



Australian Government

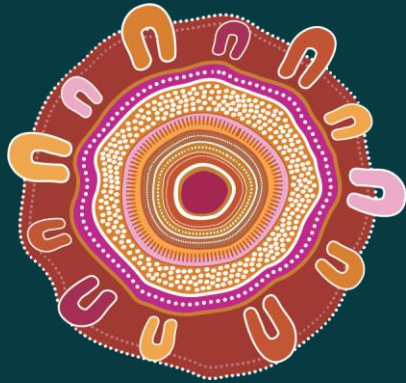
Department of Climate Change, Energy,
the Environment and Water

EIA Environment Information Viewer (EIV) and Protected Matters Search Tool (PMST)

Presenter: Environment
Information Australia

11 June 2026





We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

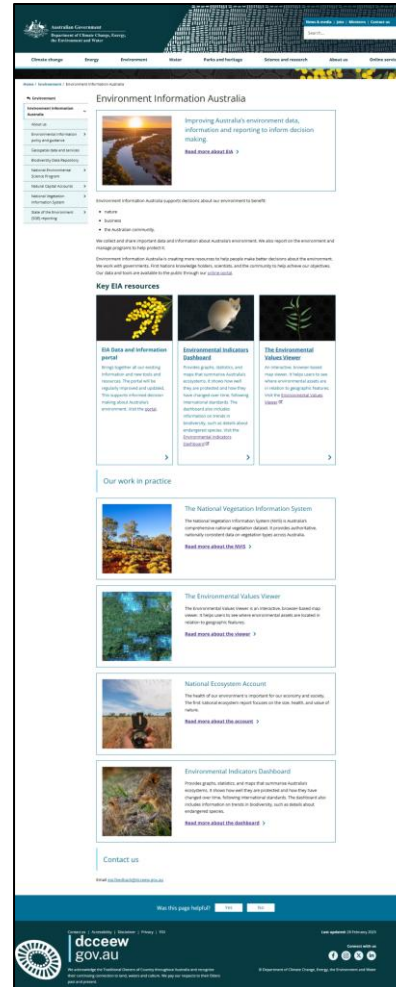
EIA Webpage and Portal

Environment Information Australia (EIA) works to improve environment information, data and reporting.

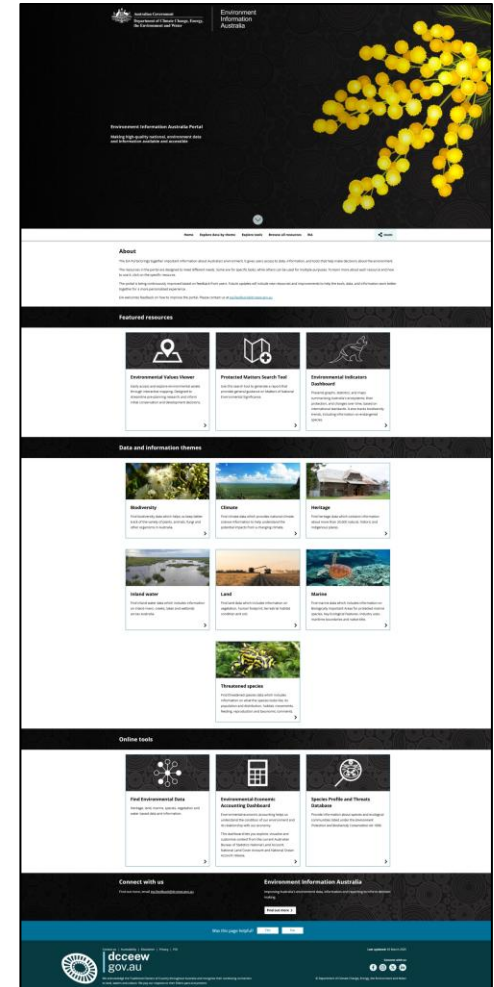
EIA Webpage communicates information on EIA including news, policies and programs, digital stories, channels for community/stakeholder engagement and access to EIA Portal.

