



Australia’s Ramsar Implementation Plan 2016-2018

(Implementation Plan for First Triennium of Ramsar Strategic Plan 2016-2024)

REPORT AGAINST INDICATORS

This Report assesses progress against indicators in [Australia’s Ramsar Implementation Plan 2016-2018](#), in contributing to the Goals and Targets of the Ramsar Strategic Plan.

Goals and Targets from Ramsar Strategic Plan 2016 - 2024	Indicators	Status as at December 2018 or over period 2016 to 2018
Goal 1: Addressing the drivers of wetland loss and degradation	<i>(consistent with Ramsar indicators, National Report Q and SDGs where possible)</i>	
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	Changes in wetland extent (where available) Change in wetland condition (where available)	<p>Note: It is difficult to separate effects of drought and effects of human interference on wetland extent, with monitoring generally measuring hydrological conditions (extent of open water).</p> <p>During the triennium, in Southern Australia, the average Autumn rainfall for 2016 was 1.73 mm above average, in 2017 it was 4.63 mm below average, and 2018 was 56.54 mm below average (with severe drought conditions in large areas of central and southern Qld, NSW, Vic, eastern SA and SW WA).</p> <p>http://www.bom.gov.au/climate/change/#tabs=Tracker&tracker=timeseries&tQ=graph%3Drranom%26area%3Dsaus%26season%3D0305%26ave_yr%3D0</p> <p>2018 Eastern Australian Waterbird Survey – based on aerial surveys of 2000 wetlands in Oct 2018. Most of SE Australia was exceptionally dry, with large areas in drought, and with very warm temperatures (second highest maximum temperatures on record over year for NSW)</p> <p>2017 and 2018 Wetland Area Indexes were well below the long term average, with many wetlands dry</p> <p>https://www.ecosystem.unsw.edu.au/content/rivers-and-wetlands/waterbirds/eastern-australian-waterbird-survey</p> <p>Mangroves – TERN, Queensland Govt and National Environmental Science Program are mapping extent of dieback along Gulf of Carpentaria and Cape Your Peninsula. In 2016 – 10,000 hectares of mangroves along</p>

	<p>Proportion of Ramsar sites for which ecosystem services assessed (ie ECDs prepared)</p>	<p>Gulf of Carpentaria was lost. Cause of this loss is under investigation. https://www.tern.org.au/Newsletter-2018-Jun-Mangrove-Data-pg32480.html</p> <p>Seagrass in GBR – 2016-17 -abundance generally poor but increasing (except in Burdekin – good) , condition score unchanged since 2015-16 at poor. http://www.seagrasswatch.org/Info_centre/Publications/2018/Seagrass MMP 2016-17.pdf</p> <p>South Australia - Environmental trend and condition report card 2018 – Wetland cover is stable in SA (some regions showing gains and some losses). Cover has declined in 3 wetter regions (loss of 888,400 ha in 3 NRM regions, due to less rainfall and intensified land and water use). The condition of aquatic ecosystems is fair and improving, with 20% of ecosystems rated as 'good' to 'very good', 39% rated 'fair' and 41% rated 'poor' to 'very poor'. The proportion of sites rated 'poor' to 'very poor' is highest in the Eyre Peninsula and South East regions. https://data.environment.sa.gov.au/Content/Publications/DEW%20trend%20and%20condition%20report%20card%20summary.pdf and 2018 SoE - https://www.epa.sa.gov.au/soe-2018/inland-waters/key-messages</p> <p>Queensland - has updated wetland mapping to 2017 extent and this will be released in 2019. Analysis will be completed and provided on-line to show extent changes from pre-European and then in stages from 2001, 2005, 2009, 2013 to 2017. https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/</p> <p>In 2017-18 the Queensland Government established permanent monitoring transects in far north Queensland to assess mangrove dieback and monitor recovery.</p> <p>Victoria - has commenced a project using Landsat imagery to detect inundation from 1987 to 2017. From this, will have frequency and timing of inundation for Victorian wetlands. Providing funding can be secured will continue on an annual basis to monitor changes in wetland water regime and extent.</p> <p>Ecological Character Descriptions (ECD) for 58 (of 66) Australian Ramsar sites have now been finalised and endorsed. All endorsed ECDs are available on the DoEE wetlands publications webpage. http://www.environment.gov.au/water/wetlands/publications#ecds</p> <p>Ramsar sites that do not yet have an endorsed ECD are:</p> <ul style="list-style-type: none"> • Gwydir Wetlands, NSW • Moreton Bay, Qld (near completion) • Bowling Green Bay, Qld • Currawinya Lakes, Qld (near completion)
--	--	--

