red fox.

A National Feral Pig Management Coordinator was appointed in 2020 to lead the development and implementation of a National Feral Pig Action Plan to reduce the risks of feral pigs to Australia's agriculture industries and environment.

The Cane toad threat abatement plan identifies the research and management actions needed to ensure the long-term survival of native species and wetlands affected by cane toads. The Australian Government's Environment Restoration Fund is supporting Indigenous rangers and other landholders across the Kimberley to identify areas of highest biodiversity focused on tropical waterways and wetlands ahead of the cane toad invasion.

Australia's Strategy for Nature 2019-2030 requires state, territory and Commonwealth governments to demonstrate progress against the 'extent and success of management programs for established invasive species that pose a significant threat to species and/or ecosystems that are vulnerable to this threat. See: <https://www.australiasnaturehub.gov.au/national-strategy>

The Native Fish Recovery Strategy (2020) identifies the need for investment in the management of introduced fish, including by reviewing and updating the Basin-wide introduced fish plan under the Native Fish Strategy (2003); establishing forums of fish ecologists, water and land managers, and specialists in integrated pest management to identify how introduced fish should be managed and incorporating these insights into regional recovery plans. See: <https://www.mdba.gov.au/issues-murray-darling-basin/fish-deaths/native-fish-recovery-strategy>

4.3. Has your country successfully controlled through management actions invasive species of high risk to wetland ecosystems?

A=Yes

4.3 Additional Information

If 'Yes', please provide examples, including the species name and the successful management action

> Australia's strong biosecurity system minimises the risk of entry of new invasive pests, weeds and diseases and prevents establishment of many invasive species of high risk to wetland ecosystems. For example, screening occurs at the border for items that may carry freshwater invasive species such as *Didymosphenia geminata*.

Biological control of *Salvinia molesta*, an invasive aquatic weed in wetlands, using the small back weevil, *Cyrtobagous salviniae*, from Brazil, has been successful. The weevil was first released in at Lake Moondarra, Mt Isa in 1980, and then elsewhere in Australia Papua New Guinea, Sri Lanka and other countries, resulting in high levels of control, most within three years of release.

At Commonwealth Ramsar sites, Kakadu National Park has a specialist team dedicated to the control of invasive weeds including Gamba Grass, Para Grass, Mission Grass, *Salvinia*, and *Mimosa*. *Mimosa* is being successfully controlled but requires sustained effort and resources. Success with other weeds varies with trial control programs underway for para grass and mission grass in the East Alligator. Feral herbivores, damaging floodplain and other wetland ecosystems in Kakadu, are periodically controlled. A feral animal cull in November 2020 with Traditional Owners builds on a cull of pigs on the northern floodplains in May 2020. The aim is to secure resources to undertake control on an annual basis to reduce the level of impact.

At Pulu Keeling National Park, strict biosecurity measures, including managing access to the island and periodic monitoring, prevent entry and establishment of invasive species.

The Australian Government's Regional Land Partnerships program is investing in invasive plant and pest animal control across a suite of Ramsar sites to 2023. Projects include:

- Feral goat control in Hattah-Kulkyne;
- weed infestation and feral animal control at shorebird sites at Towra Point NSW;
- survey of aquatic weeds on farms adjacent to Myall Lake wetlands and feral pig, fox, wild dog and weed control across 50km of coastline.
- Feral pig control to address threats to water quality, nest destruction and predation of waterbirds at Currawinya Lakes

- invasive pest animal control (pigs, deer, rabbits and foxes) and removal of exotic weeds, choking waterways and harbouring pests at Central Murray Forests
- drone technology, detector dogs and community volunteers for surveillance to identify, and control Mouse Ear Hawkweed (*Hieracium pilosella*) within and around Blue Lake
- feral cat control and monitoring on French Island using 60 remote cameras to track distribution and abundance; pest animal control and black rat monitoring on Reef Island, trialling new controls to reduce non-target interactions - Westernport.

380 hectares of weeds have been controlled by CVA teams targeting a variety of species including Bitou Bush, Spiny rush, Groundsel Bush and mangroves to conserve EPBC-listed Coastal Saltmarsh as part of the Community Conservation for the Far Eastern Curlew project with a further 4334ha of weeds controlled at smaller wetland complexes across the country. See: <https://www.eaaflyway.net/far-eastern-curlew-conservation-project-update/>

At Jerrabomberra Wetlands Nature Reserve in the ACT, Yellow Water Lily *Nymphaea mexicana* has been successfully controlled in Jerrabomberra Creek and backwaters with small-effort follow-ups needed as seedlings reappear.

4.4 Are there invasive species of high risk to wetland ecosystems that have not been successfully controlled through management actions?

A=Yes

4.4 Additional Information

If 'Yes', please provide examples, including the species name and the challenges to management

> European Carp are a significant threat to native species in wetlands. Carp are now estimated to account for 70-90 per cent of fish numbers in some rivers of the MDB, becoming the dominant freshwater fish in south-east Australia, comprising up to 80% of the fish biomass in many areas. The National Carp Control Plan is determining the feasibility of using Cyprinid herpesvirus 3 (the carp virus) as a biological control agent for carp. The Australian Government has committed \$15 million to assess the viability of releasing the Carp virus CyHV-3 as a biological control tool. Once finalised, all Australian governments will decide whether to proceed toward a potential release of the carp virus, including strategic assessment under the EPBC Act to consider the impacts of carp, and the potential release of the carp virus, on Ramsar wetlands.

Within the Moreton Bay Ramsar site (41) Brazillian Peppertree (*Schinus terebinthifolius*) is becoming a weed of concern threatening tidal wetland and brackish wetland habitats. This species has become increasingly invasive following disturbance related to severe flood events.

Environmental assessments in 2019 at Coringa-Herald and Lihou Reefs and Cays Ramsar Site identified invasive scale insects (less than previously observed), African big-headed ant, tramp ant, and hawkmoth, and tropical fire ant, buffel grass and Asian house gecko at Ashmore Reef. The impacts on wetland values is yet to be determined. A biodiversity survey in 2018 at Elizabeth and Middleton Reefs Ramsar Site found a low density of crown-of-thorn starfish persists at Elizabeth Reef.

At Kakadu National Park, the management of pigs and buffalo, para grass and *Salvinia* in waterways and floodplains is ongoing and requires sustained effort and resources.

On Christmas Island, Yellow crazy ants continue to be difficult to manage at The Dales and Hosnies Spring with limitations on using bait around wet areas and increased risk of non-target impacts. Some level of control has recently been achieved through baiting.

The Barmah Strategic Action Plan addresses key threats to Moira Grass from horses and proposes two control methods: passive trapping and rehoming: and, culling using professional shooters. Feral pigs, deer and other pests and invasive flora will continue to be controlled.

The MDB Native Fish Recovery Strategy (2020) and Native Fish Demonstration Reaches identify the importance of preventing new introduced species, such as tilapia, from entering Basin rivers and recommends development of a tilapia exclusion strategy.

New NESP Northern Australia Hub research is demonstrating the value of using eDNA methods for monitoring incursions of invasive species, in both terrestrial and aquatic settings, including cane toads. eDNA can be used to detect the presence of a single cane toad for a few days after it arrives at a new location. These means that Indigenous rangers and land managers in remote areas can help track incursions by collecting a water sample from small ponds during the day, rather than searching at night. The research also shows eDNA can be used to detect tilapia and the invasive aquatic fanwort (*Cambomba caroliniana*) in tropical waterways.

See:<https://www.nespnorthern.edu.au/projects/nesp/edna/>

4.5 Have the effectiveness of wetland invasive alien species control programmes been assessed?

A=Yes

4.5 Additional Information

> At the Banrock Station Ramsar site, drying allows managers to assess effectiveness of carp control, which has shifted from a biomass of 60t of dead carp to an estimated 0.5-2t of carp.

On Christmas Island, control of yellow crazy ants has been assessed through regular monitoring following baiting activity. While the success of baiting is initially effective reinvasion of ants over time is high. Indirect biological control of introduced scale insects (a major food source for the ants) is also being implemented to

achieve long-term control. A tropical fire ant pilot control program for Ashmore Reef Commonwealth Marine Reserve Ramsar site was undertaken.

At Kakadu National Park, a pioneering program is assessing the effectiveness of weed control programs. A NESP research collaboration with Traditional Owners and Microsoft is combining Indigenous knowledge and new technology, using drone footage, interpreted by Indigenous rangers, and artificial intelligence to monitor success and inform intensive weed management. There is ongoing monitoring of the effectiveness of the mimosa control program in Kakadu. See: <https://www.nespnorthern.edu.au/2020/08/14/ai-transforms-kakadu-management/>

As part of a wider project to define indicators of success for feral animal management in northern Australia, NESP research is looking at the most effective ways to manage feral pigs the Cape York Peninsula, QLD drawing on science and using real time monitoring tools. Researchers work closely with Indigenous rangers to develop a joint understanding of what works and what doesn't in feral animal management and monitoring. New research shows fences can prevent pig damage to wetlands if they are functional, but if damaged pigs cause as much as or sometimes more damage than at unfenced sites, highlighting the importance of maintaining fences to protect wetlands. Feral pig damage of wetlands has also been found to limit the richness and abundance of ground invertebrates associated with wetlands. See:

<https://www.nespnorthern.edu.au/projects/nesp/feral-animal-management/>

<https://link.springer.com/article/10.1007/s11273-019-09670-7>

<https://www.nespnorthern.edu.au/2020/10/28/wetland-invertebrates-lost-to-pugging-and-wallowing-pigs/>

The NESP TWQ Hub has developed an integrated research strategy for managing the impact of Crown of Thorns Starfish (CoTS) on the Great Barrier Reef (GBR) drawing on the collective experience of CoTS control operations, policy makers and researchers to improve the performance of the control program, both on-water tactics and in the decision-making that guides control operations. See:

<http://nesptropical.edu.au/index.php/round-3-projects/project-3-1-1/>

Goal 2. Effectively conserving and managing the Ramsar Site network

[Reference to Sustainable Development Goals 6, 11, 13, 14, 15]

Target 5

The ecological character of Ramsar Sites is maintained or restored through effective, planning and integrated management {2.1.}

[Reference to Aichi Targets 6,11, 12]

5.1 Have a national strategy and priorities been established for the further designation of Ramsar Sites, using the Strategic Framework for the Ramsar List? {2.1.1} KRA 2.1.i

C=Partially

5.1 Additional information

> Research underway in the NESP NAER Hub is improving knowledge about major rivers systems in Northern Australia and their values, providing the basis for priority setting to protect these important wetland assets and ecological processes, and helping to identify potential sites for future nomination as Ramsar wetlands.

See: <https://www.nespnorthern.edu.au/nesp/projects/>

A Victorian project to improve the framework for identifying high value wetlands and assessing risk is underway ahead of the next state-wide and regional waterway strategies. It involves:

- Ecological models to provide statewide information on wetland values and threats and identify high value wetlands.
- An approach to group wetlands into complexes as a basis for assessing risk and making investment and management decisions.
- Decision support tools that assess the benefits and costs of alternative management actions.

NSW is developing a Ramsar Strategy for the strategic management of existing Ramsar sites and nominate new Ramsar sites, consistent with the Ramsar Convention and relevant legislation.

5.2 Are the Ramsar Sites Information Service and its tools being used in national identification of further Ramsar Sites to designate? {2.2.1} KRA 2.2.ii

D=Planned

5.2 Additional information

> A strategic review of representativeness of the Ramsar and the wider wetland estate (including all protected areas) is proposed to identify gaps and threats by wetland type, and to inform future Ramsar site nominations and prioritisation.

5.3 How many Ramsar Sites have a formal management plan? {2.4.1} KRA 2.4.i

E=Exact number (sites)

> 64

5.4 Of the Ramsar Sites with a formal management plan, for how many of these is the plan being implemented? {2.4.2} KRA 2.4.i

E=Exact number (sites)

> 64

5.5 Of the Ramsar sites without a formal management plan, for how many is there effective management planning currently being implemented through other relevant means e.g. through existing actions for appropriate wetland management? {2.4.3} KRA 2.4.i

E=Exact number (sites)

> 2

5.3 – 5.5 Additional information

> In the current triennium, Management plans have been prepared and are being implemented for three Ramsar Sites within Australian Marine Parks: the Coringa-Herald and Lihou Reefs and Cays Ramsar Site - Coral Sea Marine Park Management Plan 2018; Ashmore Reef Commonwealth Marine Reserve Ramsar Site - the North-west Marine Parks Network Management Plan 2018; and, Elizabeth and Middleton Reefs Ramsar Site - Temperate East Marine Parks Network Management Plan 2018. Christmas Island and Pulu Keeling National Parks have Plans of Management that include management of their Ramsar wetlands.

DES (Queensland Parks and Wildlife) are developing a Bowling Green Bay National Parks monitoring and research strategy which addresses many of the needs of the Ramsar site.

The Western Australian Government's Peel-Harvey Estuary Protection Plan (Bindjareb Djilba) is a whole-of-government plan to guide the protection of the estuary component of the Peel-Yalgorup Ramsar site over the next 10 years, including actions needed to protect and improve the water quality of the estuary so it may continue to support the community, ecology and economy of the Peel region of Western Australia. See: <https://www.wa.gov.au/government/publications/peel-harvey-estuary-protection-plan-bindjareb-djilba>

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g. through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

C=Partially

5.6 Additional information

> As part of the Ramsar National Coordinating Committee (WAESC), each jurisdiction reports six monthly on the state of the ecological character of their Ramsar sites, which provides a measure of management effectiveness.

As part of a new Monitoring, Evaluation, Reporting and Improvement (MERI) system for Commonwealth parks, MERI plans are being prepared for Marine park network management plans, that include the Coringa-Herald and Lihou Reefs and Cays Ramsar Site, Ashmore Reef Commonwealth Marine Reserve Ramsar Site and the Elizabeth and Middleton Reefs Ramsar Site. Network Science Plans are also being developed for these three sites that will include monitoring priorities for the sites and will also help assess management effectiveness. Revised indicators for monitoring condition of values in Pulu Keeling, Christmas Island and Kakadu National Parks are being developed for the MERI system. Preliminary monitoring has been undertaken for Hosnie's Springs and the Dales Christmas Island Ramsar sites and Puku Keeling is monitored extensively.

Western Australia has engaged an aquatic ecologist to coordinate a Ramsar monitoring and evaluation strategy that will help identify priority monitoring activities that meet the assessment and reporting of condition and potential changes in ecological character of Ramsar sites in WA. It is viewed as an important step in moving to a more strategic coordination of monitoring efforts across Ramsar sites in WA.

A new Australian Research Council Linking Project Grant (led by Professor Richard Kingsford at UNSW) will assist state and national governments to meet their obligations under the Ramsar Convention and guide more effective management. The research will develop a global standard for assessing, reporting and managing wetlands and assist in prioritising conservation efforts of internationally significant wetlands. The standard will include protocols for measuring past trends, current condition and future trajectories of key ecosystem components, using an ecosystem modelling decision tree. Added to this will be a cloud-based system to allow easy access by managers and other users and the implementation of the standard that is consistent with obligations of the Ramsar Convention. It will focus on four Australian Ramsar sites- Macquarie Marshes, Hattah-Kulkyne Lakes, Currawinya Lakes and Malkumba-Coongie Lakes.

The Victorian Government has developed a Ramsar MERI framework to guide the development and implementation of individual Ramsar site MERI plans. Individual site MERI plans:

- assist in tracking the status of ecological character
- identify priority critical components processes and services (CPS) for monitoring at the site scale
- identify of priority management interventions for evaluation of effectiveness
- set out a process for improved reporting and management of the ecological character of the site.

5.7 How many Ramsar Sites have a cross-sectoral management committee? {2.4.4} {2.4.6} KRA 2.4.iv

E=Exact number (sites)

> 40

5.7 Additional information

If at least 1 site, please give the name and official number of the site or sites

> See Section 5. Annex for full list

Kakadu National Park has a cross-sectoral committee with a Board of Management including representatives of the nature conservation, tourism sector, traditional owners and government.

Pulu Keeling National Park has a community advisory committee.

Three Ramsar Sites within Australian Marine Parks that have a cross-sectoral advisory committees including community and Indigenous members. Coringa-Herald and Lihou Reefs and Cays Ramsar Site - Coral Sea Marine Park Advisory Committee. Ashmore Reef Commonwealth Marine Reserve Ramsar Site - North-west Marine Parks Advisory Committee. Elizabeth and Middleton Reefs Ramsar Site -Temperate East Marine Parks Advisory Committee.

NSW - Narran Lake (MoU with Traditional Owners); Paroo River Wetlands - (involvement of Traditional Owners); Myall Lakes (involvement of Traditional Owners)

Hunter Wetlands Centre component of the Estuary has a site management committee that includes community partners, wetland experts and agency staff.

Vic - All Victoria's Ramsar sites (12) have a cross-sectoral management committee. Members include representation from Catchment Management Authorities, Parks Victoria, Traditional Owners, Water corporations, not for profit organisations and other agencies responsible for implementing Ramsar site management plans.

QLD - The NQ Dry Tropics are exploring the establishment of a Ramsar Management Advisory Group for Bowling Green Bay. The Burnett Mary Regional Group convenes Ramsar Management Advisory Group for Great Sandy Strait.