EIA Portal brings together important information about Australia's environment. It gives users access to data, information, and tools that help make decisions about the environment.

Directly links to [Find Environmental Data \(FED\)](#), [Environment Information Viewer \(EIV\)](#) and [Protected Matters Search Tool \(PMST\)](#)



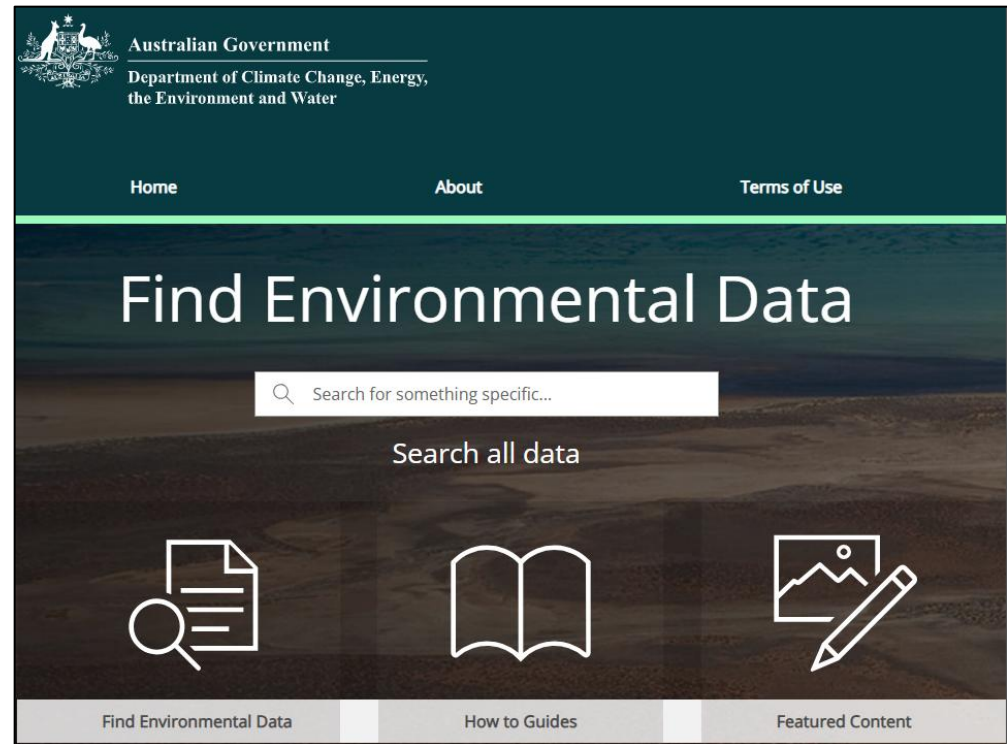
EIA.gov.au



EIA.gov.au/portal

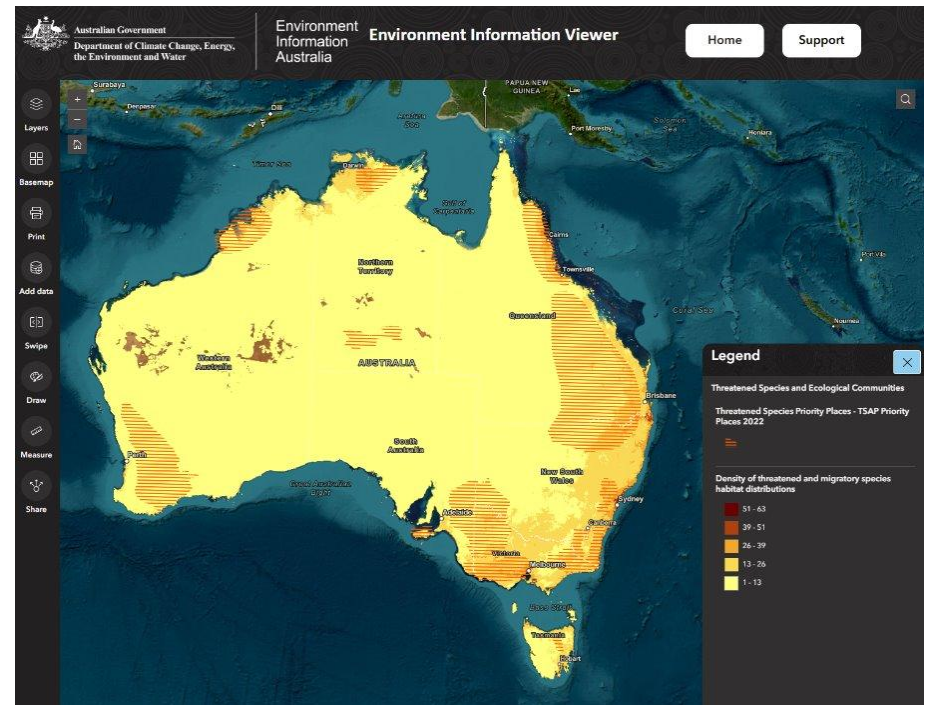
Find Environmental Data

- Geospatial catalogue
- Platform that facilitates delivery of the Department's authoritative geospatial data holdings
- Allows user to discovery, explore, visualise, download and provide comments on datasets
- Interact with data through charts, tables, and maps
- Can search datasets through name, key words, topics or tags



Environment Information Viewer (EIV)

- National – regional scale
- Interactive browser-based map viewer
- Enables users to visualise national environmental assets relative to range of features.
- Informs high-level investigative work
- Help you:
 - identify areas of environmental significance
 - understand where activities may overlap with sensitive values
 - screen nature-related risks, dependencies and opportunities
 - understand environmental context
- Focused on terrestrial environments. Marine information can be found through AMSIS
- Links to Find Environmental Data




Protected Matters Search Tool (PMST)

- Regional – local scale
- Web-based platform
- Enables user to check whether their project area or surrounds may contain protected matters under the EPBC Act
- User can define area of interest, explore protected matters, print maps and generate reports.
- Generate results specific to your location.
- Help you:
 - determine whether protected matters are likely or may be present
 - understand potential impact pathways
 - assess whether a referral for proposed actions or impact avoidance measures may be required



Environment Information Viewer (EIV)

Home Screen

 Australian Government
Department of Climate Change, Energy,
the Environment and Water

Environment
Information
Australia

Environment Information Viewer