	<p>Number of development proposals where measures have been taken to protect Ramsar values</p> <p>Policy, programs and legislation where wetlands are relevant is documented.</p>	<ul style="list-style-type: none"> • Great Sandy Strait, Qld (underway) • Bool and Hacks Lagoon, SA • Port Phillip Bay (Western Shoreline) and Bellarine Peninsula, Vic (ECD currently being finalised by Vic) • Becher Point Wetlands, WA. <p>All of these sites have either a draft ECD, or have a pre-Framework ECD.</p> <p>South Australia is developing a revised Ecological Character Description for the Coorong, and Lakes Alexandrina and Albert Wetlands, following the Article 3.2 notification (in 2006) and subsequent recovery actions. This ECD is intended to set a new baseline for the site (as of 2015) and is expected to be completed by 2019.</p> <p>During 2015-16, 2016-17 and 2017-18 financial years, decisions were made on 8 proposals under the EPBC Act, where Ramsar was a controlling provision and where conditions were imposed. Specific conditions were applied to protect Ramsar values for 5 developments:</p> <ul style="list-style-type: none"> • Flying operations at RAAF Base Williamtown, NSW (Hunter Estuary)– aircraft noise monitoring and mitigation; fauna management plan • Coal Export Terminal at Kooragang Island (Hunter Estuary) – offset habitat for Green and Golden Bell Frog, Australasian Bittern and migratory birds; monitoring and recovery actions for Bell Frog; plan to manage impacts of dredging and construction activity. • Ecological thinning trial of River Red Gums (NSW Central Murray Forests) – Superb Parrot protection; reporting of unplanned impacts; monitoring reports. • Mineral sands operation (Vasse-Wonnerup) – protect and manage area of at least 35 hectares; monitor and maintain records of groundwater volumes extracted • Urban Village, Redlands (Moreton Bay) – no decline in Eastern Curlew density, habitat quality and extent; Eastern Curlew Management Plan; Environmental Management Plan; Water Quality Management Plan including monitoring and response measures. • In July 2018, the Reedy Lake Bypass (Kerang Lakes) was approved with conditions – weed management measures, environmental management plan (covering salinity, reduced oxygen and acidity, flora and fauna), fish monitoring <p>Relevant policy, programs and legislation are listed in ECDs for most sites.</p> <p>Queensland – maintains an up-to-date list of legislation, policies and programs to enable wetlands to be addressed in each: https://wetlandinfo.des.qld.gov.au/wetlands/management/legislation-update/</p>
--	---	---