SA - Coorong, Lakes Alexandrina and Albert Wetland has cross sectoral management arrangements

WA - Toolibin Lake (Recovery Catchment Team); Peel-Yalgorup (Technical Advisory Group); Roebuck Bay (jointly managed with Traditional Owner Groups); Eighty Mile Beach (jointly managed with Traditional Owner Groups); Lake Warden (Ramsar Management advisory group); Lake Gore (Ramsar Management advisory group); Vasse-Wonerup (Vasse Taskforce of the Revitalising Geographe Waterways Program overseeing the science and community consultative partnership).

NT - Cobourg Peninsula (joint management with Traditional Owners)

Target 7

Sites that are at risk of change of ecological character have threats addressed {2.6.}.

[Reference to Aichi Targets 5, 7, 11, 12]

7.1 Are mechanisms in place for the Administrative Authority to be informed of negative human-induced changes or likely changes in the ecological character of Ramsar Sites, pursuant to Article 3.2? {2.6.1} KRA

2.6.i

A=Yes

7.1 Additional information

If 'Yes' or 'Some sites', please summarise the mechanism or mechanisms established

> Australian governments have an agreed approach for making Article 3.2 notifications. The assessment and notification of change in ecological character must be evidence-based and undertaken in accordance with the National guidance on notifying change in ecological character of Australia's Ramsar wetlands (Article 3.2). A practice note to guide the process has been developed.

See: <http://www.environment.gov.au/water/wetlands/publications/national-guidance-notifying-change-ecological-character-australias-ramsar-wetlands>

Keeping track of developments that might result in changes in the ecological character of Ramsar Sites is captured by referral, assessment and approval requirements in Australia's national environmental legislation. The EPBC Act places an obligation on a person to not take an action that has or will have a significant impact on the ecological character of a declared Ramsar wetland, or is likely to have a significant impact on the ecological character of a declared Ramsar wetland. A person proposing to take an action that may have a significant impact must refer the proposal to the Minister of the Environment for approval to take the action.

7.2 Have all cases of negative human-induced change or likely change in the ecological character of Ramsar Sites been reported to the Ramsar Secretariat, pursuant to Article 3.2? {2.6.2} KRA 2.6.i

A=Yes

7.2 Additional information

If 'Yes' or 'Some cases', please indicate for which Ramsar Sites the Administrative Authority has made Article 3.2 reports to the Secretariat, and for which sites such reports of change or likely change have not yet been made

> Once the Australian Government is advised that a change in ecological character has occurred or may occur at a Ramsar site, it works with the site manager to undertake investigations and report any change to the Ramsar Secretariat. Changes have been notified for the following Ramsar sites:

Towra Point: A response strategy has been developed by the NSW Government, outlining a suite of management interventions for the recovery of the site. Management activities under the strategy (like weed and feral animal control) are progressing through a \$1.5m project under the Australian Government's Regional Land Partnership program. Wildlife cameras have been used to capture information on the extent and type of pest animals to target control activities. Weed control within the Ramsar site is allowing natural regeneration of saltmarsh.

The Coorong and Lakes Alexandrina and Albert: The Australian Government committed \$169.9m funding for a series of projects to help restore the Coorong, including emergency and early works during the Millennium Drought; preparation of a 20 year long term plan for the site; and the Coorong, Lower Lakes and Murray Mouth (CLLMM) Recovery Project. An updated Ecological Character Description (ECD) was prepared for the site which describes baseline conditions as at 2015 for future site management. An increase in filamentous algae is a recent phenomenon that is negatively affecting the site. Funding through the Healthy Coorong, Healthy Basin project will be used to identify management options.

Macquarie Marshes: The Australian Government commissioned a technical review of the Macquarie Marshes to report on monitoring activity, environmental watering outcomes and scientific research in 2018. This review found that the vegetation was responsive to the watering events. The extended dry conditions in 2019 resulted in a bushfire within the Ramsar site which significantly impacted the reedbeds, a critical component of the site. Recent rainfall in the catchment has resulted in water flowing into the Marshes with the reedbeds demonstrating a good response. The NSW Government is monitoring the responses of aquatic vegetation post fire to inform future management of the site.

Gwydir: Commonwealth environmental water has been provided to the Gwydir wetlands to improve and maintain the core wetland vegetation to provide conditions suitable for waterbirds and frogs to complete breeding cycles, improve water quality variables such as pH and conductivity and increase longitudinal and lateral connection throughout the site. The watering combined with natural flows in 2018 reached all parts of the site with good environmental responses. Natural flows supplemented by environmental water in early 2020 inundated parts of the site, contributing to an overall improvement in condition following the extremely dry year in 2019.

7.3 If applicable, have actions been taken to address the issues for which Ramsar Sites have been listed on the Montreux Record, such as requesting a Ramsar Advisory Mission? {2.6.3} KRA 2.6.ii

Z=Not Applicable

Goal 3. Wisely Using All Wetlands

[Reference to Sustainable Development Goals 1, 2, 5, 6, 8, 11, 12, 13, 14, 15]

Target 8

National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands {1.1.1} KRA 1.1.i

[Reference to Aichi Targets 12, 14, 18, 19]

8.1 Does your country have a complete National Wetland Inventory? {1.1.1} KRA 1.1.i

C=In Progress

8.1 Additional information

> There is a large amount of information on wetlands in Australia, but as yet no single repository in the form of a comprehensive national inventory.

The Bureau of Meteorology (BoM) provides water data, information and assessments about the past, current and likely future state of inland waters, a national overview and by region in the National Water Account as well as the Groundwater Dependent Ecosystems (GDE) Atlas. The GDE Atlas is a national dataset, using web-based mapping to allow users to visualise, analyse and download information about GDEs without needing specialised software. See: <http://www.bom.gov.au/water/waterassessments/>;

<http://www.bom.gov.au/water/nwa/2020/>; <http://www.bom.gov.au/water/groundwater/gde/>

New products and mapping tools being developed by Geoscience Australia's (GA). Digital Earth Australia (DEA) draw on 30 years of Landsat imagery to map Australia's inland waters and coastal ecosystems. The Waterbodies tool captures the extent and location of surface water identifying almost 300,000 waterbodies, their wet surface, and map changes in wet surface area (See:<https://www.ga.gov.au/dea/products/dea-waterbodies>). Water Observations from Space mapping surface water at continental scale (See: <https://www.ga.gov.au/dea/products/wofs>).

The Intertidal extents model maps the extent and topography of Australia's intertidal mudflats, beaches and reefs (See:<https://www.ga.gov.au/dea/products/iem>).

New Landsat-based national mangrove mapping shows the extent of mangrove forests between 1987 and 2016 (See: <https://landsat.gsfc.nasa.gov/article/mapping-mighty-mangrove>). The next version will improve the methodology and address issues with the underestimation of national mangrove extent. See:

<https://www.sciencedirect.com/science/article/pii/S0034425719301890>

GA is working with Queensland to add hydrological attributes (e.g. permanence of water, timing predictability, residence time, residence extent, commence to fill) to all freshwater wetlands in Queensland drawing on 30 years of Landsat data, as above.

GA also produced an assessment for the NESP Marine Biodiversity (MB) Hub demonstrating the potential utility of satellite remote sensing for mapping the extent and dynamics of key coastal and estuarine habitats critical for threatened and migratory species in Northern Australia. Seven estuaries used to test the potential for mapping intertidal areas and mangrove, and changes in extent over time. See:

https://www.nespmarine.edu.au/system/files/Phillips%20et%20al%20Characterising%20northern%20estuaries%20using%20the%20DEA_restructure_Milestone15_4Jan2018.pdf

A Victorian project to monitor wetland extent and water regime using Landsat imagery from 1988 to 2017 has been completed and will input to an update of the Victorian wetland inventory. Monitoring inundation using satellite imagery will be ongoing.

Western Australia has used a combination of 2020 aerial imagery, wet season Sentinel 2 imagery (Capernicus Australasia Regional Data Hub), Water observations from space (Digital Earth Australia) and Digital Elevation Model derived from LiDAR 5 Metre Grid (Geoscience Australia) to improve delineation of wetlands across the Swan Coastal Plain, Mid-West and South West regions. The project has also implemented a Multi Criteria Evaluation of wetlands across the Swan Coastal Plain using biological datasets and the National Guidelines for Identifying High Ecological Value Aquatic Ecosystems (Module 3 Aquatic Ecosystems Toolkit) as a conceptual framework of wetland value. The new mapping layer to be released in 2021 has improved mapping of estuarine, riverine and floodplain wetlands, poorly mapped in existing datasets.

The CSIRO is developing the Habitat Condition Assessment System to generate a national view of ecological condition and Ecosystems Models Framework to develop dynamic ecosystem models to underpin environmental accounting (see 11.1) build understanding of ecosystem responses to climate change and help prioritise management and monitoring. See: <https://research.csiro.au/biodiversity-knowledge/projects/hcas/> <https://research.csiro.au/biodiversity-knowledge/projects/models-framework/>

8.2 Has your country updated a National Wetland Inventory in the last decade?

C1=Partially

8.2 Additional information

> See 8.1 above.

8.3 Is wetland inventory data and information maintained? {1.1.2} KRA 1.1.ii

A=Yes

8.3 Additional information

> Wetland data is maintained by the Australian Government and the states and territories. Information on Australian Ramsar wetlands is available through the Australian Wetlands Database. This information is updated as Ramsar Information Sheets are reviewed and Ecological Character Descriptions are prepared for each site. The Eastern Australian Wetland area Index (derived from the Annual Waterbird survey see:

<https://data.gov.au/dataset/ds-dga-4d5bf55f-5382-4e45-8be8-12132a748b03/details>) and spatial data for surface water upstream catchment areas of Ramsar wetlands is periodically updated (see:

<https://data.gov.au/dataset/ds-dga-02d1bde6-0689-4a91-a2a3-7aa20a4e324d/details?q=Ramsar>)

New wetland information this triennium includes:

- National mangrove mapping <https://landsat.gsfc.nasa.gov/article/mapping-mighty-mangrove>

- Intertidal and Subtidal ecosystem mapping and type descriptions for Central Queensland

(<https://wetlandinfo.des.qld.gov.au/wetlands/ecology/aquatic-ecosystems-natural/estuarine-marine/descriptions/55/>

<https://wetlandinfo.des.qld.gov.au/wetlandmaps/>)

Queensland Wetland Data (Version 5.0) was released in December 2019, updating wetland extent to 2017 currency. This mapping is updated every 4 years and provides information on wetlands extent change over that period. The Queensland Herbarium is working with the Department of Natural Resources Mines and Energy (DNRME) to process wetland spatial datasets (lines, water bodies and points) to align with the wetlands mapping datasets. Joining drainage datasets together will result in a 1_25,000 scale network.

The Western Australian Departments of Biodiversity Conservation and Attractions and Water and Environmental Regulation are collaborating to review wetland mapping across the state. The review has been commenced for catchment basins that are under greatest pressure from urban and water resource development, including the Swan Coastal Plain, with other priority catchment basins to follow.

Victoria maintains a Victorian Wetlands Inventory (<https://www.data.vic.gov.au/data/dataset/victorian-wetland-inventory-current>) and an edit tool (<http://essolutions.com.au/wetlandedittool>) to allow stakeholders to contribute to the improvement of the inventory. Two progressive updates to the statewide inventory are planned for the next two years, that will use new datasets.

Victoria maintains a Victorian Wetlands Inventory (<https://www.data.vic.gov.au/data/dataset/victorian-wetland-inventory-current>) and an edit tool (<http://essolutions.com.au/wetlandedittool>) to allow stakeholders to contribute to the improvement of the inventory. Two progressive updates to the statewide inventory are planned for the next two years, that will use new datasets.

8.4 Is wetland inventory data and information made accessible to all stakeholders? {1.1.2} KRA 1.1.ii

A=Yes

8.4 Additional information

> Data and mapping on the extent of wetlands is made available to the public through the Australian Wetlands Database, State of the Environment reporting, the Protected Matters Search Tool (<http://www.environment.gov.au/epbc/protected-matters-search-tool>) and on the national data website (<http://data.gov.au>), as well as on state/territory websites e.g. WetlandInfo (<https://wetlandinfo.des.qld.gov.au/wetlands/>)

QLD has developed a detailed mapping method for intertidal and subtidal mapping which provides guidance on how to collate existing data and knowledge across a range of disciplines and attributes to develop an integrated map.

The Queensland Waterhole Classification Scheme available on WetlandInfo provides a framework for classifying and typing Queensland waterholes. The scheme uses a biophysical framework of physical, environmental and climatic attributes. See: <https://wetlandinfo.des.qld.gov.au/wetlands/what-are-wetlands/definitions-classification/classification-systems-background/waterholes/>

The Victorian wetland inventory (wetland current layer) is publicly available on the Data Vic website.

The WA Healthy Rivers website shares information collected through the Healthy Rivers monitoring program that undertakes routine assessment of over 150 river sites across south-west WA on a 3-5 year rotation, and a range of ad hoc assessments and research partnerships. The program collects information on aquatic species, habitats, water quality, land use, hydrology, and riparian vegetation. All sites are assessed to support decisions about the sustainable management of river systems. See: <https://rivers.dwer.wa.gov.au/>

Western Australia has developed wetland mapping datasets across many parts of the south-west which are made publicly available through the on-line mapping viewer, 'Locate' maintained by the Western Australia's land information authority, Landgate <https://www0.landgate.wa.gov.au/maps-and-imagery/interactive-maps/locate>

8.5 Has the condition* of wetlands in your country, overall, changed during the last triennium? {1.1.3}

Please describe on the sources of the information on which your answer is based in the free- text box below. If there is a difference between inland and coastal wetland situations, please describe. If you are able to, please describe the principal driver(s) of the change(s).

* 'Condition' corresponds to ecological character, as defined by the Convention

Please select only one per square.

a) Ramsar Sites	<input type="checkbox"/> P=Status Improved <input type="checkbox"/> O=No Change <input checked="" type="checkbox"/> N=Status Deteriorated
b) Wetlands generally	<input type="checkbox"/> P=Status Improved <input type="checkbox"/> O=No Change <input checked="" type="checkbox"/> N=Status Deteriorated

8.5 Additional information on a) and/or b)

> a) Coral reef health and monitoring assessments were conducted at Pulu Keeling National Park and Ashmore Reef in 2019. The Pulu reefs had healthy hard coral cover of 28% with very little coral bleaching. Ashmore's marine and terrestrial environments are healthy despite some introduced species (e.g. tropical fire ant and buffel grass). A 2018 survey of the Elizabeth and Middleton Reefs Ramsar Site found population levels for coral species had increased with low incidence of crown-of-thorns starfish and bleaching and most macroalgae and fish populations stable and healthy. The abundance of an apex predator, Galapagos shark has decreased at Middleton and increased at Elizabeth Reefs. At Christmas Island, there has been a loss of mid and adult size classes of mangroves in the Hosnies Springs Ramsar site, potentially from reduced water flows.

The Murray-Darling Basin experienced its worst 2-3-year drought period in over 120 years. Since 2018, Ramsar sites have been impacted by low flows, lack of natural flooding and extreme temperatures, with the Macquarie Marshes and Gwydir also affected by bushfires in early 2020. A return to wetter conditions in 2020 is seeing waterbirds return to the Macquarie Marshes with the Paroo Overflow and Currawinya Lakes filling and supporting a large number and diversity of waterbirds.

b) The annual MDB aerial waterbird surveys documented the 2019 declines in all waterbird indices (total abundance, breeding, number of species breeding and wetland area) resulting from protracted drought. The 2020 surveys reveal the Cuttaburra Channels (Warrego River floodplain) are supporting thousands of waterbirds, including breeding swans and Lake Cowal also supporting around 50,000 waterbirds with high species diversity including magpie geese and migratory shorebirds.

Australia experienced first-hand the impact of climate change on its peatland wetlands with unprecedented bushfires in 2019-2020. An expert panel convened following the fires identified the Sub-alpine peatlands and Temperate Highland Peat Swamps on Sandstone (Blue Mountains NSW) Alpine Sphagnum Bogs and Associated Fens (in ACT, NSW and Victoria) threatened ecological communities as priorities for restoration and management interventions. See: <https://www.environment.gov.au/biodiversity/bushfire-recovery/priority-tecs>
 The ACT's Rapid Risk Assessment Team found 82% of High Country Bogs and Fens across Namadgi National Park were impacted by fire with loss or degradation of Sphagnum wetlands and likely loss of dependent

species like the Northern Corroboree Frog (*Pseudophryne pengilleyi*). 148 bog and fen complexes including nationally Important sites were impacted with restoration ecologists assessing sites to identify priority recovery actions and a framework for ongoing monitoring.

A NESP multi-hub research project used aerial surveys and shoreline field validation to map mangrove extent, patterns, condition, trend and recovery in the Gulf of Carpentaria, following a dieback event in 2016 affecting around 7400 hectares of mangroves along 1000 km of coastline. To support ongoing monitoring, a guide for Indigenous ranger groups has been produced so rangers can contribute data using the MangroveWatch shoreline assessment method. See: <https://www.nespnorthern.edu.au/projects/nesp/gulf-mangrove-dieback/>
The National Mangrove mapping study (see 8.3) shows that the 2016 dieback was wider than the Gulf of Carpentaria, with declines in Western Australia’s Cambridge Gulf and the Alligator Rivers Region of the Kakadu National Park in the NT.