The Environment Information Viewer (EIV) is an interactive, web-based tool that overlays environmental data on a map of Australia.

It provides the best available national-scale information about key environmental features, including where threatened species are found, the distribution of threatened ecological communities and areas that are protected or a focus for conservation.

EIV serves as a useful starting resource for initial research and information gathering.

For the best experience, use the latest version of Google Chrome on a desktop or laptop computer.

[Start here](#)

Related online resources. 

- [Protected Matters Search Tool \(PMST\)](#)
- [Find Environment Data \(FED\)](#)
- [Australian Marine Spatial Information System \(AMSIS\)](#)
- [Digital Atlas of Australia](#)

[Support](#) | [Disclaimer](#) | [DCCEEW Website](#)

Demo

The screenshot displays the 'Environment Information Viewer' interface. At the top left, the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water are visible. The main title 'Environment Information Viewer' is centered at the top. On the right, there are 'Home' and 'Support' buttons. A search bar is located in the top right corner. The central part of the interface is a map of Australia and the surrounding Pacific region, showing state and territory boundaries and major cities. A scale bar for 500 km is at the bottom left. A legend box is at the bottom right. A vertical toolbar on the left side contains various interactive tools: Layers, Basemap, Print, Add data, Swipe, Draw, Measure, and Share. Callouts 1 through 4 highlight specific features: 1 points to the toolbar, 2 points to the zoom controls, 3 points to the legend, and 4 points to the Home and Support buttons.

Demo

Australian Government
Department of Climate Change, Energy,
the Environment and Water

Environment
Information
Australia

Environment Information Viewer

Home Support

Layers
Basemap
Print
Add data
Swipe
Draw
Measure
Share

User Guide
Data Notes & Metadata
Links
Contact Us
Data Considerations

User Guide

For the best experience, use the latest version of Google Chrome on a desktop or laptop computer.