	<p>Reef Water Quality Protection Plan indicators (relevant to ability to fulfil functions)</p>	<ul style="list-style-type: none"> • Coorong – in 2016-17, to improve water conditions, aquatic vegetation and native fish movement; in 2017-18 to support migration of native fish; in late 2017 to improve water quality and breeding of Black Bream; March and May 2018, to provide feeding habitat for waterbirds. • Macquarie Marshes – June to Dec 2016 – to support nesting and foraging habitat for colonial waterbird breeding; in Jan-Feb 2017 to support completion of naturally triggered colonial waterbird breeding event; in 2016-17 to assist dispersal of native fish, including silver perch; in 2017-18 to support feeding habitat for migratory and resident birds. • Gunbower – in 2016-17 to maintain populations of threatened fish including Murray Cod, in 2017-18 to support fish movement and habitat condition. • Hattah Lakes – in winter/spring 2017 to improve health of Black Box woodlands. <p>Source: CEWO Annual Reports</p> <p>Reef Water Quality Indicators (2018) – results from Reef Water Quality Report Card 2017 and 2018</p> <ul style="list-style-type: none"> • The rate of loss of natural wetlands slowed between 2013 and 2017 with a recorded loss of 556 hectares of all natural wetlands over this period. • The overall state of freshwater floodplain wetlands in the Great Barrier Reef catchments remained moderate. The state of wetlands within conservation areas was good, compared to the moderate state of wetlands surrounded by non-conservation land uses. <p>https://www.reefplan.qld.gov.au/tracking-progress/reef-report-card</p> <p>Specific Regions:</p> <p>Fitzroy – Ecosystem Health Assessment https://riverhealth.org.au/report_card/ehi/ Wet Tropics Report Card 2019 https://wettropicswaterways.org.au/wet-tropics-report-card/ Mackay Whitsunday waterway health https://healthyriverstoreef.org.au/report-card-results/ Gladstone Harbour http://ghhp.org.au/ Dry Tropics https://drytropicshealthywaters.org/pilot-report-card</p>
<p>Target 3: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands</p>	<p>Number of programs/projects and level of investment in key wetland programs</p>	<p>National Landcare Program Stage 1 – Review of Program (2017) found that:</p> <ul style="list-style-type: none"> • Reef Program (to Dec 2016) - Through 832 projects, the Reef Program has supported more than 700 farmers to improve fertiliser management and stabilise erosion on more than 710,000 ha. This has led to a significant reduction in the nutrients and sediments flowing into the Reef from these paddocks, with benefits to many Reef catchment wetlands. • 25th Anniversary Landcare Grants projects – 36 projects contributed to improved soil condition or

		<p>ground cover, including more than 50 property management plans; 700 farming or fisher entities participating in projects, including through more than 150 events to raise awareness of management practice techniques; and 600,000 hectares of management practice change with 30 farmers or fishers, delivering benefits to biodiversity and wetlands.</p> <ul style="list-style-type: none"> • The review reported that “Awareness of the importance of wetlands on agricultural land has increased; along with the percentage of farmers reporting they protect wetlands for conservation purposes. This increase in reporting of wetlands may have been facilitated by the reappearance of many ephemeral wetlands at the end of a long period of drought.” <p>http://www.nrm.gov.au/publications/national-landcare-program-review-report</p> <p>Regional Land Partnerships – Ramsar projects - to maintain the ecological character and reduce threats to Ecological character of Ramsar sites. Projects announced in 2018 and some commenced. Investment of \$49.7 million over 5 years to support projects which will improve the environmental values of 24 Ramsar-listed wetlands.</p> <p>http://www.nrm.gov.au/news/2018/11/30/regional-land-partnerships-investment-announced</p> <p>Reef 2050 – Investment Framework – In 2017, the fifth phase of the Reef Trust was announced, comprising two major partnership projects. The first is a \$5 million fund matching arrangement with Greening Australia for their Reef Aid program, which has been combined with earlier investment of \$2 million from Reef Trust Phase III, to restore priority wetlands along coastal areas of the Great Barrier Reef (GBR). The Reef Aid program aims to see 10,000 ha of wetlands restored by 2030. The second is the Enhanced Efficiency Fertiliser (EEF) project which is providing \$4.5 million, with an estimated \$12.8 million co-investment by the sugar-cane industry, to improve nutrient run-off.</p> <p>In Jan 2018 announcement of \$58 m, and in April 2018 an additional \$42.7 m for GBRMPA as well as \$443.3 million for Great Barrier Reef Foundation to tackle risks to reef and seek co-funding Some of this funding will benefit coastal and near shore wetlands, including a citizen science project designed to protect wetlands for the future by supporting teacher training, student engagement and curriculum materials. The project will deliver a framework for a standardised school-based Mangrove Watch monitoring program to inform local mangrove management and conservation.</p> <p>http://www.environment.gov.au/marine/gbr/publications/reef-2050-investment-framework</p>
--	--	---