8.6 Based upon the National Wetland Inventory if available please provide a figure in square kilometres for the extent of wetlands (according to the Ramsar definition) for the year 2020 and provide the relevant disaggregated information in the box below. This Information will also be used to report on SDG 6, Target 6.6, Indicator 6.6.1, for which the Ramsar Convention is a co-custodian.

X=Unknown

8.6 Marine/Coastal Wetlands

	Square kilometers (km ²)
A -- Permanent shallow marine waters in most cases less than six metres deep at low tide; includes sea bays and straits.	
B -- Marine subtidal aquatic beds; includes kelp beds, sea-grass beds, tropical marine meadows.	
C -- Coral reefs.	
D -- Rocky marine shores; includes rocky offshore islands, sea cliffs.	
E -- Sand, shingle or pebble shores; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.	
F -- Estuarine waters; permanent water of estuaries and estuarine systems of deltas.	
G -- Intertidal mud, sand or salt flats.	
Ga -- Bivalve (shellfish) reefs.	
H -- Intertidal marshes; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.	13,029
I -- Intertidal forested wetlands; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.	10,434

J -- Coastal brackish/saline lagoons; brackish to saline lagoons with at least one relatively narrow connection to the sea.	
K -- Coastal freshwater lagoons; includes freshwater delta lagoons.	
Zk(a) - Karst and other subterranean hydrological systems, marine/coastal.	

8.6 Additional information

Additional information: If the information is available please indicate the % of change in the extent of wetlands over the last three years. Please note: For the % of change in the extent of wetlands, if the period of data covers more than three years, provide the available information, and indicate the period of the change.

> National data is available for:

Mangrove forests extent = 10,434 Km².

Source: <https://landsat.gsfc.nasa.gov/article/mapping-mighty-mangrove>

Saltmarsh extent = 13,029 Km²

Source: http://ozcoasts.org.au/management/habitat_extent/

Victorian data is available for Alpine Peatlands = 4372 hectares across 10,000 Km² range. Source:

<https://www.ari.vic.gov.au/research/wetlands-and-floodplains/alpine-sphagnum-bogs-if-we-map-them-we-can-manage-them>

8.7 Please indicate your needs (in terms of technical, financial or governance challenges) to develop, update or complete a National Wetland Inventory

> Comprehensive wetland mapping is not available in every state and territory jurisdiction. These spatial constraints and agency capacity and suitable platforms to integrate and interpret new landsat data is the most significant challenge to progress development of a comprehensive national wetland inventory. The National Mangrove mapping (see 8.1) provides the proof of concept for the future development of satellite derived mapping for all Australia's wetlands.

Target 9

The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone {1.3.}.

[Reference to Aichi Targets 4, 6, 7]

9.1 Is a Wetland Policy (or equivalent instrument) that promotes the wise use of wetlands in place? {1.3.1} KRA 1.3.i

If 'Yes', please give the title and date of the policy in the green text box

C=In Preparation

9.1 Additional information

> The NSW Wetlands Policy promotes the sustainable conservation, management and wise use of the state's wetlands. The Policy recognises the need for all stakeholders to work together to protect wetland ecosystems and their catchments. See: <https://www.environment.nsw.gov.au/topics/water/wetlands/protecting-wetlands/nsw-wetlands-policy>

For the Sydney Olympic Park wetlands, a Biodiversity Management Plan (BMP) and Wetland Operational Action Plan (WOAP) is in place.

Western Australia has a Wetlands Conservation Policy (1997) that includes an Implementation Plan.

Western Australia is developing a wetlands buffer policy as part of a review of WA State Planning Policy – Water Resources, and Victoria has implemented a project to look at the effectiveness of the wetland buffer to assist in identifying best management practice for wetland buffers.

Victoria is about to begin updating the state waterway health strategy, which currently includes a chapter on state wetland policy, as agreed with delivery partners and stakeholders.

9.2 Have any amendments to existing legislation been made to reflect Ramsar commitments? {1.3.5} {1.3.6}

A=Yes

9.2 Additional information

> Nationally, an independent review of the EPBC Act has been completed and the Australian Government has

introduced new legislation to streamline environmental assessment and approvals processes under the Act with new national standards to be developed to underpin future bilateral agreements with the states and territories. <https://epbcactreview.environment.gov.au/>

The Marine and coastal policy in Victoria is underpinned by the new Marine and Coastal Act 2018, enabling ecosystem based management of coastal and marine wetlands and embedding climate change adaptation into coastal planning. See: <https://www.marineandcoasts.vic.gov.au/coastal-management/marine-and-coastal-policy>

Victoria's updated climate change legislation requires adaptation plans for all natural systems, including the natural environment and the water cycle systems, that are currently under development. See:

<https://www.marineandcoasts.vic.gov.au/coastal-management/marine-and-coastal-policy>

NSW has implemented a new coastal management framework that protects coastal wetlands. The State Environmental Planning Policy (SEPP) Coastal Management 2018 enables an integrated and coordinated approach to land use planning, including mapping of, and controls to protect coastal wetlands and areas of coastal vulnerability. See: <https://www.planning.nsw.gov.au/Policy-and-Legislation/Coastal-management>

The QLD Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (subordinate legislation to the Environmental Protection Act 1994) provides for the determination of Environmental Values and Water Quality Objectives for QLD's wetlands. The EPP supports the Map of Queensland Wetland Environmental Values which defines wetlands and identifies their significance based on aquatic conservation assessment scores. Wetlands are either of 'high' or 'general' ecological significance with high significance wetlands of state environmental significance. Documents and mapping have been completed for 13 River basins, including those containing Ramsar sites: South-East Queensland, the Burnett, Mary and Great Sandy, Dan and Haughton, as well as for the Great Barrier Reef End-of Basin and Mitchell basin in the Gulf. See:

<https://environment.des.qld.gov.au/management/water/policy>

The ACT has enacted a Migratory Species Action Plan in 2018, which includes Latham's Snipe and Jerrabomberra Wetlands. The ACT Water Resource Plan supports the implementation of the Action Plan by promoting sustainable water resource development within its jurisdiction and protecting water for the environment to sustain important waterbird habitat. See"

https://www.environment.act.gov.au/__data/assets/pdf_file/0009/1168704/Migratory-Species-Action-Plan_ACCESS.pdf

The MDB includes 16 of Australia's 66 Ramsar Wetlands. The four states (QLD, NSW, Victoria, South Australia) and ACT government are primarily responsible for water management and are developing detailed statutory Water Resource Plans (WRPs). WRPs set limits on the amount of water that can be extracted from the Basin and are assessed by an independent agency (the MDBA) before being considered for accreditation under Commonwealth law. Over 2018-2020, the majority of states have finalised their WRPs, aligning their water management frameworks with Commonwealth requirements under the Water Act 2007 and Basin Plan 2012, including the protection of Ramsar Wetlands.

In addition, the Water Amendment (Murray-Darling Basin Agreement-Basin Salinity Management Regulations 2018 indirectly upholds Ramsar commitments by establishing a renewed framework for Basin States to manage salinity, including for the benefit of Ramsar Wetlands.

9.3 Are wetlands treated as natural water infrastructure integral to water resource management at the scale of river basins? {1.7.1} {1.7.2} KRA 1.7.ii

A=Yes

9.3 Additional information

> See 2.1-2.4 for the Murray-Darling Basin and 9.6 and 9.7 overleaf.

Connected wetlands are key components managing water resources in the river basins leading to the Great Barrier Reef (GBR) with special development provisions to protect their ecosystem services from effects of earthworks.

The GBRMPA's Outlook Report 2019 highlights the important links between land, freshwater and marine environments, and an integrated whole-of-catchment approach to protect and restore the ecological functioning of coastal ecosystems. A suite of coastal habitat and species protection projects have been funded under the RLP to re-instate hydrological connectivity between coastal and upstream freshwater ecosystems, enhance seagrass, saltmarsh, turtle and fish habitats in GBR river basins, including the Murray and lower Herbert River; Black Haughton and Don Rivers, Fitzroy, Burnett Mary and the Eastern Cape catchments. See: <https://www.gbrmpa.gov.au/our-work/outlook-report-2019>

In the upper Murrumbidgee River catchment in the Murray-Darling Basin, a series of constructed wetlands in the ACT are providing essential green infrastructure to improve water quality downstream. See: https://www.environment.act.gov.au/water/constructed_wetlands

9.4 Have Communication, Education, Participation and Awareness (CEPA) expertise and tools been incorporated into catchment/river basin planning and management (see Resolution X.19)? {1.7.2}{1.7.3}

A=Yes

9.4 Additional information

> CEPA expertise and tools are widely used in catchment and river basin planning and management. The

Water Act 2007 requires transparent community consultation at all scales of planning for the Murray Darling Basin. The MDBA consults extensively with the community about their water needs, preferences and the impact of water policy on their industries and communities. The MDBA is investing in building a strong stakeholder engagement capability and regional presence, employing Regional Engagement Officers and opening regional offices across the Basin. <https://www.mdba.gov.au/sites/default/files/pubs/mdba-corporate-plan-2020-21.pdf>

The Native Fish Recovery Strategy (2020) includes a strong focus on communication, education, participation and awareness, through establishment of:

- Independent advisory panels to the Native Fish Recovery Taskforce.
- Recovery reaches and community-led regional recovery plans.
- A comprehensive communication plan, sound education principles and input from Local Recovery Coordinators.

Awareness raising activities will be undertaken in a few formats targeting a wide range of audiences. Activities will seek to complement or link to established Murray-Darling Basin Authority and state government initiatives.

The CEWO publishes its plans for use of water for the environment across the Murray-Darling Basin annually using a range of accessible, plain English information being made available to the community (for example through brochures, videos and online publications). The CEWO has local engagement officers located in regional areas across the Basin who actively share and disseminate this information to the community and participate in local engagement processes established by State agencies and CMAs, such as environmental water advisory groups.

The Great Barrier Reef Marine Park Authority (GBRMPA) uses communication and engagement to empower people and foster change. In particular, the Communication and Engagement Plan for the Reef Trust Partnership will help engage partners to invest in the health of the Reef and build community understanding, trust and ownership of the Partnership projects. See:

https://www.barrierreef.org/uploads/RTP_EngagementCommunicationPlan_FINAL.pdf

The outcomes of the Logan River MangroveWatch citizen science tidal wetlands monitoring program in Moreton Bay (site 41) is designed to inform local government (Logan City Council) estuary and tidal wetland management.

The Cairns and Far North Queensland MangroveWatch program (delivered by the Cairns and Far North Environment Centre and funded by the GBR Foundation) is coordinating with the Wet Tropics Healthy Waterways Report Card (Terrain NRM) to incorporate citizen science assessment of tidal wetland condition as a habitat indicator in the Wet Tropics report card framework, with the intention of expanding this initiative to other regions of the GBR.

QLD's 'Walking the Landscape' project involves synthesising catchment information and expert knowledge through facilitated workshops, with Traditional Owners, local area experts, government officers and land managers. This information is used to make 'catchment stories', delivered via esri map journals. Fifty-four catchment stories are available through WetlandInfo. See:

<https://wetlandinfo.des.qld.gov.au/wetlands/ecology/processes-systems/water/catchment-stories/>

CVA draws on its CEPA expertise to engage over 2,800 volunteers in wetland conservation programs as well as hosting workshops with over 40 stakeholders to help improve shorebird and wetland management through the Community Conservation for the Far Eastern Curlew project. See:

<https://www.eaaflyway.net/far-eastern-curlew-conservation-project-update/>

9.5 Has your country established policies or guidelines for enhancing the role of wetlands in mitigating or adapting to climate change? {1.7.3} {1.7.5} KRA 1.7.iii

A=Yes

9.5 Additional information

> The Blue Carbon Strategy for South Australia (2019) sets a path to protect and restore valuable wetland ecosystems along South Australia's coastline, including mangroves, saltmarsh and seagrass meadows, to co-benefits provided protection from storm surges and sea level rise, improving water quality and biodiversity, providing fisheries habitat and nature-based tourism opportunities. See:

<https://www.environment.sa.gov.au/topics/climate-change/climate-change-blue-carbon-strategy>

An innovative tidal restoration research trial in SA reintroduced tidal flow to salt ponds creating a living shoreline of tidal wetlands, a 'triple win' for climate mitigation, adaptation and biodiversity conservation.

See: http://www.goyderinstitute.org/_r2300/media/system/attrib/file/635/Goyder%20TRS%2019-28%20Salt%20to%20C_Technical%20Report%20June%202019_FINAL.pdf

The tidal reconnection method has been identified as the first blue carbon ecosystem for the development of a methodology for future project registration under Australia's Emissions Reduction Fund (<http://www.cleanenergyregulator.gov.au/ERF>).

In 2020, the WA Government released the Western Australian Climate Policy that commits to achieving net zero greenhouse gas emissions by 2050. It includes a \$15 million Carbon Farming and Land Restoration Program that will support carbon sequestration projects with environmental, social and economic co-benefits on freehold land. Proximity to high biodiversity areas, including Ramsar wetlands, and enhancing landscape corridors and wetlands are key project assessment criteria.

The NSW Parks and Wildlife Service adopted a Climate Change Adaptation Strategy using the latest climate change projections to identify regional biophysical risks from climate change for park values. The strategy has two phases: trialling and implementing adaptation actions into strategic and operational planning; application of adaptation pathways in Aboriginal joint managed parks for cultural heritage; and, developing a climate change adaptation communication strategy.

The QLD government is funding the Blue Carbon Lab to compile an inventory of blue carbon stocks and sequestration rates and drivers for take up in QLD catchments. Spatial heat maps of sites suitable for Blue Carbon additionality, as well as predictive models of Blue Carbon under different management scenarios are being developed. Mangrove forests and seagrass meadows in the GBR hold blue carbon stocks of over 111 million tonnes. See: <https://www.bluecarbonlab.org/new-grant-blue-carbon-potential-in-qld/>

The MDBA released a climate change discussion paper about the impacts of climate change on wetlands and focuses on four key actions to respond to risks:

- Refining existing arrangements to support adaptation (such as water trade);
- Buffering the system from stress (recovering water for the environment);
- Greater research collaboration to understand climate change impacts on water; and
- Building adaptive responses into longer-term plans and annual watering priorities.

See: <https://www.mdba.gov.au/publications/mdba-reports/climate-change-murray-darling-basin-plan-discussion-paper>

Collaborative research led by the Nature Conservancy Mapping Ocean Wealth estimates the carbon storage and coastal protection benefits of wetlands in south-eastern Australia, providing spatial mapping, data and communication messages to underpin decision-making. See:

https://www.natureaustralia.org.au/content/dam/tnc/nature/en/documents/australia/MOW_Report_Web.pdf
NESP Earth Systems and Climate Change (ESCC) Hub research is exploring the potential of living shorelines (oyster reefs, mangroves and saltmarshes) for coastal protection, climate mitigation and adaptation, carbon sequestration and reduced erosion and flooding. As well as a road map for the development of national guidelines for coastal habitat restoration and eco-engineering, the Hub is building the evidence base to support the inclusion of blue carbon ecosystems in emissions trading and improving methods for measuring carbon stocks and accumulation rates to help manage these systems for mitigation.

9.6 Has your country formulated plans or projects to sustain and enhance the role of wetlands in supporting and maintaining viable farming systems? {1.7.4} {1.7.6} KRA 1.7.v

A=Yes

9.6 Additional information

> The Australian Government's Regional Land Partnerships includes several projects that engage with rural landowners to improve wetlands, including permanent protection of sites, fencing, and changing management practices. For example, projects at Little Llangothlin Nature reserve and Gwydir Wetlands are enhancing upstream and adjacent land management through protection of groundcover, improved grazing and cropping practices. At Moulting Lagoon and Apsley Marshes in Tasmania, NRM South is working with private landowners to address threats to, and improve wetland health of, the Ramsar site by controlling weeds, improving land management practices and restoring fringing vegetation.

Queensland state agencies are working in partnership in the lower Herbert Catchment to build the capacity of agricultural extension officers, industry and catchment groups to understand landscape processes. The Catchment is one of the highest priority areas for nitrogen load reduction in Great Barrier Reef Catchments and an area with valuable and extensive wetlands. A whole-of-system approach is being promoted through Walking the Landscape workshops, targeted training and resources. It is enabling extension officers and producers to identify actions such as wetland restoration, treatment systems and farm practice changes to improve water quality and ecosystem health whilst maintaining sustainable agricultural production.

In collaboration with Georges River Keepers, CVA conducted a planting program of 12,000 *Sporobolus virginicus* seedlings in the Georges River catchment, Sydney NSW. This species was identified to form the basis of aquatic food webs which support the River's recreational and commercial fishers.