Welcome Screen

Click the **Start here** button to access the main map.

Exploring the map

Environment Information Viewer (EIV) is an interactive web-based tool that provides environmental data for a range of Australia. It enables the user to explore and interact with data for any geographic location, including where the regional system is located. The distribution of different types of environmental data varies from the production of landscape for conservation. EIV is a powerful tool for anyone interested in environmental and the regional planning in Australia. For the best experience, use the latest version of Google Chrome on a desktop or laptop computer.

Start here

Related online resources: ¹²
 Regional Mapping Service Tool (RMST)
 First Environment Data (FED)
 Australia's National Geospatial Information System (ANZIS)
 Digital Atlas of Australia

Support | Feedback | OCCENV Website

Ayr
Home Hill
Legend

Australian Government
Department of Climate Change, Energy,
the Environment and Water

Environment
Information
Australia

Environment Information Viewer

Home Support

Layers

Basemap

Print

Add data

Swipe

Draw

Measure

Share

INDONESIA

PAPUA NEW GUINEA

Port Moresby

Northern Territory

Western Australia

Queensland

South Australia

New South Wales

Victoria

Tasmania

Perth

Adelaide

Melbourne

Sydney

Brisbane

Coral Sea

Tasman Sea

Auckland

Christchurch

Legend

There is currently no added data.

+ Click to add data

Add data

URL File

Type
ArcGIS Server Web Serv...

URL
Enter URL

Add

Sample URL
https://services.arcgis.com/P3ePLMys2RVChkLx/arcgis/rest/services/World_Cities/FeatureServer/0

Australian Government
Department of Climate Change, Energy,
the Environment and Water

Environment
Information
Australia

Environment Information Viewer

Home Support

Layers

- NaturePositiveMatters_Site1
- Australia's Bioregions (IBRA)
- Protected Area Layers
- Threatened Species and Ecological Communities
- Biodiversity Values and Representativeness Layers
- Habitat Condition Assessment System- v3.3 (HCAS)

Wingaloo Conservation Park
Jerona
Alva
Carrick Plains Nature Refuge
Mount Surround
Giru
Brandon
Ayr
Horseshoe Lagoon
Airville
Mount Kelly
Home Hill

Legend

The screenshot displays the 'Environment Information Viewer' web application. At the top left, the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water are visible. The main header includes 'Environment Information Australia' and 'Environment Information Viewer'. Navigation buttons for 'Home' and 'Support' are located in the top right. A vertical toolbar on the left contains icons for Layers, Basemap, Print, Add data, Swipe, Draw, Measure, and Share. The central map shows a satellite view of a rural landscape with a blue polygon overlay. A 'Layers' panel on the left lists several layers, with 'NaturePositiveMatters_Site1' selected. A 'Change symbol' dialog box is open over the map, offering options to 'Use predefined symbols' or 'Use custom symbols'. Below these options is a grid of color swatches and a color picker with a hex code input field showing '#3186a7'. A 'Legend' button is located in the bottom right corner of the map area.

Australian Government
Department of Climate Change, Energy, the Environment and Water

Environment Information Australia

Environment Information Viewer

Home Support

Layers

- NaturePositiveMatters_Site1
- Australia's Bioregions (IBRA)
- Protected Area Layers
 - World Heritage Areas
 - Commonwealth Heritage List
 - National Heritage List
 - Indigenous Protected Areas
 - Ramsar Wetlands of Australia
 - National Reseve System
 - Threatened Species and Ecological Communities
 - Biodiversity Values and Representativeness Layers
 - Habitat Condition Assessment System- v3.3 (HCAS)

Legend

- NaturePositiveMatters_Site1
- Protected Area Layers
 - World Heritage Areas
 - Declared property
- National Heritage List
- Ramsar Wetlands of Australia
 - Ramsar Wetlands
- National Reseve System
- Terrestrial Protected Areas (CAPAD 2024)
 - Terrestrial Protected Area

Map labels: Townsville, Cleveland Bay, Bowling Green Bay, Cungulla, Alva, Woodstock, Ayer, Home Hill, Claro.