		<p>https://www.greeningaustralia.org.au/programs/reef-aid/ https://www.barrierreef.org/science-with-impact/reef-partnership</p> <p>Reef protection and water quality in GBR - The Queensland Government provided \$35 m annually for reef water quality action, and in 2015 provided an additional \$90m over 5 years. It also announced funding of \$13.8 m over 4 years to support industries to improve water quality. GBR catchment, coastal and nearshore wetlands have benefited from some of this funding. https://www.qld.gov.au/environment/coasts-waterways/reef/reef-program</p> <p>Conservation Volunteers Australia - Revive our Wetlands – in 2017-18 CVA teams engaged the community in 719 project days of community conservation at 55 wetland sites in 36 locations. The total value of investment in partnership projects was \$1.18 m. https://conservationvolunteers.com.au/news/2017/02/launch-revive-our-wetlands-program/ and https://conservationvolunteers.com.au/news/2018/06/revive-wetlands-annual-report/</p> <p>Queensland Wetlands Guides and on-ground works Queensland established and maintains a list of on-ground wetlands best practice guides https://wetlandinfo.des.qld.gov.au/wetlands/management/wetland-management/ and maintains a list of on-ground works being undertaken in the state https://wetlandinfo.des.qld.gov.au/wetlands/resources/tools/wetland-project/index.jsp</p> <p>Queensland Land Restoration Fund - During the reporting period, the Queensland Government announced a \$500 million Land Restoration Fund, aimed at leveraging emerging carbon markets to supply high quality offsets and deliver important environmental co-benefits. The LRF will also support research, including working towards methods to generate Australian carbon credit units from projects that restore or protect coastal wetlands (blue carbon).</p> <p>Pest and Weed Drought Funding: In NSW, 14 projects are targeting pest and weed management to build drought resilience, including projects with benefits to wetlands https://www.ils.nsw.gov.au/biosecurity/2018-19-weed-and-pest-animal-drought-project</p>
<p>Target 4: Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled</p>	<p>Publication of documentation on relevant invasive species and control strategies</p>	<p>Australian Weeds Strategy 2017-2027 finalised. http://www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/review-aus-pest-animal-weed-strategy/aus-weeds-strategy Australian Pest Animal Strategy 2017-2027 finalised.</p>

<p>or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.</p>		<p>http://www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/review-aus-pest-animal-weed-strategy/aus-pest-animal-strategy</p> <p>Relevant Threat Abatement Plans published</p> <ul style="list-style-type: none"> • 2016 – Chytrid fungus • 2017 – Feral pigs • 2018 – Marine debris, Incidental bycatch <p>http://www.environment.gov.au/biodiversity/invasive-species/feral-animals-australia</p> <p>National Wildlife Biosecurity Guidelines published in Sep 2018 – national protocols developed to document best practice biosecurity measures for those working with wildlife.</p> <p>https://www.wildlifehealthaustralia.com.au/AboutUs/News/NationalWildlifeBiosecurityGuidelinesreleased.aspx</p> <p>State/territory guidance on weed control, including of wetland weeds eg</p> <ul style="list-style-type: none"> • NSW WeedWise https://weeds.dpi.nsw.gov.au/ ; • Qld Wetland Weeds https://wetlandinfo.des.qld.gov.au/wetlands/ecology/components/flora/wetland-weeds.html ; • Vic Managing invasive species in wetlands https://www.ari.vic.gov.au/research/pests-weeds-and-overabundant-species/managing-invasive-species-in-wetlands <p>NSW also has an Invasive Species Plan https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/about-pest-animals-and-weeds</p> <p>NSW NPWS has regional pest management strategies. https://www.dpi.nsw.gov.au/biosecurity/weeds/strategy/strategies/nsw-invasive-species-plan-2018-2021</p> <p>Victoria: training for management invasive fauna for wetlands held every second year. Produced flyers for rabbit, pig, fox and carp impacts to wetlands and two reports on the impacts of priority weed species in wetlands, and advice on management.</p>
--	--	---

<p>Goal 2: Effectively conserving and managing the Ramsar Site network</p>		
<p>Target 5: The ecological character of Ramsar sites is maintained or restored, through effective planning and integrated management.</p>	<p>Number of ECDs and updated RISs for Ramsar sites</p>	<p>Ecological Character Descriptions – see Target 1 Ramsar Information Sheets – Over the last 3 years, the following RIS updates have been finalised:</p> <ul style="list-style-type: none"> • 2016 – 0 • 2017 – 1 (Ord River Floodplain) • 2018 – 3 (Glenelg, Shoalwater and Corio Bays, Ginini Flats) <p>At Dec 2018, 23 RISs were up to date, 28 updates were underway, and 3 were with the Ramsar Secretariat.</p>