NESP research in the Gulf of Carpentaria's shows how river flows are critical to the productivity of the Gulf's banana prawn fishery, and the potential impacts from changes in freshwater flows due to water extraction from the Gilbert, Mitchell and Flinders Rivers on the prawn fishery. Drawing on 28 years of data, the research modelled future scenarios of how water extraction would affect the prawn catch, showing that water extraction during low-flow years will have the greatest impact on the prawn fishery, because of the loss of the freshwater 'cue' for prawns to emigrate from estuaries into coastal waters. See:

<https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/ecs2.3194>

NRM North in Tasmania is delivering a range of catchment actions as part of the Tamar estuary river health action plan including grants for graziers and dairy farmers to install riparian fencing to control stock access, off-stream stock water and crossings, rehabilitate riparian areas and upgrade effluent management on dairy farms to stop pollutants entering the Tamar's catchment and help the health of the Tamar Estuary and wetlands. See: <https://nrmnorth.org.au/water/tamar-estuary-river-health-action-plan/>

The Sustainable Farms research initiative is showing farmers how investing in the protection of their natural assets can improve productivity and increase drought resilience with practical guidance about looking after rivers, creeks and wetlands and improving farm dams to create wildlife refugia, assist pest control and

nutrient cycling.

See: http://sustainablefarms.org.au/ten_ways

The Australian Rivers Institute's, Wetlands for improving water quality of the Great Barrier Reef, project will investigate the potential of wetlands to improve water quality by removing contaminants and excess fertiliser, promoting clean waterways and informing strategies to support the health of the Reef, focused in the Moresby catchment.

9.7 Has research to inform wetland policies and plans been undertaken in your country on:

{1.6.1} KRA 1.6.i

Please select only one per square.

a) agriculture-wetland interactions	<input type="checkbox"/> C=Planned <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
b) climate change	<input type="checkbox"/> C=Planned <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
c) valuation of ecosystem services	<input type="checkbox"/> C=Planned <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

9.7 Additional information

> a. NESP TWQ Hub research produced IrrigWeb, for PC, tablet or smartphone, software that enables farmers to remotely control automated irrigation systems. This prevents over-watering and excess runoff reducing pollutants leaving the farm and entering the catchments and estuarine wetlands adjoining the GBR. See: <https://nesptropical.edu.au/wp-content/uploads/2017/05/NESP-TWQ-Project-3.1.2-Factsheet.pdf>

Research by the NESP TSR Hub estimates that rice fields in the Riverina, NSW support 500-1000 Australian bitterns in most years, demonstrating that novel agricultural habitats like rice fields can play an integral role alongside natural wetlands in species conservation. See:

<https://www.sciencedirect.com/science/article/abs/pii/S0167880919302154>

Kakadu National Park managers are working with Territory NRM to control Gamba Grass from entering the park from agricultural areas to the south and west of the park with potential for the project to increase knowledge about interactions between wetlands and agricultural areas. See:

<https://www.territorynrm.org.au/gambagrass>

b. The BoM and CSIRO are developing a critical forecasting service to provide advance warnings about marine heatwaves. New ocean forecast tools for these extreme events will complement the existing ocean outlook. The CSIRO's Decadal climate forecasting project is addressing the need for improved forecasting (extending seasonal forecasts to multi-year to decadal timescales) enabling water managers to better deal with climate variability and extremes.

The QLD government is funding the Blue Carbon Lab to compile an inventory of Queensland's blue carbon stocks and, sequestration rates and drivers for take up in QLD catchments. Spatial heat maps of sites suitable for Blue Carbon additionality, as well as predictive models of Blue Carbon under different management scenarios are being developed. Mangrove forests and seagrass meadows in the GBR catchments hold blue carbon stocks of over 111 million tonnes. See: <https://www.bluecarbonlab.org/new-grant-blue-carbon-potential-in-qld/>

ACT research assessed climate change vulnerability for 1296 wetlands using indicators representing current anthropogenic pressure, future ecological change and future hydrological change. This detailed assessment identifies the current and future hazards to ACT wetlands, allowing for the development of strategic management actions. See: <https://www.publish.csiro.au/mf/pdf/MF17302>

Research by the NESP ESCC hub is developing:

- sea-level rise information for Australia's 255 coastal councils for application in the CoastAdapt risk management tool and coastal wetland risk assessments, management and adaptation planning (<http://nespclimate.com.au/sea-level-projections/>)
- improved coastal inundation models for adaptation planning (<http://nespclimate.com.au/wp-content/uploads/2019/05/A4-2p-impact-CFAST-WEB.pdf>)
- a framework to improve understanding of Australia's future hydro-climate to inform planning for water resources, assessments of systems resilience and adaptation options (<http://nespclimate.com.au/water-resources-under-a-changing-climate-project-5-4/>).
- Improved understanding about marine and coastal extremes (sea-level trends, marine heatwaves and combined effects, see <http://nespclimate.com.au/marine-and-coastal-climate-services-project-5-8/>)
- science-based datasets and tools for coastal managers.
- tailored products for different regions to help communities understand and manage climate risks, including impacts on coastal marine and freshwater resources. (http://nespclimate.com.au/wp-content/uploads/2020/10/ESCC-Hub_Climate-change-in-NT-state-of-the-

science-and-climate-impacts.pdf)

The MDB Water and Environment Research Program across climate change adaptation, hydrology, environmental, social, economic and cultural outcomes, will include practical information for water managers to guide short and long-term strategic investment. See: <https://www.mdba.gov.au/water-management/allocations-states-mdba/science-research/murray-darling-water-environment-research-program>

A special edition of CSIRO's Marine and Freshwater research summarises the state of knowledge for the tropical ecosystems of Kakadu region, and threats to freshwater floodplains from climate change including modelling of the impacts of sea level rise and saline intrusion. Parks Australia is working with CSIRO to produce a revised climate vulnerability assessment for Kakadu. See:

<https://www.publish.csiro.au/mf/issue/8779>

c. see 11.1

9.8 Has your country submitted a request for Wetland City Accreditation of the Ramsar Convention, Resolution XII.10 ?

B=No

9.8 Additional information

If 'Yes', please indicate How many request have been submitted

> Australia participated on the Independent Advisory Committee that assessed Wetland City nominations and is providing advice on the procedures.

9.9 Has your country made efforts to conserve small wetlands in line with Resolution XIII. 21?

A=Yes

9.9 Additional information: (If 'Yes', please indicate what actions have been implemented)

If 'Yes', please indicate what actions have been implemented

> The Australian Government's Communities Environment Program is supporting a small number of small-scale, local, community group based projects that are addressing the health and management of wetlands. Projects include surveying, removal of weeds from wetlands, stock exclusion, revegetation, reducing public access impacts, monitoring of birdlife and water quality, and educational activities.

The NESP Clean Air and Urban Landscape Hub has prepared series of governance and policy Fact Sheets to support the creation and maintenance of healthy, multifunctional green-blue spaces in Australia's urban areas including waterways and wetlands recognising their functions and benefits to cool cities, treat and water, for habitat and spaces for recreation and connection. The Hub has also produced a research synthesis about the conservation and cultural value of urban wetlands. See:

<https://nespurban.edu.au/wp-content/uploads/2020/10/Recognising-the-conservation-and-cultural-value-of-urban-wetlands.pdf>

The Sustainable Farms Initiative has produced practical guidance to assist primary producers enhance and conserve small wetlands (including farm dams) as well as their creeks and rivers. See:

http://sustainablefarms.org.au/ten_ways

Salisbury Council in SA has an extensive network of wetlands in metropolitan Adelaide with 50 individual wetlands covering around 300 hectares in total, conserved to manage overland flows and harvest stormwater through smaller wetlands. See:

<http://discoversalisbury.com.au/new-milestone-for-salisburys-wetlands/>

The Victorian Coastal Wetland Restoration Program is underway with a range of government, academic and Traditional Owner partners. See:

<https://storymaps.arcgis.com/stories/f44a22f56d264d0ea6bbcc09f6d78c5d>

Catchment management authorities undertake restoration works throughout Victoria with community and Traditional Owners, such as this project at the Hopkins wetlands and Budj Bim Cultural Landscape World Heritage Site. See:

<https://www.ghcma.vic.gov.au/projects/current-projects/hopkins-wetlands-restoration-project>

<https://www.ghcma.vic.gov.au/projects/current-projects/budj-bim-restoration/>

Target 10

The traditional knowledge innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels.

[Reference to Aichi Target 18]

10.1 Have case studies, participation in projects or successful experiences on cultural aspects of wetlands been compiled. Resolution VIII.19 and Resolution IX.21? (Action 6.1.6)

A=Yes

10.1 Additional information

If yes please indicate the case studies or projects documenting information and experiences concerning culture and wetlands

> Kakadu's Bininj/Mungguy Traditional Owners have co-led the design of NESP research to develop and implement cross-cultural approaches to monitor and evaluate the health of country, that includes the floodplain wetlands. The Bininj/Mungguy Health Country Indicators project is developing a range of outputs, including a handbook on best practice cross-cultural monitoring and evaluation approaches that can be used for adaptive co-management in protected areas.

See: <https://www.nesppnorthern.edu.au/projects/nesp/healthy-country-indicators/>

The MDBA has developed or contributed to several case studies, projects and experiences on cultural aspects of wetlands since 2018. In 2019, ten case studies of First Nations involvement in water management were published, highlighting the benefits of working in partnership with Indigenous groups to manage water. Rivers, the Veins of our Country is available on the web. See:

https://www.mdba.gov.au/sites/default/files/pubs/rivers,%20the%20veins%20of%20our%20country_1.pdf

The Native Fish Recovery Strategy (2020) contains examples of existing good practice including partnerships with local industry, First Nations and volunteer groups (e.g. Tri-State Murray NRM Regional Alliance's Murray Corridor Fish Connections).

The First Nations Environmental Water Guidance project, co-funded by the MDBA and CEWO, is developing a defined and transparent methodology for First Nations' environmental watering objectives which will be incorporated into the next iteration of the Basin-wide environmental watering strategy (2022). The Basin-wide environmental watering strategy (2019) includes discussion of First Nations objectives and outcomes for shared benefits of environmental water and the 2020 review of the Basin Plan environmental watering plan included consultation with First Nations through the Murray Lower Darling Rivers Indigenous Nations and Northern Basin Aboriginal Nations. The MDBA produces an annual report on how water holders (including the CEWO) have considered Indigenous values and uses when planning for environmental watering in the Murray-Darling Basin. The report was prompted by a Ministerial Directive introduced in 2018 under Section 175 of the Water Act 2007. It compiles case studies and other information to explain how Indigenous cultural values and uses are considered in environmental watering, including for wetlands

(<https://www.mdba.gov.au/sites/default/files/pubs/First%20Nation%20People%20participation%20in%20environmental%20watering%20report%202018-19.pdf>).

A collaborative short story project 'Rivers, the Veins of our Country' highlights the benefits of partnering with Indigenous groups to manage water in the Basin.

A small grant through the Australian Government's Communities Environment Program is supporting the restoration of an ephemeral wetland that is water-stressed from historical hydrological changes. This will assist in the protection of culturally significant old red gum scar trees within the Western Wimmera region of Victoria.

The Australian Government's Regional Land Partnerships aim to incorporate traditional knowledge into wetland management activities, including through targeted consultation with Traditional Owners and engagement as part of management and project activities. For example, the Wetlands and People project for the Peel-Yalgorup system in WA is a collaborative management project that embeds Noongar cultural values and knowledge to manage Ramsar values. In addition, the Bindjareb Gabi Wonga (Bindjareb Water Story) communicates the Bindjareb Noongar people's vision, management goals and priority actions for the Peel-Harvey estuary with the aim of including Aboriginal people as active partners in estuary management and preserving cultural knowledge, special places and traditional sites for hunting and gathering.

10.2 Have the guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands been used or applied such as (Resolution VII. 8) (Action 6.1.5)

Please select only one per square.

a) stakeholders, including local communities and indigenous people are represented on National Ramsar Committees or similar bodies	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=In Preparation <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
b) involvement and assistance of indigenous people's and community-based groups, wetland education centres and non-governmental organizations with the necessary expertise to facilitate the establishment of participatory approaches	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=In Preparation <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

10.2 Additional information

If the answer is “yes” please indicate the use or application of the guidelines

> a. Australian Government funding provided to Australian states and territories to deliver environmental water outcomes on projects that have a wetland benefit, require application of the Guide to Participatory Action Planning and Techniques for Facilitating Groups. Several projects involve Indigenous people, local community groups and NGOs, including projects supporting traditional knowledge and management practices for the wise use of wetlands, Nimmie-Caira Project; Toorale Water Infrastructure Project; Healthy Coorong, Healthy Basin Project; ACT Healthy Waterways Project, Coorong, Lower Lakes and Murray Mouth Recovery Project; and the Riverine Recovery Project.

Since 2018, the MDBA has taken a range of initiatives to establish and strengthen local communities' and indigenous people's participation in the management of wetlands, including the First Nations Environmental Water Guidance project with the Murray Lower Darling Rivers Indigenous Nations and Northern Basin Aboriginal Nations. The National Cultural Flows Research Project completed in mid-2018, is also assisting the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and Northern Basin Aboriginal Nations (NBAN) to implement the cultural flows assessment methodology across the Basin.

A suite of guidelines and tools for strengthening Indigenous peoples participation in land and sea country management have been produced by the NESP Hubs including Indigenous authored Three-Category Approach and Our-Knowledge-Our-Way guidelines. See:

<https://nespurban.edu.au/wp-content/uploads/2019/06/CAUL-HUB-Three-Category-Approach-Info-sheet-Home-or-Office-Printer.pdf>

<https://www.csiro.au/en/Research/LWF/Areas/Pathways/Sustainable-Indigenous/Our-Knowledge-Our-Way>

b. The CEWO works with Indigenous peak groups the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN) to incorporate First Nations values and knowledge in planning for water for the environment. This Basin-scale engagement complements ongoing direct relationships with more than 14 Nations at the local community level.

Indigenous participation in management of the Jerrabomberra Wetlands Nature Reserve in the ACT includes: application of traditional burning practices aimed at promoting native plant species; development of bush tucker interpretive trail; and, Indigenous education and Visitor Tour guides. Jerrabomberra Wetlands is also used as a venue for Connection to Country Programs for Indigenous people.

CVA's Revive campaign promotes participatory approaches to wetland conservation to engage communities to care for aquatic environments by undertaking priority actions such as: community education, awareness raising, revegetation, weed management, citizen science activities, sediment control and rubbish removal.

In Victoria, the majority of Ramsar site coordinating committees includes representation by Traditional Owners either formally through membership on the committees or informally through other established engagement frameworks in the region.

10.3 Traditional knowledge and management practices relevant for the wise use of wetlands have been documented and their application encouraged (Action 6.1.2)

A=Yes

10.3 Additional information

> New Indigenous authored guidelines, Our-Knowledge-Our-Way, developed through the NESP NAER hub show how practitioners can listen and learn from Indigenous people and what is best practice in working with traditional knowledge and in partnerships. Indigenous-led approaches, principles and protocols are key to the wise use of wetlands and diverse case studies from across Australia demonstrate the value of traditional knowledge and approaches. See:

<https://www.csiro.au/en/Research/LWF/Areas/Pathways/Sustainable-Indigenous/Our-Knowledge-Our-Way>

Australian Marine Park management plans include 'Principles supporting Indigenous people to engage in management of Australian Marine Parks' and document cultural values.

At Kakadu National Park, there is an increasing emphasis on two-way science where traditional knowledge and western science are combined. A dedicated Indigenous Research Steering Committee was established to guide the NESP NAER hub Bininj/Mungguy Health Country Indicators project with the role of this group expanded to provide a forum for Indigenous engagement on science in the park more generally. This Indigenous committee also has representatives on the Kakadu Research and Management Advisory Committee.

At Roebuck Bay in WA, an Atlas of Living Australia project is enhancing the capacity of Yawuru Rangers to protect and manage the wetland. Field surveys conducted with Indigenous Yawuru rangers will build information about the rare and vulnerable snubfin dolphin whilst building the skills and capacity of Indigenous people to protect and manage the marine environment. See:

<https://collections.ala.org.au/public/show/dp1951>

The CEWO is funding its monitoring and reporting program (Flow MER) to work with Traditional Owners to enable local knowledge to inform how water for the environment is used. For example, the turtle monitoring program in six wetlands along the Edward/Kolety River system has been undertaken in partnership with the Yarkuwa Indigenous Knowledge Centre. See: page 7

<https://www.environment.gov.au/system/files/pages/d8696b44-d6ae-4a9c-b7d8-5ef7a8f5c0d9/files/edward-kolety-wakool-newsletter-5-2020.pdf>

The Living Murray Indigenous Partnerships Program (IPP) supports Indigenous contributions to the planning, management and watering of key riverine and wetland sites, including Ramsar wetlands. First Nations groups work with agencies to plan water use, connect to Country, share knowledge between generations, participate in two-way exchanges between Cultural science and Western science, provide learning and training opportunities and undertaken cultural practice at key sites along the River Murray.

At the Jerrabomberra Wetlands Nature Reserve in the ACT, cultural burns are carried out each year (usually in spring) of patches of grasslands at the Wetlands with a mosaic of small patches are burnt. Currently this is treated as part of a much wider, territory 5-year Plan. Burning is done as a small operation, as befitting a mosaic of patches, under the supervision of the Senior Ranger; with actual burning done by indigenous Rangers.

