

METADATA STATEMENT	
Acknowledgement	These data were collected for the Commonwealth Environmental Water Office by a large number of organisations, institutions, jurisdictions and other stakeholders working collaboratively on the Long Term Intervention Monitoring Project. We acknowledge the First Nations peoples as the Traditional Owners and Custodians of the lands, waterways and skies of the Murray-Darling Basin. We thank them for their knowledge and science, and respect their continuing connection to culture and Country and the values reflected in these data.
Name of dataset or data source	Long-Term Intervention Monitoring (LTIM) Project data – Ecosystem Diversity
Custodian of the dataset or data source	Shane Brooks (LTIM Data Manager)
Publisher/Agency	Commonwealth Environmental Water Office (CEWO), Department of Climate Change, Energy, the Environment and Water
Description	<p>The CEWO's LTIM Project examined the contribution of Commonwealth environmental water to the environmental objectives of the <i>Basin Plan 2012</i> (Basin Plan) and assisted the CEWO to demonstrate environmental outcomes and adaptively manage the water holdings. Monitoring and evaluation was focused in seven Selected Areas: the Junction of the Warrego and Darling rivers, Gwydir river system, Lachlan river system, Murrumbidgee river system, Edward/Kooley-Wakool river system, Goulburn River and Lower Murray River. These areas will continue to be monitored through the CEWO's Monitoring, Evaluation and Research (MER) Program.</p> <p>Data collected by monitoring at Selected Areas is used to evaluate local outcomes from watering and also contributed to the analysis and evaluation of Basin Plan objectives.</p> <p>The Ecosystem Diversity component of the LTIM Project catalogued the different ecosystem types in the Basin that received Commonwealth environmental water annually and cumulatively over the five-year duration of the project (2014-15 to 2018-19). The evaluation was conducted at a whole-of-basin scale to assess the extent to which water-dependent ecosystem types were supported by Commonwealth environmental water and the contribution of Commonwealth environmental water to Basin Plan biodiversity objectives.</p> <p>Ecosystem types in the Basin are defined using the interim Australian National Aquatic Ecosystems (ANAE) Classification Framework. The ANAE Classification Framework was applied to the best available jurisdictional mapping for Basin wetlands, floodplains and rivers by Brooks et al. (2014)¹ to produce the interim Murray-Darling Basin Aquatic Ecosystem Classification data set. Ecosystem types that received Commonwealth environmental water were identified by intersecting the ANAE mapping with the annual Commonwealth environmental water inundation and LTIM valleys spatial layer. The evaluation was updated retrospectively to include improvements to</p>

¹ Brooks SS, Cottingham P, Butcher R, Hale J (2014) *Interim classification of aquatic ecosystems in the Murray-Darling Basin: Stage 2 report*. Peter Cottingham & Associates report to the Commonwealth Environmental Water Office and Murray-Darling Basin Authority. Canberra, Australia.

	<p>the ANAE mapping that were published during the LTIM Project. The final data sets include these updates.</p> <p>Please refer to the <i>Murray-Darling Basin LTIM Project: 2018-19 Basin-scale evaluation of Commonwealth environmental water – Ecosystem Diversity Report</i> for the detailed method on data used for evaluation.</p>
Data inputs	<p>Data used that contributed to the evaluation of Ecosystem Diversity include:</p> <p><u>The Murray-Darling Basin ANAE data set</u></p> <p><u>Commonwealth environmental water inundation</u> – spatial representation of water extent of Commonwealth environmental water</p> <p><u>LTIM valleys</u> – a spatial layer developed for the LTIM Project that subdivides the Basin into major river valleys maintaining alignment with water accounting in the Basin</p> <p><u>Geofabric v3 River Lines</u> (Bureau of Meteorology)</p>
Quality	<p>In accordance with the LTIM Project Data Standards (link below), the collected data for the Ecosystem Diversity evaluation is of high quality, complete, compatible and in consistent and standardised formats to meet reporting and evaluation needs.</p>
Type	<p>Dataset (excel)</p> <p>Each table contains the total area in hectares, or river length in km, of each ANAE type, the area or length of the subset that intersects the Basin-wide watering strategy managed floodplain, and the area or length that was inundated or influenced by Commonwealth environmental water during each of the 5 years of LTIM.</p>
Version	Final
Time period	2014-2019
Links	<p>CEWO LTIM Data Standard (provided in zip file)</p> <p>Murray-Darling Basin LTIM Project: 2018-19 Basin-scale evaluation of Commonwealth environmental water – Ecosystem Diversity (https://www.dcceew.gov.au/water/cewo/publications/2018-19-basin-scale-evaluation-cew-report-and-appendices)</p> <p>Australian Government Department of Agriculture, Water and the Environment data catalogue (ANAE) - https://www.environment.gov.au/fed/catalog/main/home.page</p>
Contact	cewomonitoring@environment.gov.au
LTIM contributors	<p>The Murray-Darling Freshwater Research Centre, Eco Logical Australia, University of Canberra, Charles Sturt University, University of Melbourne, South Australian Research and Development Institute (SARDI), Griffith University, University of New England, NSW Office of Environment and Heritage, NSW DPI Fishing and Aquaculture, NSW Office of Water, NSW National Parks and Wildlife Services, Western Local Land Services, Australian Floodplain Association, Future North Western Local Land Services, State Water, Cotton Research and Development Court, Gwydir Valley Irrigator reps, Central Tablelands Local Land Services, University of New South Wales, Riverina Local Land Services, CSIRO, Murray Local Land Services, Monash University, Wakool River Association, Edward-Wakool</p>

	<p>Angling Association, Western Murray Land Improvement Group, Goulburn Broken Catchment Management Authority, Victorian Environmental Water Holder, Department of Environment, Land, Water and Planning, Goulburn Murray Water, Arthur Rylah Institute, Centre for Aquatic Pollution Identification and Management, SKM, University of Adelaide, South Australian Department of Environment, Water and Natural Resources, Primary Industries and Regions South Australia, South Australia Water, Murray-Darling Basin Authority.</p>
Suggested citation	<p>CEWO-LTIM (2019) Long-Term Intervention Monitoring (LTIM) Project - Ecosystem Diversity data. Commonwealth Environmental Water Office, Australian Government Department of Climate Change, Energy, the Environment and Water. Sourced on <date sourced>, https://data.gov.au/data/dataset/ltim-project-ecosytem-diversity</p>