	<p>Number of Ramsar Management Plans developed and reviewed</p>	<p>Ramsar Management Plans – During 2016-2018, the following Plans were prepared/updated:</p> <ul style="list-style-type: none"> • Kakadu National Park Management Plan 2016-2026, NT (2016) http://www.environment.gov.au/resource/kakadu-national-park-management-plan-2016-2026 • Toolibin Lake Catchment Recovery Plan 2015-2035, WA (2017) https://www.dpaw.wa.gov.au/images/documents/parks/management-plans/20170224_toolibin_lake_recovery_plan_wb.pdf • Gippsland Lakes Ramsar Site Management Plan, Vic (2016) https://www.loveourlakes.net.au/gippsland-lakes-ramsar-site-management-plan/ • Hunter Estuary Coastal Zone Management Plan (2017), NSW https://www.newcastle.nsw.gov.au/getmedia/15fc6ab0-b8b8-49e5-b5c2-73bf600bce49/Hunter-Estuary-Coastal-Zone-Management-Plan-Revised-December-2017.aspx • Ginini Flats Ramsar Site Management Plan, ACT (2017) https://www.environment.act.gov.au/cpr/conservation_and_ecological_communities/ginini-flats-wetland-complex-ramsar-site • Glenelg Estuary and Discovery Bay Ramsar Site Management Plan, Vic (2017) https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands • Western Port Ramsar Site Management Plan, Vic (2017) https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands • Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan, Vic (2018) https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands/significant-wetlands • In 2018, the Fitzroy Basin Association (FBA) in collaboration with Wetlands team began developing a “Health Assessment and Monitoring Tool” for the Shoalwater and Corio Bays Area Ramsar site. A similar product is planned for the Great Sand Strait Ramsar site and will be developed in collaboration with Burnett Mary Regional Group (BMRG). <p>NSW commenced work on Plans of Management for Parks sites.</p> <p>In 2016, Queensland launched a contemporary Values Based Management Framework (VBMF) management process for Queensland’s national parks and marine parks. Queensland is in the process of developing new management plans for the parks associated with the</p>
--	---	---

		Ramsar site. These plans consider biodiversity values, which includes shorebird conservation and management and also incorporated wetlands principles.
Target 6: There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network, in particular under-represented types of wetlands including in under-represented ecoregions and Transboundary Sites.	<p>Number and area of new sites designated (including specific types of wetlands)</p> <p>Changes in area of existing sites (boundary extensions)</p> <p>Changes in IUCN status of areas within Ramsar sites (eg area of new reserves declared)</p>	<p>New sites - During 2016-2018, one new Ramsar site was listed – the Glenelg Estuary and Discovery Bay Ramsar site, Victoria. Includes freshwater wetlands, an estuary and beach/dune systems. The site covers 22,289 hectares.</p> <p>Boundary changes – in 2016, a further area of 3104 hectares was added to the Narran Lake Nature Reserve Ramsar site, NSW, taking it to 8447 hectares (aligning with the boundary of the Narran Lake Nature Reserve boundary).</p> <p>Changes in IUCN status – none identified.</p>
Target 7: Sites that are at risk of change of ecological character have threats addressed.	<p>Number of Article 3.2 notifications, formal assessments, response strategies, and sites removed from Article 3.2 list</p>	<p>One notification during 2016-2018 (Towra Point). One new baseline being established (The Coorong) No response strategies completed – 2 being implemented. No sites removed from list. The following assessments of potential change in ecological character were undertaken:</p> <ul style="list-style-type: none"> • Towra Point Nature Reserve, NSW – an assessment was undertaken, which found a change in ecological character relating to reductions in shorebird diversity and abundance and in breeding success of the regionally endangered migratory Little Tern, as well as decline in salt marsh extent. The change was notified to the Ramsar Secretariat on 17 August 2017. A response strategy to address these issues is under development by the site manager and the NSW Government. • Hunter Estuary, NSW - The NSW Government, which manages the site, advised the Ramsar Administrative Authority of a potential change in the ecological character of the site, possibly resulting from chemical contamination. Consultants have been engaged to undertake an independent investigation to determine whether the site has changed or is likely to change in character as a result of chemical contamination. • Gippsland Lakes, Vic – In August 2017, the Victorian Government advised the Administrative Authority of a potential change in ecological character due to increasing salinity. A formal assessment is currently being prepared. • Barmah Forest, Vic –In 2017, the Victorian Government advised the Administrative Authority of a potential