The Peel-Harvey Catchment Council of Western Australia has developed a Noongar Participation Plan with the Traditional Owners to help guide consultation, engagement and capacity building protocols and procedures that will provide a consistent approach to working with the local Noongar communities in planning and implementing natural resource management. See:

https://peel-harvey.org.au/wp-content/uploads/2018/02/NPP_20161.pdf

Target 11

Wetland functions, services and benefits are widely demonstrated, documented and disseminated. {1.4.} [Reference to Aichi Targets 1, 2, 13, 14]

11.1 Have ecosystem benefits/services provided by wetlands been researched in your country, recorded in documents like State of the Environment reporting, and the results promoted? {1.4.1} KRA 1.4.ii

A=Yes

11.1 Additional information

If 'Yes' or 'Partially', please indicate, how many wetlands and their names

> A new State of the Environment Report is being developed for publication in 2021, with recording of wetland benefits and services likely to be captured under key report themes: Biodiversity, Coasts. Inland Water and Marine. <https://www.environment.gov.au/science/soe>

Australia has a new National Framework for environmental-economic accounting (EEA) to track the extent and condition of ecosystem assets, the ecosystem services produced by those assets, and the direct benefits delivered to individuals and society over time. See: <https://eea.environment.gov.au/>

A suite of pilot ecosystem experimental accounts projects are in development with research partners, including a project capturing the Gunbower Forest Ramsar site and in Northern Australia focused on the Mitchell River catchment with the catchment accounts seeking to reflect interconnected assets as well as the regional socio-cultural context. The experimental accounts are being used to explore whether a common national approach to EEA can represent the full suite of ecosystem-related values relevant to regions. See: <https://eea.environment.gov.au/accounts/ecosystem-accounts>

A further project is looking at building in Indigenous cultural connections and values, using Kakadu National Park. See: <https://www.nesppnorthern.edu.au/projects/nesp/cultural-connections/>

An ocean accounting pilot developed for the Geopraphe Marine Park off south-west WA, represents the most comprehensive work completed to date to build an integrated environmental social and economic dataset about benefits and services to support monitoring and evaluation and assist sustainable management. See: <https://eea.environment.gov.au/accounts/ocean-accounts/geopraphe-marine-park>

New research by the NESP Marine Biodiversity Hub has developed indicators that measure how Australian Marine Parks (AMPs) affect the social and economic benefits from the marine environment. The indicators were developed by reviewing approaches used nationally and internationally, and regional workshops with marine park managers and experts from around Australia. The indicators are simple to understand and cost-effective to apply at a national scale. drawing on a range of existing data sources, including catch and effort reports from commercial fisheries, oil and gas infrastructure databases, and vessel registration data. The indicators are designed for incorporation in the Monitoring, Evaluation, Reporting and Improvement (MERI) System being developed by Parks Australia. See:

<https://www.nesppmarine.edu.au/document/measures-social-and-economic-monitoring-australian-marine-parks>

The Native Fish Recovery Strategy (2020) outlines the ecosystem services and benefits provided by native fish in the Murray-Darling Basin, including for First Nations people and communities, recreational anglers and regional tourism, as well as the health and wellbeing benefits of fishing and river and wetland-based recreation.

11.2 Have wetland programmes or projects that contribute to poverty alleviation objectives or food and water security plans been implemented? {1.4.2} KRA 1.4.i

C=Partially

11.2 Additional information

> The importance of Caring for Country programs in improving the lives of Aboriginal and Torres Strait Islander people has been documented in research funded by the Australian Government's National Environmental

Science Program (NESP). See: <https://www.nespnorthern.edu.au/projects/nesp/multiple-benefits-knowledge-systems-ilmps/>

Indigenous land and sea management programs (ILSMPs) deliver multiple benefits for regional communities, from social and economic benefits through provision of good jobs to well-being benefits from maintenance of culture. From a poverty alleviation perspective, these programs are contributing to the Indigenous Advancement Strategy and the goal of Closing the Income Gap. Researchers interviewed 190 Indigenous people involved with Commonwealth, state, territory and NGO funded Indigenous ranger programs and Indigenous Protected Areas (IPA) who reported that ILSMPs played a big role in improving their wellbeing, positively changing factors most important to them from simple benefits (e.g. jobs) to the more complex (e.g. maintenance of culture) and keeping country healthy. See:

<https://www.mdpi.com/1660-4601/17/1/125/htm>

NESP TWQ Hub synthesis research is exploring the opportunities to build Indigenous conservation-based livelihoods and traditional co-management into restoration of Northern GBR wetland ecosystems by enabling Indigenous partners to manage wetland repair projects to deliver ecosystem services (water quality) and social co-benefits and improved governance. See:

<https://nesptropical.edu.au/index.php/round-2-projects/project-2-3-3/>

NESP ESCC Hub research documents scientific knowledge about climate change impacts on communities of the Torres Strait Islands, focusing on implications for inshore fisheries and marine ecosystems that are culturally important and underpin Islanders health well-being and livelihoods. It draws on lessons from the Pacific, recognising the islands are geographically remote with dispersed populations with their communities critically dependent on marine resources for food security and income. See:

<http://nespclimate.com.au/understanding-climate-change-impacts-on-torres-strait-fisheries-and-marine-ecosystems/>

11.3 Have socio-economic values of wetlands been included in the management planning for Ramsar Sites and other wetlands? {1.4.3}{1.4.4} KRA 1.4.iii

C=Partially

11.3 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> Australian Marine Park management plans for the Coral Sea, include social and economic values. See:

<https://parksaustralia.gov.au/marine/parks/coral-sea/plans/>

DAWE and Parks Australia, with other research partners, are aiming to develop ecosystem accounts for Kakadu. This will include social and economic values including the potential for cultural values to be integrated in accounts being investigated by the NESP NAER Hub (see 11.1 above). Kakadu's wetlands are a major factor supporting tourism to the region (for example fish and wildlife watching) and are taken into account in management planning for the park as a whole.

11.4 Have cultural values of wetlands been included in the management planning for Ramsar Sites and other wetlands including traditional knowledge for the effective management of sites (Resolution VIII.19)? {1.4.3}{1.4.4} KRA 1.4.iii

A=Yes

11.4 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> The Australian Government's Indigenous Protected Areas (IPA) Program supports Indigenous Australians to manage more than 74 million hectares of land to protect and conserve biodiversity and cultural heritage.

Indigenous Australians undertake long-term environmental planning through their IPA management plans that support their aspirations for managing land, including wetlands. Three IPAs in Western Australia include Ramsar wetlands. Support is provided to more than 127 Indigenous ranger groups across Australia to manage natural and cultural values of country. Indigenous rangers and IPA managers conduct wetland management as part of their routine work.

Australia's Strategy for Nature 2019-2030 requires all governments to demonstrate progress regarding 'respect and maintain traditional ecological knowledge and stewardship of nature'. See:

<https://www.australiasnaturehub.gov.au/national-strategy>

Australian Marine Park management plans include 'Principles supporting Indigenous people to engage in management of Australian Marine Parks' and document cultural values. Kakadu National Park is a cultural landscape managed jointly with Traditional owners, with cultural values and ecological knowledge embedded into management. Culturally significant species and sites are considered when setting priorities for conservation action. Ecosystem accounts being developed for the park are exploring Indigenous cultural values. See: <https://www.nespnorthern.edu.au/projects/nesp/cultural-connections/>

The First Nations Environmental Watering Guidance Project is learning from and incorporating First Nations peoples' objectives in water planning for the MDB. This collaboration provides opportunities for First Nations to influence Basin-scale prioritisation of environmental outcomes, with complementary cultural benefits. It builds on opportunities for First Nations people to participate in decisions on water for the environment on their

country through state processes. CEWO local engagement officers work alongside Basin communities, including Nation groups to plan watering events. The MDB Native Fish Recovery Strategy (2020) includes a focus on the cultural values of native fish and applying traditional knowledge in management. The Hunter Estuary wetlands are valued by the Awabakal and Worimi people who participate in joint projects with the Hunter Wetland Centre. The wetlands have a rich Indigenous history that includes a documented factory site for tools and artworks by Joseph Lycett that capture Aboriginal use of the wetlands. At Jerrabomberra Wetlands Nature Reserve in the ACT, a cultural interpretative trail connecting plant species used by and of significance to the Ngunnawal people is underway. In Victoria, joint management is established under the Traditional Owners Settlement Act 2010, which provides for recognition of Traditional Owners and certain rights in Crown land, including joint management. To access these rights, Traditional Owners enter into a Recognition and Settlement Agreement, which can include provision for parks and reserves to be returned to Aboriginal ownership under Aboriginal Title. Joint management arrangements are in place for the Gippsland Lakes Ramsar site with the Gunaikurnai Land and Water Aboriginal Corporation, and for Barmah Forest with the Yorta National Aboriginal Corporation. Joint plans set out the actions to implement shared management strategies with a focus on the aspirations of the Traditional Owners. Across all sites, cultural values of wetlands are incorporated through the management planning framework and Traditional Owners are represented on site coordinating committees as formal members or as corresponding members in established processes.

Target 12

Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. {1.8.} [Reference to Aichi Targets 14 and 15].

12.1 Have priority sites for wetland restoration been identified? {1.8.1} KRA 1.8.i

C=Partially

12.1 Additional information

> Prioritisation of restoration is in progress across the Commonwealth marine park estate, including assessment to identify the need for restoration activities for wetland sites. At Kakadu National Park, work is underway to identify priority sites for weed management taking into account cultural values and sites, visitor areas, pathways of entry of invasive species, climate change and saline intrusion. A large body of research has been undertaken on the Kakadu floodplain ecosystems that includes modelling of the impacts of sea level rise and saline intrusion and a special edition of CSIRO's Marine and Freshwater research that summarises the state of knowledge for the tropical aquatic ecosystems of Kakadu region, and threats to freshwater floodplain from climate change. See: <https://www.publish.csiro.au/mf/issue/8779> Parks Australia is currently working with CSIRO to produce a revised climate vulnerability assessment for Kakadu.

Restoration works are conducted routinely over a majority of the sites listed under the Ramsar Convention in Western Australia including weed control, revegetation to improve habitat value and reduce soil loss through erosion, feral animal control, fencing for management of stock access, groundwater and surface water level control and water supplementation to manage hydrological alteration from climate change and altered land uses.

In South Australia, a native shellfish reef restoration project is underway off Glenelg beach in partnership with the Nature Conservancy, building on the Windara reef project to restore these lost native reefs. See: <https://www.environment.sa.gov.au/news-hub/news/articles/2020/05/shellfish-reef>
<https://www.environment.sa.gov.au/goodliving/posts/2019/05/windara-reef>

The Australian Government's Reef Builder program has identified the restoration of shellfish reefs as a national priority leveraging the restoration experience of the Nature Conservancy to restore shellfish reefs across 11 coastal sites around Australia. including building on the Conservancy's shellfish restoration at the Ramsar-listed Port Phillip Bay and Peel-Harvey Estuary and new projects for Gippsland Lakes. See: <https://www.natureaustralia.org.au/what-we-do/our-priorities/oceans/ocean-stories/reefbuilder/>

The Australian and Tasmanian governments as part of the Launceston City Deal are funding a 10-year plan to restore and improve the long term environmental health of the Tamar river and estuary, Australia's longest estuary. See: https://www.launcestoncitydeal.com.au/projects/tamar_estuary

The Logan River MangroveWatch program within the Moreton Bay Ramsar site has identified and prioritized estuarine tidal wetland management restoration activities which can be undertaken by local government in the Logan River.

The NESP TWQ Hub is working with Traditional Owners and local citizens to better manage Great Barrier Reef estuarine wetlands, specifically identifying tidal wetland restoration and management activities that can be undertaken to protect and restore tidal wetlands in the Southern Great Barrier Reef region. See: <https://nesptropical.edu.au/index.php/round-2-projects/project-2-3-4/>

The restoration priority for the Banrock Station Ramsar site in South Australia is the Wigley Reach section of the site (western floodplain). This floodplain has not received natural floodwaters since 1992/93 and will be watered via pump to retain the rejuvenation of eucalypt woodland in addition to supporting the habitat of the Southern Bell Frog and regent Parrot and migratory shorebirds.

Victorian waterway managers prioritise wetlands for management actions through the regional waterway

strategies. See:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/strategies-and-planning>

12.2 Have wetland restoration/rehabilitation programmes, plans or projects been effectively implemented?
{1.8.2} KRA 1.8.i

C=Partially

12.2 Additional information

If 'Yes' or 'Partially', please indicate, if available the extent of wetlands restored

> The GBR Foundation's Reef Restoration and Adaptation Science Program is investing \$23 million to support the world's largest coral reefs program using science and new technologies to restore coral reefs and help them recover and adapt to a combination of threats. See: <https://www.barrierreef.org/what-we-do>
NRM North in Tasmania is delivering a range of catchment actions and restoration works as part of the Tamar estuary river health action plan which commenced in 2018. To date, the program has protected over 150km of waterways through the installation of riparian fencing, resulting in 693 hectares of riparian land and wetlands being excluded from stock and managed for natural regeneration. By June 2021, a further 185km of waterways will be protected using riparian fencing and 1,600 hectares of improved effluent management across dairy farms. See: <https://nrmnorth.org.au/water/tamar-estuary-river-health-action-plan/>
A suite of NESP research projects are implementing wetland restoration projects in partnership with Indigenous land and sea country managers. At Kakadu National Park in the NT, wetlands sites on the floodplains are a priority area as part of the NAER hub's Bininj/Mungguy Healthy Country Indicators project where culturally important biota and the latest technology are being used to monitor the effectiveness of para grass control. The use of drones captures areas that are under intensive weed management regimes (aerial spraying and ground spraying) to control Para grass (*Urochloa mutica*) and the return of key bush tucker species like magpie geese signals the successful restoration of the floodplain. *Salvinia* has been kept in check and under control in some areas with the use of weevils, preventing floodplains being choked with vegetation and helping to maintain or restore their original character. See:

<https://www.nesppnorthern.edu.au/projects/nesp/healthy-country-indicators/>

In WA, NESP Marine Biodiversity (MB) Hub researchers are working with the Malgana people and Indigenous rangers to recover seagrasses following the extreme marine heatwave in 2010-11 affecting Shark Bay. The restoration project combines western science and traditional knowledge to develop appropriate field methods to restore temperate seagrass meadows. See:

<https://www.nesppmarine.edu.au/news/working-together-restore-seagrasses-shark-bay-gathaagudu>

At Banrock station, major areas of focus since COP13 have included improved hydrologic management, landscape rehabilitation through planting natives (approx. 4,000 p/a) and implementation of pest control measures targeting vertebrate pests and exotic weeds.

The Victorian Coastal Wetland Restoration Program is a large multi-disciplinary program with three core program,; a Wetland Restoration Site Strategy and Action Plan; on-ground restoration in three coastal regions to repair 100 hectares of threatened saltmarsh and species wetland habitat; and remedial on-ground works with Traditional Owners within Port Philip Bay. See:

<https://www.bluecarbonlab.org/our-research/wetland-restoration/>

12.3 Have the Guidelines for Global Action on Peatlands and on Peatlands, climate change and wise use (Resolutions VIII.1 and XII.11) been implemented including?

Please select only one per square.

a) Knowledge of global resources	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes
b) Education and public awareness on peatlands	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes
c) Policy and legislative instruments	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

d) Wise use of peatlands	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes
e) Research networks, regional centres of expertise, and institutional capacity	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes
f) International cooperation	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes
g) Implementation and support	<input type="checkbox"/> Y=Not relevant <input type="checkbox"/> X=Unknown <input type="checkbox"/> D=Planned <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input type="checkbox"/> A=Yes

12.3 Additional Information

If 'Yes' or 'Partially', please indicate, the progress in implementation

> a. The NESP TSR Hub has undertaken a global literature review of the effectiveness of management actions to improve peatlands. Evidence about the impact of 11 actions on peatlands across seven ecosystem response categories were mapped onto a conceptual model showing how each action improved condition. A Fact sheet highlights actions that best support peatland recovery. See:

https://www.nespthreatenedspecies.edu.au/media/hi3p5h3f/1-2-3-alpine-peatland_factsheet_v4b.pdf

b. West Gippsland CMA's Alpine Peatlands NLP project delivered community engagement and awareness activities including surveys and field days to educate national park users about the importance, sensitivity and key threats to peatlands. See: <https://www.wgcma.vic.gov.au/our-region/projects/alpine-peatlands-2>

c. In 2019, the ACT included High Country Bogs and Associated Fens in the Endangered category of the ACT Threatened Ecological communities list and prepared conservation advice. In recognition of the need to meet international obligations to conserve remaining peatlands, the Management Plan for the Ginnini Flats Wetlands Complex Ramsar site in the ACT, identifies education, research and monitoring actions, and recognises climate change as the biggest threat Predicted increased temperatures and altered rainfall patterns have created the conditions for more frequent and intense bushfires (experienced in 2003 and 2020) and altered hydrology. See: <https://www.environment.act.gov.au/nature-conservation/conservation-and-ecological-communities/high-country-bogs-and-associated-fens-ecological-community>;
<https://www.legislation.act.gov.au/ni/2019-66>

d. See a. and b. above, the Alpine Peatlands project has addressed a range of threats through planning and on-ground management works, including restoration of 13 ha of peatlands; closure of illegal tracks and re-siting tracks and trails; deer control trials; baseline condition monitoring; pest plant and animal surveillance (feral horse) and treatments.