Australian Government
Department of Climate Change, Energy, the Environment and Water

Environment Information Australia

Environment Information Viewer

Home Support

Layers

- NaturePositiveMatters_Site1
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 - World Heritage Areas
 - Commonwealth Heritage List
 - National Heritage List
 - Indigenous Protected Areas
 - Ramsar Wetlands of Australia
 - National Reseve System
 - Threatened Species and Ecological Communities
 - Biodiversity Values and Representativeness Layers
 - Habitat Condition Assessment System- v3.3 (HCAS)

World Heritage Areas, Australia

Zoom to

Name: Great Barrier Reef

Status: Declared property

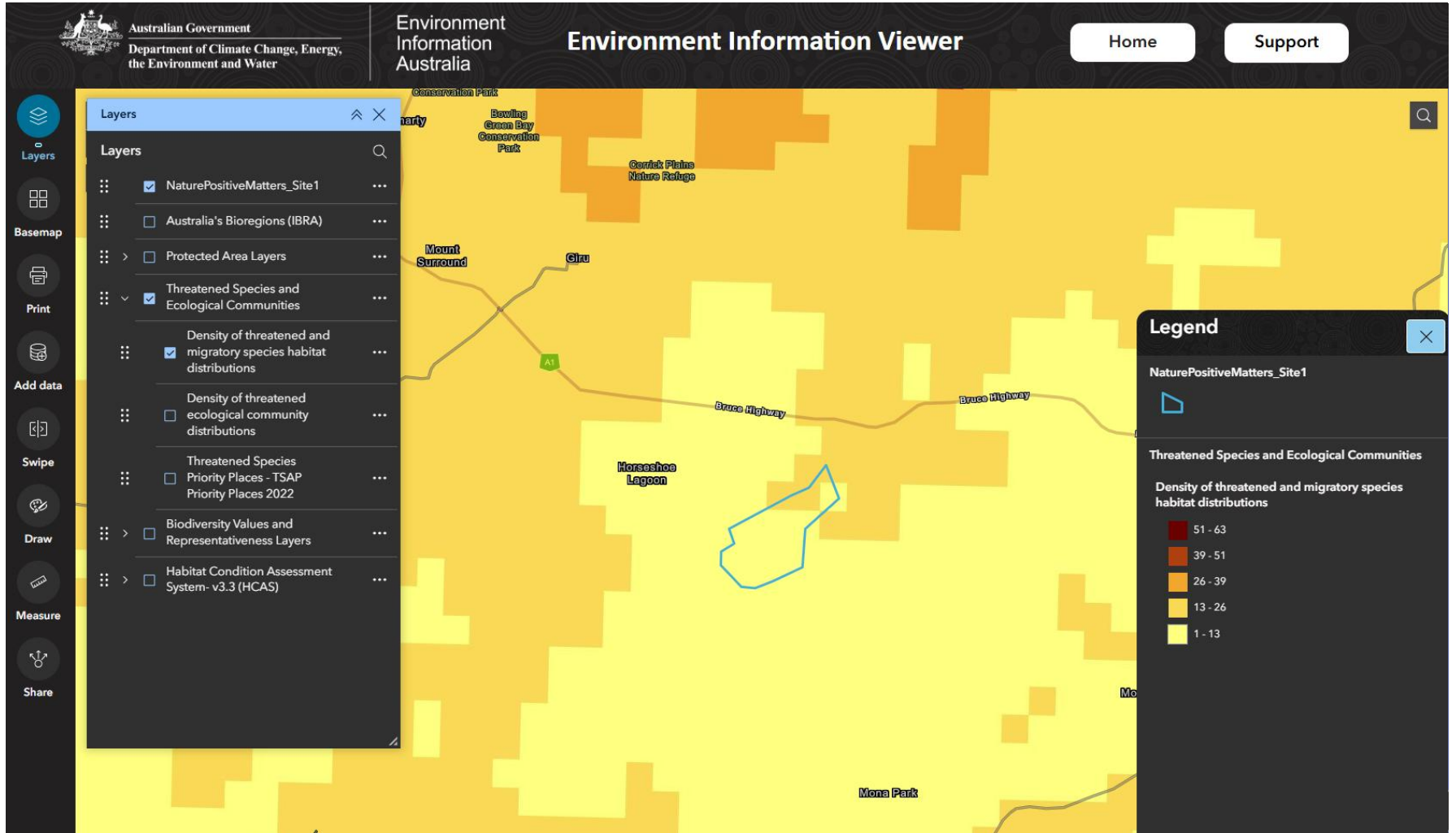
Address: Townsville QLD

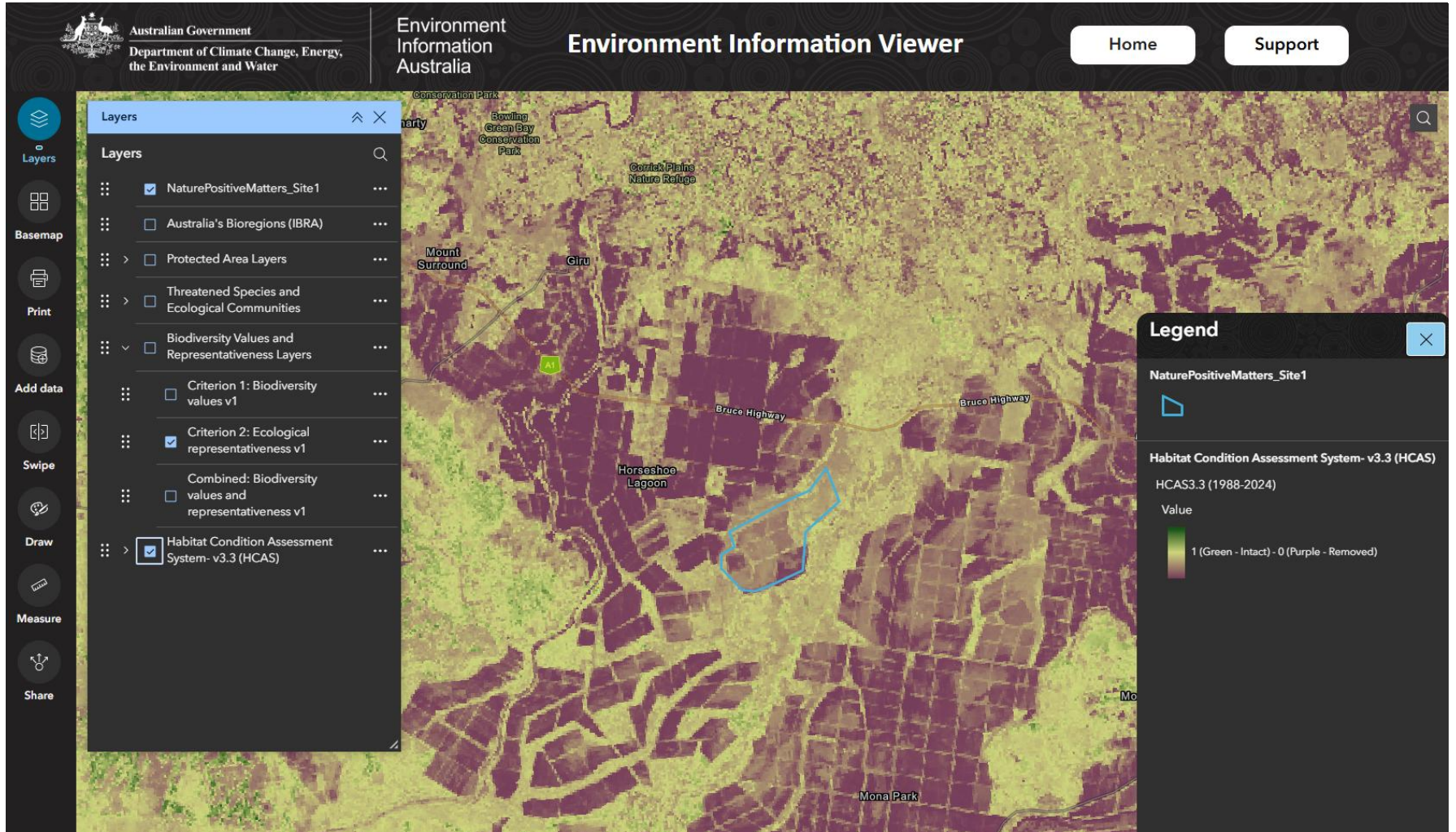
Area: 34,893,405 Ha

For further information on this place or the World Heritage Areas visit:

- [Australian Heritage Database: Great Barrier Reef](#)
- [World Heritage Areas](#)

Legend





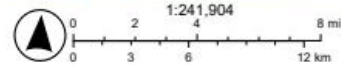
The screenshot displays the 'Environment Information Viewer' web application. At the top left, the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water are visible. The page title is 'Environment Information Viewer'. Navigation buttons for 'Home' and 'Support' are located at the top right. A search icon is present in the top right corner of the map area. The main map shows a satellite view of a coastal region in Queensland, Australia, with several protected areas highlighted in light green: Bowling Green Bay National Park, Wungahlee Conservation Park, Corrick Plains Nature Refuge, and Horseshoe Lagoon. A blue outline on the map indicates a selected area for printing. On the left side, a vertical toolbar contains icons for Layers, Basemap, Print (highlighted with a red box), Add data, Swipe, Draw, Measure, and Share. The 'Print' dialog box is open, showing a 'Print template' section with 'A4 Portrait' selected, a 'Title' field containing 'NPM_Site1_ProtectedAreas', and an 'Advanced' section with a 'Show print area' checkbox. A 'Print' button is at the bottom of the dialog. A 'Legend' button is located in the bottom right corner of the map area.

NPM_Site1_ProtectedAreas



08/06/2026, 7:40:04 pm

- | | |
|-------------------------------------|------------------------------|
| NaturePositiveMatters_Site1 | State Marine Protected Area |
| Declared property | Sea Country IPA |
| Commonwealth Heritage List | World Imagery |
| National Heritage List | High Resolution 60cm Imagery |
| Ramsar Wetlands | High Resolution 30cm Imagery |
| Terrestrial Protected Area | Citations |
| Marine Protected Areas (CAPAD 2024) | |
| Commonwealth Marine Protected Area | |



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community. World Heritage Areas: Australia are copyright (c) Commonwealth of Australia. Australian Government Department of Climate Change, Energy, the Environment and Water 2026. Australia, Commonwealth Heritage List - Spatial Database is copyright (c)

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Australian Government
Department of Climate Change, Energy,
the Environment and Water

Environment
Information
Australia

Environment Information Viewer

Home Support

Layers
Basemap
Print
Add data
Swipe
Draw
Measure
Share

Horseshoe Lagoon
Brandon
Ayr
Airville
Mount Kelly
Home Hill
Clare

Draw

Select draw mode

Preview

Legend

Australian Government
Department of Climate Change, Energy, the Environment and Water

Environment Information Australia

Environment Information Viewer

Home Support

Layers
Basemap
Print
Add data
Swipe
Draw
Measure
Share

Swipe

Leading layers
Trailing layers

Horseshoe Lagoon
Ayr
Alhambra
Mount Kelly
Clare
Auriferous zone

Legend

Biodiversity Values and Representativeness Layers

Criterion 1: Biodiversity values v1

Criterion 1: Biodiversity values v1

- 0 to 49%
- 50 to 59%
- 60 to 69%
- 70 to 79%
- 80 to 89%
- Above 90%
- Protected Area

Criterion 2: Ecological representativeness v1

Criterion 2: Ecological representativeness v1

- 0 to 49%
- 50 to 59%
- 60 to 69%
- 70 to 79%
- 80 to 89%
- Above 90%

5 km
Earthstar Geographics | Criterion 2: Ecological representativeness v1.0: Australia are copyright(c) Common