		<p>change due to a decline in the extent of moira grass. A formal assessment is currently being prepared.</p> <p>Progress on previous Article 3.2 notifications is as follows:</p> <ul style="list-style-type: none"> • Gwydir Wetlands (notified 23 September 2003) - Commonwealth environmental water was provided to improve and maintain the condition of the core wetland vegetation and to provide conditions suitable for waterbirds and frogs to complete their breeding cycles. The site has responded well to environmental watering and the overall condition of the site has improved. The Article 3.2 notification will be reviewed in 2019. • Coorong, Lakes Alexandrina and Albert Wetland (notified 13 December 2006) - The Australian Government committed \$169.9 million 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, which formed the response strategy for the site. A revised ECD is being prepared to document the condition of the site at 2015, providing the basis for future management. The ECD is expected to be finalised by 2019. The Article 3.2 notification will be reviewed once the ECD is finalised in 2019. • Macquarie Marshes (notified 17 July 2009) - A response strategy for the site was prepared in 2013 and recovery actions implemented. In 2017, the Australian Government commissioned a technical review of the Macquarie Marshes to report on monitoring activity, environmental watering outcomes and scientific research. The review was completed in 2018 and will inform the future management of the site. The Article 3.2 notification will be reviewed in early 2019.
--	--	--

Goal 3: Wisely using all wetlands	Indicators	Comments
<p>Target 8: National wetland inventories have been initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands.</p>	<p>Progress with wetland classification, mapping and assessment</p>	<p>No national inventory of wetlands available. Information and mapping of the Ramsar estate available in Australian Wetlands Database at http://www.environment.gov.au/cgi-bin/wetlands/alphablist.pl and on Protected Matters Search Tool at http://www.environment.gov.au/epbc/protected-matters-search-tool</p> <p>Release in 2017 of final module of Aquatic Ecosystems Toolkit, Module 5 – Integrated Ecosystem Condition Assessment (IECA) – to enable consistency in assessing and reporting on condition of aquatic ecosystems http://www.environment.gov.au/water/publications/aquatic-ecosystems-toolkit-module-5-integrated-ecosystem-condition-assessment</p>

	Results of state-based or ecosystem-based assessments of extent (see also Target 1)	<p>National mapping of particular wetland habitats is being undertaken. For example, TERN has worked with Geoscience Australia (GA) to make available maps of mangrove extent through Digital Earth Australia's Open Data Cube (ODC). Time-series data showing mangrove extent and canopy cover at a 25m resolution from 1987 to 2016 are now openly available through both the data cube and TERN.</p> <p>Victorian wetland classification framework updated in 2014 (based on ANAE framework), inventory updated in 2017, inventory edit tool developed in 2017 (allows for validation of inventory attributes by wetland experts).</p> <p>Progress on wetland mapping by states/territories, eg:</p> <ul style="list-style-type: none"> • Qld - updated wetland mapping to 2017 extent and this will be released in 2019.. https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/ • Qld - inventory, assessment and monitoring information and tools developed https://wetlandinfo.des.qld.gov.au/wetlands/assessment/ • Qld - developed an Intertidal and Subtidal Ecosystem Classification Scheme. The mapping methodology has been finalised and a mapping product has been developed for central Queensland coast and will be released in 2019 https://wetlandinfo.des.qld.gov.au/wetlands/what-are-wetlands/definitions-classification/classification-systems-background/intertidal-subtidal/ • WA – mapping at various scales across state https://www.dpaw.wa.gov.au/management/wetlands/mapping-and-monitoring • NSW – wetland inventory project - https://www.environment.nsw.gov.au/topics/water/wetlands/nsw-wetland-inventory • Victoria - Wetland Inventory, updated in 2017 https://www.data.vic.gov.au/data/dataset/victorian-wetland-inventory-current and Index of Wetland Condition https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands
Target 9: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, <i>inter alia</i> , within a river basin or along a coastal zone.	See Target 2	See also reporting on the Murray-Darling Basin and Great Barrier Reef.
Target 10: The traditional knowledge, innovations and practices of indigenous peoples and local	Number of wetland related research	Under the National Environmental Science Program (NESP), all Hubs were required to develop an Indigenous Engagement and Participation Strategy, to ensure effective integration of Indigenous aspirations and outcomes in all