Parks Victoria is collaborating with the NESP TSR Hub to develop a peatland management strategy to coordinate action on threats to Victoria's alpine peatlands. The research is developing a decision-framework to allow managers to quantify changes in peatland condition over time and evaluate the results of management strategies, and can be adapted by other jurisdictions managing sub-alpine and alpine peatlands.

e. In Victoria Alpine Sphagnum bogs have been mapped across their 10,000 km range in the high country with the last bogs in the Cobungra State Forest mapped in 2018. See:

<https://www.ari.vic.gov.au/research/wetlands-and-floodplains/alpine-sphagnum-bogs-if-we-map-them-we-can-manage-them>

An important historical review of rehabilitation techniques and revegetation following the removal of grazing from the alpine zone in Kosciuszko National Park documents the recovery of the Blue Lake Ramsar site and upland peatlands. See: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/emr.12363>

Honours research focused on the Blue Lake expands knowledge of the recent palaeoclimate of the alpine region of Kosciuszko National Park, and response to human impacts, as well as a baseline record of the sensitivity to change. See:

<https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1150&context=thsci>

g. The RLP is funding a Sambar Deer pilot control trial at the Ginini Flats Ramsar Wetland Complex in the ACT. Learnings from the project will guide management of Sambar deer across the full mosaic of sphagnum bogs and fens in the Upper Cotter Catchment improving condition of this listed threatened ecological community in the ACT, with potential knowledge transfer to other sub-alpine systems in NSW and Victoria.

Western Australia is conducting research into the hydrogeochemical basis for potential damage to peat wetlands at the Lake Muir-Byenup Ramsar site as a result of hydrological alteration from climate change, including acidification risk and potential for amelioration

Target 13

Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods
[Reference to Aichi Targets 6 and 7]

13.1 Are Strategic Environmental Assessment practices applied when reviewing policies, programmes and plans that may impact upon wetlands? {1.3.3} {1.3.4} KRA 1.3.ii

C=Partially

13.1 Additional information

> Parks Australia assesses and authorises certain types of activities/uses in Australian Marine Parks that contain Ramsar Sites. Decisions about activities will be consistent with objectives of management plans, objectives for the zones in which the activity will be conducted, and the applicable reserve management principles. Decisions consider impacts and risks on values, and potential impacts on park users, stakeholders and Indigenous people.

The renewed Regional Forest Agreements include a requirement for outcome focused five-yearly reviews, including examining how state forest management systems are demonstrating Ecologically Sustainable Forest Management and how the states have provided for the protection of Ramsar wetlands.

Environmental risk assessments are carried out to inform Ministerial decisions in relation to amending the list of specimens considered to be suitable for live import into Australia, consider the impact of the establishment of new animals on Australia's environment, including wetlands.

Statutory reviews of Key Threatening Process listings and Threat Abatement Plans take into consideration information about the impact these processes have on the listed threatened species and ecological communities that occur in wetlands.

NESP Cross-hub research (led by the TSR Hub) is producing a framework for Integrated Environmental Assessment to inform decision-making focused on Northern Australia. See:

<https://www.nespthreatenedspecies.edu.au/projects/integrated-environmental-assessment-to-inform-environmental-decisions>

This project draws on key research projects in Northern Australia exploring the utility of Scenario and Multi objective Planning , Strategic Assessments for biodiversity, and Tools and models to support sustainable decisions as well as mapping projects for threatened and migratory marine species and their habitats in northern Australia.

See: <https://www.nespnorthern.edu.au/projects/nesp/multi-objective-planning-northern-australia/>

<https://www.nespnorthern.edu.au/wp-content/uploads/2017/04/Review-of-models-wrap-up-web-FINAL.pdf>

<https://www.nespnorthern.edu.au/wp-content/uploads/2017/04/Review-of-models-wrap-up-web-FINAL.pdf>

<https://www.nespthreatenedspecies.edu.au/publications-and-tools/strategic-assessments-for-biodiversity-in-northern-australia>

13.2 Are Environmental Impact Assessments made for any development projects (such as new buildings, new roads, extractive industry) from key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries that may affect wetlands? {1.3.4} {1.3.5} KRA 1.3.iii

A=Yes

13.2 Additional information

> Australia's national environmental law, the Environment Protection and Biodiversity Conservation Act 1999, includes listed Ramsar wetlands, threatened and migratory species and ecological communities as matters of national environmental significance. Commonwealth environmental assessment and approval is required for developments that are likely to have a significant impact on these matters and for Ramsar wetlands, includes assessing potential impacts associated with changes to hydrology and water quality. In the current triennium, the range of proposals referred and assessed for their impact on Ramsar wetlands included port, rail and road infrastructure; energy generation; residential and industrial subdivisions; floodplain works; water storage and related irrigation developments.

The new National Light Pollution Guidelines for Wildlife published in 2020 guide the management of artificial light for conservation of listed threatened and migratory species. Ramsar and other wetlands are identified as important habitat where the impacts of artificial light should be addressed in environmental assessments and other projects that may impact listed species. See:

<https://www.environment.gov.au/system/files/resources/2eb379de-931b-4547-8bcc-f96c73065f54/files/national-light-pollution-guidelines-wildlife.pdf>

<https://www.environment.gov.au/system/files/resources/2eb379de-931b-4547-8bcc-f96c73065f54/files/national-light-pollution-guidelines-wildlife.pdf>

Commonwealth assessment and approval processes under the EPBC Act also apply to forestry operations that

may have a significant impact on Ramsar wetlands and development by Commonwealth agencies and on Commonwealth land, including Commonwealth reserves.

Similarly, in each State and Territory, environmental planning, water or biodiversity legislation specifies the circumstances where EIA is required, and this may relate to the type of development, specific locations, species or ecosystems.

For example, wetlands in Tasmania, are protected areas under the Nature Conservation Act 2002. Any new development proposals that may impact on a wetland would be considered under the appropriate regulatory scheme at the state level, with different regulatory pathways in place for proposals relating to:

- urban developments (Land Use and Planning Approvals Act 1993)
- forest practices (Forest Practice Act 1985)
- water, energy, mining and aquaculture (Environmental Management and Pollution Control Act 1994).

These regulatory schemes contain the requirements for environmental assessments of potential environmental impacts or effects of a proposed development.

In Qld, the Environmental Protection Regulation defines the Map of Great Barrier Reef Wetland Protection Areas, buffer areas protecting wetlands of 'high ecological significance' in Great Barrier Reef catchments. The map is an assessable trigger for development under the Planning Regulation 2017. See:

<https://environment.des.qld.gov.au/wildlife/wetlands/map-referrable-wetlands>

Two critically endangered ecological communities were recently nationally listed and protected under the EPBC Act: River-flat eucalypt forest on coastal floodplains of southern NSW and eastern Victoria, and Karst Springs and associated alkaline fens of the Naracoorte Coastal Plain Bioregion South Australia.

QLD has identified over 20 at risk species of freshwater Crustaceans, with range limited crayfish being the highest priorities for conservation listing under the Nature Conservation Act. The following species have been listed or proposed for listing:

- *Euastacus bindal*, *E. jagara*, *E. binzayedii* - listed as Critically Endangered in Queensland and passed to Commonwealth for EPBC Act inclusion.
- *E. robertsi*, *E. monteithorum* - listed as Endangered in Queensland and passed to Commonwealth for EPBC Act inclusion
- *Cherax robustus* - listed as Vulnerable in Queensland and passed to Commonwealth for EPBC Act inclusion
- *E. eungella*, *E. maidae* - nominations submitted for consideration.

Goal 4. Enhancing implementation

[Reference to Sustainable Development Goals 1, 2, 6, 9, 10, 11, 13, 14, 15, 17]

Target 15

Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention. {3.2.}

15.1 Have you (AA) been involved in the development and implementation of a Regional Initiative under the framework of the Convention? {3.2.1} KRA 3.2.i

A=Yes

15.1 Additional information

If 'Yes' or 'Planned', please indicate the regional initiative(s) and the collaborating countries of each initiative
> Australia was a founding member of the East Asia—Australasian Flyway Partnership launched on 6 November 2006. A Ramsar regional initiative, the Partnership is an informal and voluntary collaboration of effort focusing on protecting migratory waterbirds, their habitat and the livelihoods of people dependent on them.

The EAAF is one of nine major migratory waterbird flyways around the globe, extending from within the Arctic Circle in Russia and Alaska, through East and South-east Asia, to Australia and New Zealand in the south. It aims to protect migratory waterbirds, their habitat and the livelihoods of people dependent upon them. There are currently 37 Partners including 18 countries, 6 intergovernmental agencies, 12 international non-governmental organisations (NGOs) and 1 international private enterprise.

The EAAF is home to over 50 million migratory waterbirds from over 250 different populations, including 32 globally threatened species and 19 near threatened species. A cornerstone of the Partnership is the establishment of a network of internationally important sites for migratory waterbirds throughout the Flyway. Australia will co-host, with BirdLife Australia, the Flyway Partnership's 11th Meeting of Partners in Brisbane, Queensland, Australia in March 2022 (postponed from 2021).

See: www.eaaflyway.net

A new Australian Flyway site, Leichhardt River to Gore Point (Wernadinga coast) in the south-east Gulf of Carpentaria, has been added to the Flyway site network on 16 December 2020 and is cooperatively managed by the pastoral leaseholder and Indigenous land and Sea Rangers.

The Hunter Wetlands Centre, led, in collaboration with Sydney Olympic Park Authority and Contracting Parties, the development of a RRI proposal for Oceania but was unable to secure sufficient support from Oceania Contracting Parties.

15.2 Has your country supported or participated in the development of other regional (i.e., covering more than one country) wetland training and research centres? {3.2.2}

B=No

Target 16

Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness {4.1}

[Reference to Aichi Targets 1 and 18]

16.1 Has an action plan (or plans) for wetland CEPA been established? {4.1.1} KRA 4.1.i

Even if no CEPA plans have been developed, if broad CEPA objectives for CEPA actions have been established, please indicate this in the Additional information section below

Please select only one per square.

a) At the national level	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> C=In Progress
b) Sub-national level	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> C=In Progress
c) Catchment/basin level	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> C=In Progress
d) Local/site level	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> C=In Progress

16.1 Additional information

If 'Yes' or 'In progress' to one or more of the four questions above, for each please describe the mechanism, who is responsible and identify if it has involved CEPA NFPs

> a) Australia developed a Ramsar CEPA Action Plan to implement the Ramsar CEPA Program 2016-2024, setting out actions by the Australian Government, state and territory governments and NGOs for the triennium 2016-2018. A report on progress was published. See:

<http://www.environment.gov.au/water/wetlands/publications/report-against-indicators-australias-ramsar-cepa-national-action-plan-2016-2018>

b) Communications Plans have been prepared for the marine networks that include Ramsar sites, including the Coral Sea Marine Park, North-west and Temperate East Marine Parks networks.

c) CEPA activities are embedded in a number of Victoria's Ramsar site management plans, for example the Glenelg Hopkins Catchment Management Authority co-ordinates communications and engagement for the Ramsar site as part of its role in co-ordinating implementation of the Glenelg Ramsar Site Management Plan. A communication plan and engagement strategy, developed by the Ramsar Coordinating Committee, guides stakeholder interactions. In particular, the communication plan aims to include the local community (farmers, fishers, tourists, townspeople) in understanding the international values and importance of the site and how to maintain its values.

d) At the site level, a number of CEPA plans have been established, including a Wetlands and People Plan at the Peel-Yagorup System site in Western Australia, which is now being implemented. See:

https://peel-harvey.org.au/wp-content/uploads/2018/02/WPP_Final.pdf

Within each Ramsar site management plan, priority CEPA actions are identified. At Kakadu National Park, communication and education, including intergenerational exchange of knowledge, is integrated in management planning, and work with local schools, Aboriginal associations, and neighbouring ranger groups.

16.2 How many centres (visitor centres, interpretation centres, education centres) have been established? {4.1.2} KRA 4.1.ii

a) at Ramsar Sites

E=Exact Number (centres)

> 10

16.2 How many centres (visitor centres, interpretation centres, education centres) have been established?

{4.1.2} KRA 4.1.ii

b) at other wetlands

E=Exact Number (centres)

> 32

16.2 Additional information

If centres are part of national or international networks, please describe the networks

> a) Wetland visitor education centres at Ramsar sites:

Hunter Wetlands Environmental Education Centre (Hunter Estuary),
 Botany Bay Environmental Education Centre (Towra Point),
 Bowali Visitors Centre and other facilities, Warradjan Aboriginal Cultural Centre Yellow Water (Kakadu National Park),

Banrock Station Wetland and Wine Centre (Banrock Station Wetland Complex),

Edithvale-Seaford Wetland Education Centre,

Broome Bird Observatory (Roebuck Bay),

Two Lakes Hubs (The Coorong, Lake Alexandrina & Lake Albert)

Boondall Wetlands Environment Centre (Moreton Bay).

There are also a variety of information and interpretation facilities at other sites (including at Fivebough and Tuckerbil Swamps, NSW, Myall Lakes, NSW and Cobourg Peninsula, NT).

b) There are 18 education centres and 14 marine discovery centres at other wetlands/sites. Examples include: a visitor centre featuring wetlands at Tamar Island, Tasmania; three centres in Western Australia (the Cockburn Wetland Education Centre, Western Australian Gould League’s centre at Herdsman Lake and the Piney Lakes Environmental Education Centre) and a visitor centre at Window on the Wetlands and visitor facilities at Fogg Dam, both on the Adelaide River floodplain south of Darwin in the Northern Territory. In Victoria, the Mokoan Visitor Hub and Café (at Winton Wetlands) was opened in May 2015; and there is a Discovery Centre at the Yea Wetlands. Sydney Olympic Park, NSW has a wetland education centre, and the Sunshine Coast Environmental Education Centre is located at the Maroochy Wetlands Sanctuary in QLD

16.3 Does the Contracting Party {4.1.3} KRA 4.1.iii

Please select only one per square.

a) promote stakeholder participation in decision-making on wetland planning and management	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
b) specifically involve local stakeholders in the selection of new Ramsar Sites and in Ramsar Site management?	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

16.3 Additional information

If ‘Yes’ or ‘Partially’, please provide information about the ways in which stakeholders are involved

> (a) There are a range of mechanisms to enable stakeholders to contribute to decision-making processes.

For Australian Government reserves covering Ramsar wetlands, the preparation of Commonwealth reserve/park management plans involves statutory public consultation including: a notice of intent to prepare a management plan, and draft management plan consultation (s.367 EPBC Act) with key stakeholders and local communities. State and Territory park planning processes also involve public consultation.

The CEWO publishes its plans for use of water for the environment across the Murray-Darling Basin annually using a range of accessible, plain English information being made available to the community (for example through brochures, videos and online publications). The CEWO has local engagement officers located in regional areas across the Basin who actively share and disseminate this information to the community and participate in local engagement processes established by State agencies and CMAs, such as environmental water advisory groups. In 2020-21, the CEWO incorporated First Nations watering objectives into its water management plans through the First Nations Environmental Watering Guidance Project and direct partnerships with some individual Nations.

The MDBA undertakes regular consultation with: Indigenous groups and individuals; regional water advisory groups; scientific and academic community; irrigators, landholders and local community representatives; local government, State/Territory governments; and conservation organisations. Stakeholder advisory committees provide advice on implementing the Basin Plan. Specific examples include consultation on the 2020 review of the Basin environmental watering plan, the 2019 review and update of the Basin-wide environmental watering strategy and developing Basin annual environmental watering priorities. The Native Fish Recovery Strategy has a strong focus on promoting stakeholder participation in decision-making in planning and management of

fish and their habitats, including wetlands.

At Banrock Station there is a three-way partnership which involves the state and federal agencies to implement improve water management and flows paths with the private site manager.

b) Marine Park Advisory Committees have been established for Australian Marine Parks (covering those with Ramsar Sites) to advise on management. These are multi-stakeholder, expertise-based committees. At Kakadu National Park, local stakeholder participation in decision making occurs via a Board of Management and consultation on management and other plans.

Funding assistance through the National Landcare Program supports citizen science and management activities at Ramsar-listed wetlands, including at Peel Yalgorup; Lake Warden and Lake Gore (bird surveys and water quality monitoring) and Hattah-Kulkyne (black box regeneration trial).

16.4 Do you have an operational cross-sectoral National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

A=Yes

16.4 Additional information

If 'Yes', indicate a) its membership; b) number of meetings since COP13; and c) what responsibilities the Committee has

> Australia's National Ramsar Committee, the Wetlands and Aquatic Ecosystems Sub Committee (WAESC), comprises representatives from the Australian Ramsar Administrative Authority and state and territory governments. WAESC was established to progress wetlands/aquatic ecosystem related aspects of both the national water reform agenda and the national partnership approach to conservation and management of biodiversity at the landscape and ecosystem scale.

Specific organisations and individuals, including representatives of non-government and scientific/technical organisations, are invited to attend particular meetings. The Sub Committee generally meets twice a year.

16.5 Do you have an operational cross-sectoral body equivalent to a National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

B=No

16.6 Are other communication mechanisms (apart from a national committee) in place to share Ramsar implementation guidelines and other information between the Administrative Authority and a), b) or c) below? {4.1.7} KRA 4.1.vi:

Please select only one per square.

a) Ramsar Site managers	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
b) other MEA national focal points	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes
c) other ministries, departments and agencies	<input type="checkbox"/> D=Planned <input type="checkbox"/> C=Partially <input type="checkbox"/> B=No <input checked="" type="checkbox"/> A=Yes

16.6 Additional information

If 'Yes' or 'Partially', please describe what mechanisms are in place

> a) There are communications between the Australian Government Department of Agriculture Water and the Environment and site managers relating to nomination and management of Ramsar sites.