<p>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 peoples and local communities at all relevant levels</p>	<p>projects that engage Indigenous people</p>	<p>projects. A variety of relevant wetland projects have been undertaken, including:</p> <ul style="list-style-type: none"> • NESP Threatened Species Recovery Hub – Indigenous action in threatened species research and management • NESP Northern Australia Hub – Indigenous NRM in Kakadu National Park, Indigenous water needs for the Fitzroy River, Knowledge brokering for Indigenous land management, Lessons from Top End Indigenous fire management, Multiple benefits of Indigenous land and sea management programs, Research priorities for Indigenous Protected Areas across northern Australia • Clean Air and Urban Landscapes Hub – Flipping the table: towards an Indigenous-led urban research agenda • NESP Tropical Water Quality Hub – Indigenous capacity building and increased participation in management of Queensland sea country, Indigenous coral reef tourism, http://www.environment.gov.au/science/nesp • CSIRO Indigenous Futures – projects on Improving water quality and livelihoods, Managing feral animals, Protocols for Indigenous fire management, Managing threatened species and their habitats, Indigenous water values • Over 2018 Indigenous rangers under the Indigenous Land and Sea Rangers Program (DES) undertook work on migratory shorebird conservation within the Gulf of Carpentaria. • Shorebird conservation work in the Gulf of Carpentaria was presented at the World Science Festival Brisbane on the 24 March 2018
<p>Target 11: Wetland functions, services and benefits are widely demonstrated, documented and disseminated.</p>	<p>See Target 5</p> <p>Reporting of wetland research/monitoring outcomes</p>	<p><i>Wetlands Australia</i> magazine was widely promoted and disseminated, highlighting research and monitoring of wetlands and their values. http://www.environment.gov.au/water/wetlands/publications/wetlands-australia</p> <p>Celebrating Australia’s Wetland Science was published in 2018, promoting wetland research http://www.environment.gov.au/water/wetlands/publications/celebrating-australias-wetland-science</p> <p>World Wetlands Day was used each year to promote the services and benefits of wetlands (particularly for disaster risk reduction, improving urban quality and adapting to/mitigating climate change).</p> <p><i>WetlandLink</i> newsletter by Conservation Volunteers Australia promoted wetlands and their conservation, and Birdlife Australia’s e-news promoted protection of waterbirds.</p> <p>Significant wetland information and resources are available through <i>WetlandInfo</i>. Over 35 Catchment Stories are available through WetlandInfo.</p>

		<p>Victoria: reports from wetland research and monitoring are provided here: https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/wetlands</p>
<p>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.</p>	<p>Number of wetland restoration and rehabilitation programs/projects</p>	<p>See Target 3.</p> <p>CVA – Revive our Wetlands - http://www.wetlandcare.com.au/</p> <p>Reef 2050 – Catchment Restoration https://www.reefplan.qld.gov.au/tracking-progress/reef-report-card</p> <p>National Landcare Program Regional Land Partnerships – Regional organisations implementing projects to maintain and reduce threats to the ecological character of Ramsar sites.</p> <p>Case studies of building resilience of wetlands to natural hazards – Wetlands Australia Feb 2017 http://www.environment.gov.au/water/wetlands/publications/wetlands-australia/national-wetlands-update-february-2017</p> <p>Case studies of wetlands for climate change adaptation and mitigation – Wetlands Australia Feb 2018 http://www.environment.gov.au/water/wetlands/publications/wetlands-australia/national-wetlands-update-february-2019</p> <p>Through the Queensland Wetland Program, the Department of Agriculture and Fisheries (DAF) partners with regional stakeholders and land managers to implement wetland restoration projects and treatment system trials. DAF is currently supporting trials for denitrifying bioreactors and constructed treatment wetlands.</p> <p>Ongoing maintenance of the wetland project search tool - This tool lists on-ground wetland and wetland related projects from a range of funding programs, stakeholder groups and land managers. It complements the Australian Government on-ground project database and search tool MERIT. See https://wetlandinfo.des.qld.gov.au/wetlands/resources/tools/wetland-project/</p> <p>In 2018, an online treatment systems “tool box” was launched to assist landholders and advisors to select and plan appropriate treatment systems for water quality improvement.</p> <p>Victoria: projects and activities in wetlands are included in regional waterway strategies developed and implemented by catchment management authorities.</p>