The Australian Government has made significant investment in developing tools and information to support management of Ramsar sites, for example, the Australian National Guidelines for Ramsar Wetlands which draw on Ramsar guidance. These guidelines are subject to review and update, in consultation with stakeholders. See:

<https://www.environment.gov.au/water/wetlands/ramsar/australian-national-guidelines>

Regular meetings are held by the Ramsar Administrative Authority with Australian Government Ramsar site managers, within Parks Australia, to share information and guidance.

b) There are both formal and informal mechanisms in place to facilitate communication between MEA national focal points (NFPs). The NFPs for biodiversity-related Conventions are located within the Department of Agriculture, Water and the Environment, and attend regular meetings to share information.

c) The Administrative Authority works collaboratively with relevant Australian, state and territory government departments and agencies, including those managing Ramsar sites. The nature and frequency of this interaction depends on the issue. Communication increases in the lead up to and following meetings of the

Conference of the Contracting Parties, with the Administrative Authority seeking input to Australia's National Report, consulting on draft resolutions and circulating information on new guidance agreed by COP.

16.7 Have Ramsar-branded World Wetlands Day activities (whether on 2 February or at another time of year), either government and NGO-led or both, been carried out in the country since COP13? {4.1.8}

A=Yes

16.7 Additional information

> Each year in Australia, World Wetlands Day (WWD) activities are carried out by Australian, state, territory and local governments, as well as a variety of community organisations, focused on the theme for each year. In 2018 and 2019 there were over 40 community events listed on the Ramsar event map, with 20 events in 2020 (when WWD activities were limited in many places by the extensive bushfires, and postponed activities were affected by COVID-19 restrictions).

Australian Government WWD activities included publication of an annual online Wetlands Australia magazine, videos, fact sheets, brochures, displays and social media. See:

<http://www.environment.gov.au/water/wetlands/world-wetlands-day>

In 2019, this included development of a portal of Wetland and Climate Change resources at:

<http://www.environment.gov.au/water/wetlands-climate-change-resources>. Australia also promotes the Secretariat's WWD resources.

Social media promoting World Wetland Day 2020 was posted on Parks Australia's Australian Marine Park channel and a short video on Kakadu's social media channels and website.

The Hunter Wetlands Centre Australia holds activities for or on WWD, most years weather permitting with a free open day held in 2019 at the wetland centre. In the ACT an annual celebration day has been held every year at the Jerrabomberra Nature Reserve since 2013, variously branded as 'Wetlands Day' or 'World Wetlands Day' excepting the summer of 2020 when it was cancelled, due to bushfire smoke.

The Cockburn Wetlands Education Centre in Perth, Western Australia host the annual Wetlands Management Conference on WWD and attract up to 200 delegates from across government, private industry and grass root community groups. In 2021 the conference is being run over two days at the Performing Arts Centre in the City of Mandurah as the city is celebrating the 30th anniversary of the listing of the Peel-Yalgorup Ramsar site at the same time that the 50th anniversary of the signing of the Ramsar Convention is being celebrated

16.8 Have campaigns, programmes, and projects (other than for World Wetlands Day-related activities) been carried out since COP13 to raise awareness of the importance of wetlands to people and wildlife and the ecosystem benefits/services provided by wetlands? {4.1.9}

A=Yes

16.8 Additional information

If these and other CEPA activities have been undertaken by other organizations, please indicate this

> Communications activities promoting wetland habitats and species are undertaken to celebrate other international days eg World Migratory Bird Day.

The Sydney Olympic Park Authority's WET Program was relaunched as the Sydney Wetland Institute in October 2020 a pilot program ushering in a new phase as the centre for knowledge and networks for urban wetlands across Australia and Oceania.

A number of Ramsar and other wetlands promote the importance of wetlands all year round through signage and interpretative installations, websites and other social platforms including the Hunter Wetlands Centre Australia. Banrock station has a network on interpretative materials around a walking trail that has been upgraded since COP13. A new walking trail and botanical garden to highlight species from the region is being constructed incorporating an outdoor classroom complete with environmental stories and messaging around wetland conservation. As part of the community education elements of the Latham's Snipe project at Jerrabomberra Wetlands nature reserve in the ACT, new interpretative signage has been installed highlighting the habitat values, the journey of the snipe and referencing the ACT's Migratory Species Action Plan.

The MangroveWatch tidal wetland citizen science monitoring program continues to engage local community and traditional owner groups across a number of estuarine tidal wetland locations between Moreton Bay and Numbulwar, NT in the Gulf of Carpentaria. The aim of this program is to engage, educate and empower local communities to better manage and protect tidal wetlands.

The GBRMPA's Reef Guardians programs raise awareness about ecosystem benefits provided by wetlands for all beneficiaries. The Reef Guardian schools program encourages and supports students to learn about wetlands so they can restore, protect and maintain wetlands in the GBR catchments, while Reef Guardian Fishers and Councils programs focus on recognising industry and local government activities that support sustainable management and supporting wetland health. See:

<https://www.gbrmpa.gov.au/our-work/our-programs-and-projects/reef-guardians>

At Elizabeth Reef, post-trip reporting systems for Reef recreational fisher permit holders have been improved to ensure fishers are aware of the importance of the wetland ecologically and to capture the data in a way that ensures important management questions are addressed. An Elizabeth and Middleton Reef Guide was developed in 2019 that includes its Ramsar listing.

Kakadu National Park has an annual Bird Week to raise awareness of birds and their habitats. In 2020 it included a number of activities on wetland species, and at Pulu Keeling, guided open weekends are held to provide opportunities for the local community and tourists to visit the park and raise awareness of the wildlife it supports.

A key initiative of CVA's Revive campaign is Revive our Wetlands undertaking priority conservation actions on wetlands of regional, national and international significance. CVA's #SeaToSource program launched in June 2020 promotes community awareness and participation in addressing the problems caused by litter in rivers, estuaries, wetlands and oceans; including source identification and reduction workshops and activities. See: <https://conservationvolunteers.com.au/seatosource/>

Target 17

Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available. {4.2.}

[Reference to Aichi Target 20]

17.1a Have Ramsar contributions been paid in full for 2018, 2019 and 2020? {4.2.1} KRA 4.2.i

A=Yes

17.2 Has any additional financial support been provided through voluntary contributions to non-core funded Convention activities? {4.2.2} KRA 4.2.i

B=No

17.3 [For Contracting Parties with a development assistance agency only ('donor countries')]: Has the agency provided funding to support wetland conservation and management in other countries? {3.3.1} KRA 3.3.i

A=Yes

17.3 Additional information

If 'Yes', please indicate the countries supported since COP12

> Australia provides core funding to the Secretariat of the Pacific Regional Environment Programme (SPREP) \$12.9 million, 2018-2021. SPREP supports Pacific island countries to protect and improve their environment, including wetlands and to ensure sustainable development for present and future generations.

In December 2020, Australia announced it would extend its commitment to build climate change resilience, mitigation and adaptation into Australia's Pacific aid investments, including a pledge of \$500m for 2020-25 to the Pacific to support climate change and disaster resilience programs.

To further Australia's work on the International Partnership on Blue Carbon, Australia's Department of Foreign Affairs and Trade (DFAT) is partnering with the Department Industry, Science, Energy and Resources; CSIRO; Conservation International and others to protect and manage coastal blue carbon ecosystems in the Pacific and Indian Ocean regions. This includes a \$6 million Pacific Blue Carbon program providing support in Fiji and Papua New Guinea. This program is strengthening blue carbon expertise and data in the Pacific, supporting its integration into national greenhouse gas accounting and climate policy, and encouraging public and private sector investment. DFAT is also supporting the Indian Ocean Rim Association/CSIRO Blue Carbon Hub based in Perth. The Hub aims to build knowledge about, and capacity in, protecting and restoring blue carbon ecosystems throughout the Indian Ocean.

DFAT has provided \$1 million to the Australian Institute of Marine Science (AIMS) to lead the coordination of the Global Coral Reef Monitoring Network and the production of a 2020 Report on the Global Status of Coral Reefs. DFAT is also working with AIMS on a \$3 million DFAT-funded project to develop innovative technology that will enable coral reef images to be analysed at speed via an algorithm. The project, which will initially be trialled in Fiji and Palau, addresses a key challenge of coral reef managers, enabling them to quickly and effectively assess the condition of reefs and take informed and timely management actions.

17.4 [For Contracting Parties with a development assistance agency only ('donor countries')]: Have environmental safeguards and assessments been included in development proposals proposed by the agency? {3.3.2} KRA 3.3.ii

A=Yes

17.4 Additional information

> DFAT's Environmental and Social Safeguard Policy came into effect on 1 January 2018 and applies to all DFAT Official Development Assistance funded aid investments regardless of value or funding mechanism.

Departmental non-aid investments should consider their program risks in relation to the safeguard policy. See: <https://www.dfat.gov.au/about-us/publications/Pages/environmental-social-safeguard-policy>

17.5 [For Contracting Parties that have received development assistance only ('recipient countries')]: Has funding support been received from development assistance agencies specifically for in-country wetland conservation and management? {3.3.3}

Z=Not Applicable

17.6 Has any financial support been provided by your country to the implementation of the Strategic Plan?

A=Yes

17.6 Additional information

If "Yes" please state the amounts, and for which activities

> The National Regional Land Partnerships (RLP) program running over five years from June 2018 to 2023, is delivering national priorities at a regional and local level. One of six priorities is to maintain the ecological character of Ramsar sites through the implementation of priority conservation actions. \$48 million over five years is provided for projects at 33 Ramsar sites. Other priorities relate to improving the condition of nationally threatened ecological communities on private land, and an increase in the awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation. A further \$25.6 million is being provided to support coastal habitat and species protection projects to restore hydrological connectivity between coastal environments and upstream freshwater wetlands and enhance fish, turtle and waterbird habitats adjoining the Great Barrier Reef.

The National Environmental Science program (NESP) is investing in applied research through six research hubs at Ramsar and other wetlands, including determining environmental and cultural flow requirements; developing methods and tools to manage terrestrial and aquatic weeds and pests; restoration and condition monitoring at freshwater coastal and marine systems.

The \$100 million Environmental Restoration Fund announced in 2019 has a focus on providing grants for community groups to meet the following national priorities: Protecting threatened and migratory species and their habitat; and protecting Australia's coasts, oceans and waterways by addressing erosion, improving water quality and protecting coastal threatened and migratory species. This investment will help to ensure that Australia continues to meet its international obligations and examples of relevant projects include funding to assist Indigenous land managers prevent cane toad incursions and to support the QLD Wader Study Group, Birdlife Australia and the Gold Coast Bird Group Society to undertake a Bay-wide population survey to record abundance and diversity of shorebirds across the site.

The Reef Trust Partnership (\$443m) through the Great Barrier Reef Foundation includes investment in new science technologies, land-based water quality improvement actions, CoTs control, traditional owner collaborations; community citizen-led action projects and integrated monitoring and reporting.

Target 18

International cooperation is strengthened at all levels {3.1}

18.1 Are the national focal points of other MEAs invited to participate in the National Ramsar/Wetland Committee? {3.1.1} {3.1.2} KRAs 3.1.i & 3.1.iv

A=Yes

18.1 Additional information

> The national focal point for the Convention on Migratory Species and the East-Asian Australasian Flyway Partnership is invited to provide input to and attend meetings of the Wetlands and Aquatic Ecosystem Sub-committee (WAESC), Australia's National Ramsar Committee.

While NFPs for other MEAs do not attend the National Ramsar Committee meetings, they are briefed on wetland-related activities at their 6 monthly NFP meetings, and the Committee is regularly briefed on relevant MEA activities.

18.2 Are mechanisms in place at the national level for collaboration between the Ramsar Administrative Authority and the focal points of UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO)? {3.1.2} {3.1.3} KRA 3.1.iv

A=Yes

18.2 Additional information

> The Administrative Authorities/focal points for the biodiversity-related conventions and the United Nations Convention to Combat Desertification (UNCCD) are located within the same agency, and their implementation of these conventions is overseen by the same Minister. Being situated together facilitates communication, information sharing and engagement across focal areas on issues of mutual interest.

Focal points for UN and other global and regional bodies are located within two Australian Government departments: Department of Foreign Affairs and Trade; and the Department of Agriculture, Water and the Environment. The UNEP focal point within the DAWE regularly seeks input from the Ramsar Administrative Authority.

Formal processes exist to facilitate communication between these agencies/focal points, for example the DAWE has an International Practitioner's Forum for senior executives and the International Negotiators Network for officer level staff to improve collaboration amongst national focal points. CHECK

In relation to the FAO, OECD, APEC, ITTO and the UN Forum on Forests, and other relevant agriculture-related

international fora, Machinery of Government changes have brought these focal points into the one federal agency and the Administrative Authority is working collaboratively with through the International Strategy section with these focal points.

18.3 Has your country received assistance from one or more UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO) or the Convention's IOPs in its implementation of the Convention? {4.4.1} KRA 4.4.ii.

The IOPs are: BirdLife International, the International Water Management Institute (IWMI), IUCN (International Union for Conservation of Nature), Wetlands International, WWF and Wildfowl & Wetland Trust (WWT).

B=No

18.4 Have networks, including twinning arrangements, been established, nationally or internationally, for knowledge sharing and training for wetlands that share common features? {3.4.1}

A=Yes

18.4 Additional information

If 'Yes' or 'Partially', please indicate the networks and wetlands involved

> Examples of Twinning arrangements within Australia include:

- Vic Waterway Management Twinning Program
- Winning and Twinning – Lake Eyre Basin and Okavango River Basin
- Jerrabomberra Wetlands, South Beach Wetlands Port Fairy Landcare – Japan on Latham's Snipe See:

<https://lathamssnipeproject.wordpress.com/>

• Brisbane City Council and the City of Narashino, Japan have an agreement to protect migratory shorebirds and celebrated the 20th anniversary in 2018. See:

<https://www.brisbane.qld.gov.au/clean-and-green/natural-environment-and-water/bushland-reserves/boondall-wetlands/narashino-agreement>

- HWCA and Kushiro Wetlands, Hokkaido, Japan – renewal in 2015.

Australia facilitates the International Partnership for Blue Carbon to protect and restore coastal blue carbon ecosystems – mangrove, tidal marsh and seagrass – for climate change mitigation and adaptation, and other ecosystem services. Partnership activities raise awareness, facilitate knowledge exchange, and accelerate practical action on coastal blue carbon ecosystems. See: <https://bluecarbonpartnership.org/>

Coastal wetlands have significant carbon capture and storage potential as well as providing many other important ecosystem services and co-benefits for adaptation and sustainable livelihoods. When degraded or lost, coastal wetlands can become significant emission sources. The Partnership is not a funding body, but instead aims to better connect the efforts of governments, research organisations and non-government organisations

18.5 Has information about your country's wetlands and/or Ramsar Sites and their status been made public (e.g., through publications or a website)? {3.4.2} KRA 3.4.iv

A=Yes

18.5 Additional information

> Information on Australia's wetlands, including Ramsar sites, is made publicly available through a range of mechanisms, including the annual Wetlands Australia, on-line magazine and websites of Australian and state/territory agencies:

<http://www.environment.gov.au/wetlands>

<https://www.environment.gov.au/water/wetlands/publications/wetlands-australia>

<https://wetlandinfo.ehp.qld.gov.au/wetlands/>

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands>

The Parks Australia website contains information on wetland and other values in Christmas Island, Pulu Keeling and Kakadu and the Coringa-Herald and Lihou Reefs and Cays Ramsar Site, Ashmore Reef Commonwealth Marine Reserve Ramsar Site and Elizabeth and Middleton Reefs Ramsar Site. See:

<https://parksaustralia.gov.au/>

NGOs and other organisations also promote wetlands including the Hunter Wetland Centre's website raises awareness about wetlands values and the Ramsar Convention and social media feeds

(<https://wetlands.org.au/>) and CVA's Revive webpage promoting projects at Ramsar and other wetlands. See:

<https://conservationvolunteers.com.au/what-we-do/revive/>

The values of Ramsar and other wetland sites are publicised on World Wetlands Day through publications, websites, print, electronic and social media

18.6 Have all transboundary wetland systems been identified? {3.5.1} KRA 3.5.i

Z=Not Applicable

18.6 Additional information

> Australia does not share any wetland systems with other countries.

18.7 Is effective cooperative management in place for shared wetland systems (for example, in shared river basins and coastal zones)? {3.5.2} KRA 3.5.ii

A=Yes

18.7 Additional information

If 'Yes' or 'Partially', please indicate for which wetland systems such management is in place

> Within Australia, a number of management arrangements are in place that support cooperative catchment or basin-scale management. These include in the Murray-Darling Basin, the Lake Eyre Basin and the Queensland Great Barrier Reef coastal catchments.

For the Kakadu National Park, managers work with the Warrdeken Indigenous Protected Area and other neighbouring areas and ranger groups on a range of biodiversity and threatening processes including both practical action and planning and capacity building and regional approaches to management of gamba grass and other environmental issues with Territory NRM.

18.8 Does your country participate in regional networks or initiatives for wetland-dependent migratory species? {3.5.3} KRA 3.5.iii

A=Yes

18.8 Additional information

> See also 15.1.

Australia participates in the East Asian – Australasian Flyway Partnership, and will co-host, with BirdLife Australia, the Flyway Partnership's 11th Meeting of Partners in Brisbane, Queensland, Australia in March 2022 (Postponed from 2021).

Australia has three bilateral migratory bird agreements with Japan (JAMBA), China (CAMBA) and the Republic of Korea (ROKAMBA). These agreements provide a basis for cooperation on activities for the conservation of migratory birds that move between each country. Species listed on the annexes to these agreements are a matter of National Environmental Significance under the EPBC Act as listed migratory species.

Meetings occur between all four countries every two years but the 20th JAMBA, 14th CAMBA and 7th ROKAMBA consultative meeting proposed for November 2020 in the Republic of Korea has been postponed until 2022. At each meeting, Australia delivers a national report which outlines activities that have contributed to the domestic implementation of the migratory bird agreements. Bilateral migratory bird consultative meeting National Report available here:

<https://www.environment.gov.au/biodiversity/publications/australian-national-report-consultative-meetings-nov-2018>

All migratory bird species listed in the annexes to these agreements are protected in Australia as matters of national environmental significance under the EPBC Act (s209-223). The Eastern Curlew is one of 20 priority bird species in the National Threatened Species Strategy. The NESP Threatened Species Recovery Hub project Strategic Planning for the Eastern Curlew is focused on how shorebirds use sites Darwin Harbour finding all sites are connected to each other and some sites are more important at certain times of the year, depending on resource availability and the needs of the birds, suggesting a hierarchy of importance across the sites. The project is producing planning guidelines applicable to all northern Australian coastal habitat, about how to accommodate curlew and other shorebird habitat in development proposals with advice about survey design, required habitats for feeding and roosting, the spatial relationship between the two and the options for offsets, habitat protection and habitat augmentation. See:

<https://www.nespthreatenedspecies.edu.au/projects/strategic-planning-for-the-far-eastern-curlew>

At the Moreton Bay Ramsar site, funding from the Australian Government's Environment Restoration Fund will support the QLD Wader Study Group, Birdlife Australia and the Gold Coast Bird Group Society to undertake a Bay-wide population survey to record abundance and diversity of shorebirds across the site. The Bribie Island Environmental Protection Association is advocating for educational signage and more Ranger patrols to protect migratory shorebirds from vehicles and other human disturbance in the Pumicestone Passage habitats of the Bay. See: <https://bribieislandenvironmentprotection.org.au/>

Target 19

Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced.

[Reference to Aichi Targets 1 and 17]

19.1 Has an assessment of national and local training needs for the implementation of the Convention been made? {4.1.4} KRAs 4.1.iv & 4.1.viii

C=Partially

19.1 Additional information

> No specific assessment has been undertaken, but local providers continue to assess needs and offer relevant training. There is a strong network of wetland education centres, NGOs and universities that provide training in wetland ecology and management. These organisations are identifying and responding to national and local

training needs.

The Sydney Wetland Institute launched in November 2020 (building on SOPA's WET program) is designed to share knowledge and build a community of practice about urban wetland systems. See:

<https://vimeo.com/473753034>

19.2 Are wetland conservation and wise-use issues included in formal education programmes?

C=Partially

19.2 Additional information

If you answer yes to the above please provide information on which mechanisms and materials

> Learnings and activities relating to wetlands are accommodated in the Australian National Curriculum in the areas of Science and Humanities and Social Sciences (HASS). While wetlands are not addressed explicitly, the Foundation to Year 10 Australian Curriculum provides opportunities for students to use wetlands when they study ecology and living things in Science and to study local wetland areas and the importance of their protection in Humanities and Social Science. Wetlands could be a particular focus for Year 7 as part of topics relating to food chains and the water cycle, as well as senior studies in Year 11 and 12 on sustainability, biology, earth and environmental science.

The MDBA provides Lesson packages that stand alone or can be used sequentially for a comprehensive unit of study addressing key inquiry questions about Wetlands and food webs for Year 4 and above; Water as a resource for Year 7; and about Caring for River country as part of the Environmental change and management for Year 10. See: <https://www.mdba.gov.au/education/lesson-packages>

In 2019, the GBRF funded the 'Protecting Wetlands for the future' program delivered by Earthwatch Australia. This program developed 6 lesson plans to assist high school teachers engage students in tidal wetland monitoring and assessment on the GBR. To date over 300 students have been actively involved in GBR tidal wetland monitoring.

GBRMPA's Outreach Reef Education programs reaches students around the globe. Recently, pre-school students from Chhattisgarh, India participated in a Reef education program focused on threats to the Reef and how we can all help to protect it. The Reef education session, facilitated in partnership with the City University of New York, brought together more than 800 participants from 13 countries simultaneously. Pre-school students and teachers from the program were so inspired they created a Youtube video. See:

<https://www.youtube.com/watch?app=desktop&v=RC20hM-k5Cw&feature=youtu.be>

19.3 How many opportunities for wetland site manager training have been provided since COP13? {4.1.5}

KRA 4.1.iv

a) at Ramsar Sites

X=Unknown

19.3 Additional information

including whether the Ramsar Wise Use Handbooks were used in the training

> a) MangroveWatch training was provided to local community members, school students and local government representatives on tidal wetland monitoring methods and tidal wetland management (Moreton Bay QLD)

At the Coringa-Herald and Lihou Reefs and Cays Ramsar Site, a site manager assisted in a formal Ramsar values assessment in 2019 with this participation increasing capacity and knowledge.

More than 50 (Opportunities)

b) SOPA's Wetland Education and Training Workshops: 12 webinar-delivered and F2F delivered courses.

See: <https://www.sydneyolympicpark.com.au/education/professional-development>

MangroveWatch training has been delivered to 8 Indigenous Ranger organisations who are actively involved in tidal wetland management in Qld and NT. Training focused on tidal wetland monitoring and management strategies. These 8 ranger groups have been actively involved in monitoring tidal wetlands on-country. As part of the NESP NAER Mangrove dieback project, a tidal wetland monitoring manual has been produced for use by Indigenous ranger groups. See: <https://www.nespnorthern.edu.au/wp-content/uploads/2020/05/Indigenous-Ranger-field-guide-to-the-Shoreline-Video-Assessment-Method.pdf>

Local community (non-indigenous) MangroveWatch tidal wetland monitoring and management training has been delivered to an additional 8 communities providing training to conservation groups and local government staff.

Through the Queensland Wetlands Program, Department of Agriculture and Fisheries (DAF) and DES continue to support adoption of best practice wetland management, by building capacity, developing resources, and providing technical support. In October 2020, an Applied Hydrology workshop delivered to 30 extension and NRM officers working in GBR catchments, increasing participants' skills and knowledge in hydrology. The workshop was tailored to field staff to build knowledge and skills in understanding water dynamics in the landscape to help in planning and undertaking on-ground works. Topics covered included:

- Case studies and demonstrations of applying hydrological understanding to site assessment and planning
- Hydrology and hydrodynamics
- Geospatial tools

- Remote sensing
- Future considerations for ecosystem restoration.

CVA's Community Conservation for the Far Eastern Curlew project hosted 5 workshops to bring together site managers, citizen scientists and non-government organisations to share information and reports on population trends produced by BirdLife Australia using Shorebird 2020 survey data, with the goal to improve site manager training and improve wetland management practices. See: <https://www.eaaflyway.net/far-eastern-curlew-conservation-project-update/>

In 2020, COVID-19 travel restrictions has precluded national and international knowledge sharing. The Banrock Station Ramsar site managers for example, were to present to the 2020 International Society of Limnology Conference in Korea, and which may still occur in 2021.

19.4 Have you (AA) used your previous Ramsar National Reports in monitoring implementation of the Convention? {4.3.1} KRA 4.3.ii

A=Yes

19.4 Additional information

If 'Yes', please indicate how the Reports have been used for monitoring

> Previous National reports are used to monitor trends and identify gaps in implementation to be addressed as priorities by the Ramsar Administrative Authority and partners. The Reports are publicly available for all stakeholders online. See: <https://www.environment.gov.au/water/wetlands/publications>

Section 5: Optional annex to enable Contracting Parties to provide additional voluntary information on designated Wetlands of International Importance (Ramsar Sites)

Guidance for filling in this section

1. Contracting Parties can provide additional information specific to any or all of their designated Ramsar Sites.
2. The only indicator questions included in this section are those from Section 3 of the COP14 NRF which directly concern Ramsar Sites.
3. In some cases, to make them meaningful in the context of reporting on each Ramsar Site separately, some of these indicator questions and/or their answer options have been adjusted from their formulation in Section 3 of the COP14 NRF.
4. Please include information on only one site in each row. In the appropriate columns please add the name and official site number (from the Ramsar Sites Information Service).
5. For each 'indicator question', please select one answer from the legend.
6. A final column of this Annex is provided as a 'free text' box for the inclusion of any additional information concerning the Ramsar Site.

A final column of this Annex is provided as a 'free text' box for the inclusion of any additional information concerning the Ramsar Site.

Australia

Apsley Marshes (255)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpipwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Ashmore Reef Commonwealth Marine Reserve (1220)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> The site is in the North-west Marine Parks Network. The 2018 Management Plan 2018 is available at:
<https://parksaustralia.gov.au/marine/parks/north-west/>

Banrock Station Wetland Complex (1221)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

https://www.environment.sa.gov.au/managing-natural-resources/wetlands/Banrock_Station_wetland_complex
For the Banrock Station wetland centre, see: <http://www.banrockstation.com.au/our-centre/centre-wetland-centre/>

Barmah Forest (262)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

The Barmah Strategic Action plan 2020-2023 is available at: <https://www.parks.vic.gov.au/projects/barmah-strategic-action-plan>

Becher Point Wetlands (1048)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Blue Lake (800)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/blue-lake>

Bool and Hacks Lagoons (322)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

D=Planned

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

https://www.environment.sa.gov.au/managing-natural-resources/wetlands/Bool_and_Hacks_Lagoons_Ramsar_site

Bowling Green Bay (632)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ramsar-wetland-bowling-green-bay/>

The Ramsar Management Advisory Group (RMAG) was established in 2020 to oversee site management.

Cape Barren Island, east coast lagoons (256)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

Z=No Management Plan

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

Z=No Management Plan

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> A draft management plan has been developed for this site but has not yet been published.

Cobourg Peninsula (1)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> Information about the joint management of Cobourg is available at:

<https://www.environment.gov.au/water/wetlands/coburg-peninsula-indigenous-australians>

Coongie Lakes (376)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

https://www.environment.sa.gov.au/managing-natural-resources/wetlands/Coongie_Lakes

Coral Sea Reserves (1222)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> The site is in the Coral Sea Marine Park. The 2018 Management Plan is available at:
<https://parksaustralia.gov.au/marine/parks/coral-sea/plans/>

Corner Inlet (261)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see: <https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>
For the Catchment Management Authority, see:
<https://www.wgcm.vic.gov.au/news/latest-news/corner-inlet-a-ramsar-site-right-in-our-backyard>

Currawinya Lakes (791)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

D=Planned

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ramsar-wetland-currawinya-lakes/>

Edithvale-Seaford Wetlands (1096)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

C=Partially

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> See: <https://www.melbournewater.com.au/water-data-and-education/water-facts-and-history/know-your-rivers-and-creeks/edithvale-seaford>

Eighty-mile Beach (480)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Elizabeth and Middleton Reefs Marine National Nature Reserve (1223)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

B=No

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> The site is part of Lord Howe Marine Park in the Temperate East Marine Parks Network. The 2018

Management Plan is available at: <https://parksaustralia.gov.au/marine/parks/temperate-east/lord-howe/>

Fivebough and Tuckerbil Swamps (1224)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see <https://www.fiveboughwetlands.org.au/>

Flood Plain Lower Ringarooma River (257)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information on the Ringarooma Ramsar project see:
<https://nrmnorth.org.au/biodiversity/ringarooma-ramsar-project/>

Forrestdale and Thomsons Lakes (481)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Ginini Flats Subalpine Bog Complex (793)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.act.gov.au/nature-conservation/conservation-and-ecological-communities/ginini-flats-wetland-complex-ramsar-site>

Gippsland Lakes (269)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For the Catchment Management Authority, see:

<https://egcma.com.au/what-we-do/gippsland-lakes/>

Glenelg Estuary and Discovery Bay Ramsar Site (2344)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For the Catchment Management Authority, see:

<https://www.ghcma.vic.gov.au/projects/current-projects/glenelg-estuary-and-discovery-bay-glenelg-ramsar>

Great Sandy Strait (992)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

D=Planned

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ramsar-wetland-great-sandy-strait/>

Gunbower Forest (263)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For the Catchment Management Authority, see:

<http://www.nccma.vic.gov.au/projects/rivers-and-wetlands#node-125>

Gwydir Wetlands: Gingham and Lower Gwydir Watercourses (993)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

B=No

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/gwydir-wetlands>

Hattah-Kulkyne Lakes (264)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For the Catchment Management Authority, see:

<https://www.malleecma.com.au/>

Hosnie's Spring (512)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through

existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Christmas Island National Park, see:

<https://parksaustralia.gov.au/christmas/>

Hunter Estuary Wetlands (287)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/hunter-estuary-wetlands>

Interlaken Lakeside Reserve (259)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through

existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpiwwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Jocks Lagoon (258)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpiwwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Kakadu National Park (204)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Kakadu National Park see:

<https://parksaustralia.gov.au/kakadu/>

Kerang Wetlands (265)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

Lake Albacutya (270)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

Lake Gore (1049)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-import>

Lake Pinaroo (799)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/lake-pinaroo-fort-grey-basin>

Lake Warden system (485)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-import>

Lakes Argyle and Kununurra (478)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

Z=No Management Plan

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-import>

Lavinia Nature Reserve (253)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpiptwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Little Llangothlin Nature Reserve (798)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/little-llangothlin-nature-reserve>

Little Waterhouse Lake (260)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpiwwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Logan Lagoon (252)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpipwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Macquarie Marshes (337)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/macquarie-marshes>

Moreton Bay (631)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ramsar-wetland-moreton-bay/>

Moulting Lagoon (251)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpipwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Muir-Byenup System (1050)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Myall Lakes (994)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/myall-lakes>

Narran Lake Nature Reserve (995)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see: <https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/narran-lake-nature-reserve>

NSW Central Murray State Forests (1291)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/nsw-central-murray-forests>

Ord River Floodplain (477)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Paroo River Wetlands (1716)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/paroo-river-wetlands>

Peel-Yalgorup system (482)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Piccaninnie Ponds Karst Wetlands (2136)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.sa.gov.au/managing-natural-resources/wetlands/piccaninnie-ponds>

Pittwater-Orielton Lagoon (254)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Tasmanian Ramsar sites see:

<https://dpiwwe.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/ramsar-wetlands>

Port Phillip Bay & Bellarine Peninsula (266)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For information about the Western Treatment Plant see: <https://www.melbournewater.com.au/water-data-and-education/learning-resources/water-and-sewage-treatment-plants/western-treatment>

Pulu Keeling National Park (797)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

B=No

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Pulu Keeling National Park see:

<https://www.environment.gov.au/topics/national-parks/pulu-keeling-national-park>

Riverland (377)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

https://www.environment.sa.gov.au/managing-natural-resources/wetlands/Riverland_Ramsar_site

Roebuck Bay (479)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

For information about Roebuck Bay Marine Park, see:

<https://parksaustralia.gov.au/marine/parks/north-west/roebuck/>

Shoalwater and Corio Bays Area (792)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ramsar-wetland-shoalwater-and-corio-bays-area/>

The Coorong, Lake Alexandrina & Albert Wetland (321)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

https://www.environment.sa.gov.au/topics/water/water-and-the-environment/wetlands/Coorong_and_Lakes_Alexandrina_and_Albert_wetland_Ramsar_site

The Dales, Christmas Island (1225)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

B=No

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For information about Christmas Island National Park see:

<https://parksaustralia.gov.au/christmas/discover/highlights/the-dales/>

Toolibin Lake (483)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Towra Point (286)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/towra-point>

Vasse-Wonnerup System (484)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.dpaw.wa.gov.au/management/wetlands/wetlands-of-national-and-international-importance>

Western District Lakes (268)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

C=Partially

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

Western Port (267)

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (i.e. sites with either a formal management plan or management via other relevant means where they exist e.g through existing actions for appropriate wetland management)? {1.6.2} KRA 1.6.ii

A=Yes

5.7 Has a cross-sectoral site management committee been established for the site?

A=Yes

11.1 Has an assessment been made of the ecosystem benefits/services provided by the Ramsar Site?

A=Yes

11.3 Have socio-economic values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

11.4 Have cultural values of wetlands been included in the management planning for the Ramsar Site?

A=Yes

16.3a Is stakeholder participation in decision-making promoted, especially with local stakeholder involvement in the management of the Ramsar Site?

A=Yes

16.6a Have communication mechanisms been established to share information between the Ramsar Administrative Authority and the Ramsar Site manager(s)?

A=Yes

Any additional comments/information about the site

> For site information see:

<https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands>

For information about the Western Port biosphere reserve see:

<https://www.biosphere.org.au/>