		https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/strategies-and-planning
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	See Target 1	

		<p>Australia. Aquatic Conservation: Marine and Freshwater Ecosystems'. In press</p> <ul style="list-style-type: none"> - 'Nitrogen removal by tropical floodplain wetlands through denitrification. Marine and Freshwater Research'. Under review - Adame et al. Carbon and nitrogen sequestration of Melaleuca floodplain wetlands in tropical Australia. Ecosystems'. Under review. <p>In late 2018 a review commenced to update the Assessment Toolbox on WetlandInfo. The toolbox provides a summary of assessment methods.</p>
<p>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.</p>	<p>Progress on development of Oceania Regional Initiative</p> <p>Level of support for EAAFP</p>	<p>Hunter Wetland Centre Australia initiated discussions with the Australian Ramsar Administrative Authority and Oceania regional parties on a Ramsar Regional Centre for Oceania, including at the Oceania Regional Meeting in March 2018 in New Zealand.</p> <p>EAAFP – Australia continued to support the Partnership, sending representatives to Meetings of Partners, and nominating 4 new Flyway sites (SE Gulf of Carpentaria - Nijinda Durlga, Adelaide International Bird Sanctuary and Ashmore Reef in 2016 and Pulu-Keeling NP in 2017). The Australian Government published a book in 2017 highlighting 24 of its Flyway sites.</p> <p>Our involvement has been supported by a number of projects, including:</p> <ul style="list-style-type: none"> • GPS/Argos tracking of several species of migratory birds commenced 2017 and is ongoing. A collaborative effort amongst The Fuller lab, Queensland Wader Study Group and Fudan University. The project will provide detailed information on non-breeding movements and habitat use, migratory routes, and stopover biology. • A project funded by the Northern Australia Environmental Resources Hub of the National Environmental Science Program (NESP), led by Griffith University is examining the food supply of migratory shorebirds, see https://www.nespnorthern.edu.au/2018/05/17/links-between-gulf-rivers-and-food-for-migratory-shorebirds/ • During the reporting period, a project funded by (NESP) led by Griffith University in collaboration with the QWSG, DES and the CLCAC was commenced to determine shorebird densities and diversity in three estuaries and adjacent coastal waters, see https://www.nespnorthern.edu.au/projects/nesp/gulf-shorebird-food-supply/
<p>Target 16: Wetlands conservation and wise use are mainstreamed through communication, capacity</p>	<p>See CEPA Plan</p>	

development, education, participation and awareness.		
Target 17: Financial and other resources for effectively implementing the 4 th Ramsar Strategic Plan 2016 – 2024 from all sources are made available.	Financial resources provided by Australian Government to support international activities under Ramsar Convention See Targets 3, 12 and 14	Australia paid its annual contributions to the Ramsar Convention for 2016, 2017 and 2018. For the 2016-2018 Triennium, Australia was Vice Chair of the Ramsar Standing Committee and Oceania Regional Representative. Australia nominated a National Focal Point, STRP Focal Point and CEPA Focal Point for the Convention. The Australian and state/territory governments provided funding and other resources for implementation of legislation, policies, research and programs relating to wetlands, to support the 4 th Ramsar Strategic Plan.
Target 18: International cooperation is strengthened at all levels.	Regional initiatives and Support for EAAFP (see Target 15)	
Target 19: Capacity building for implementation of the Convention and the 4 th Ramsar Strategic Plan 2016 – 2024 is enhanced.	See CEPA Plan	