The screenshot displays the 'Environment Information Viewer' interface. At the top left, the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water are visible. The main header includes 'Environment Information Australia' and 'Environment Information Viewer'. Navigation buttons for 'Home' and 'Support' are located at the top right. A vertical sidebar on the left contains icons for Layers, Basemap, Print, Add data, Swipe, Draw, Measure (highlighted with a red box), and Share. The central map area shows a satellite view of a rural landscape with a river and agricultural fields. An orange polygon is drawn on the map, with a measurement tool overlay showing '23.08 km²' for the area and '20.72 km' for the perimeter. The unit is set to 'Square kilometers'. Other map labels include 'Horseshoe Lagoon', 'Claro', 'Mount Kelly', 'Airville', 'Homo Hill', and 'Ayr'. A 'Legend' button is located in the bottom right corner of the map area.

Protected Matters Search Tool (PMST)

Demo

Australian Government
Department of Climate Change, Energy, the Environment and Water

Protected Matters Search Tool

- Upload
- Draw
- My Features
- Layers
- Report
- About

Upload your shape file

Upload your shape file or KMZ file by uploading from your computer or dragging and dropping into the grey box below.

Select File

Upload your file

Or

Drag your shape file (zipped shp, kmz) here!

File requirements

Availability of limitations of a file to be uploaded:

- SMB in size
- no multipart polygons
- Fewer than 50 polygons
- Fewer than 25k vertices
- No Z- or M- aware shapefiles
- Less than 1 million kml in extent

shape file has been added to my feature!

Leaflet | Powered by Esri | Vantor

Demo

Australian Government
Department of Climate Change, Energy, the Environment and Water

Protected Matters Search Tool

- Upload >
- Draw >
- My Features >
- Layers <**
- Report >
- About >

View layers X

Select layers you want to see on the map.

- Protected Areas - Terrestrial ⓘ
- Protected Areas - Marine ⓘ
- Ramsar Wetlands ⓘ
- World Heritage Properties ⓘ
- National Heritage Places ⓘ
- Commonwealth Heritage Places ⓘ
- Property Boundaries
- Local Government Areas
- Natural Resource Management Regions ⓘ
- Marine Regions ⓘ
- Great Barrier Reef Marine Park ⓘ
- Australian Marine Parks ⓘ
- Commonwealth Marine Area
- Key Ecological Features ⓘ
- Listed Critical Habitat ⓘ
- Regional Forest Agreements ⓘ
- Interim Biogeographic Regionalisation of Australia ⓘ

SHOW LAYERS LEGENDS

DESELECT 1 LAYER

Map labels: Cape York (NRM), Wet Tropics (NRM), Townsville, Bowen, Mackay, Mackay Whitsunday (NRM), Queensland, Fitzroy (NRM), Rockhampton, Bundaberg, Burnett Mary (NRM), South West Queensland (NRM), Maranoa Balonne and Border Rivers (NRM).

Map controls: Home, Zoom In (+), Zoom Out (-), Info (i), Full Screen (f), XY, Share, Print.

Map Attribution: Leaflet | Powered by Esri | Earthstar Geographics

Demo

Legends
Click back to return to the Layers panel

Natural Resource Management Regions
Natural Resource Management Regions

View layers
Select layers you want to see on the map.

- Protected Areas - Terrestrial
- Protected Areas - Marine
- Ramsar Wetlands
- World Heritage Properties
- National Heritage Places
- Commonwealth Heritage Places
- Property Boundaries
- Local Government Areas
- Natural Resource Management Regions
- Marine Regions
- Great Barrier Reef Marine Park
- Australian Marine Parks
- Commonwealth Marine Area
- Key Ecological Features
- Listed Critical Habitat
- Regional Forest Agreements
- Interim Biogeographic Regionalisation of Australia

SHOW LAYERS LEGENDS

DESELECT 1 LAYER

BACK

COLLAPSE SIDEBAR

Queensland

Cape York (NRM)

Wet Tropics (NRM)

Burdekin (NRM)

Mackay Whitsunday (NRM)

Fitzroy (NRM)

South West Queensland (NRM)

Maranoa Balonne and Border Rivers (NRM)

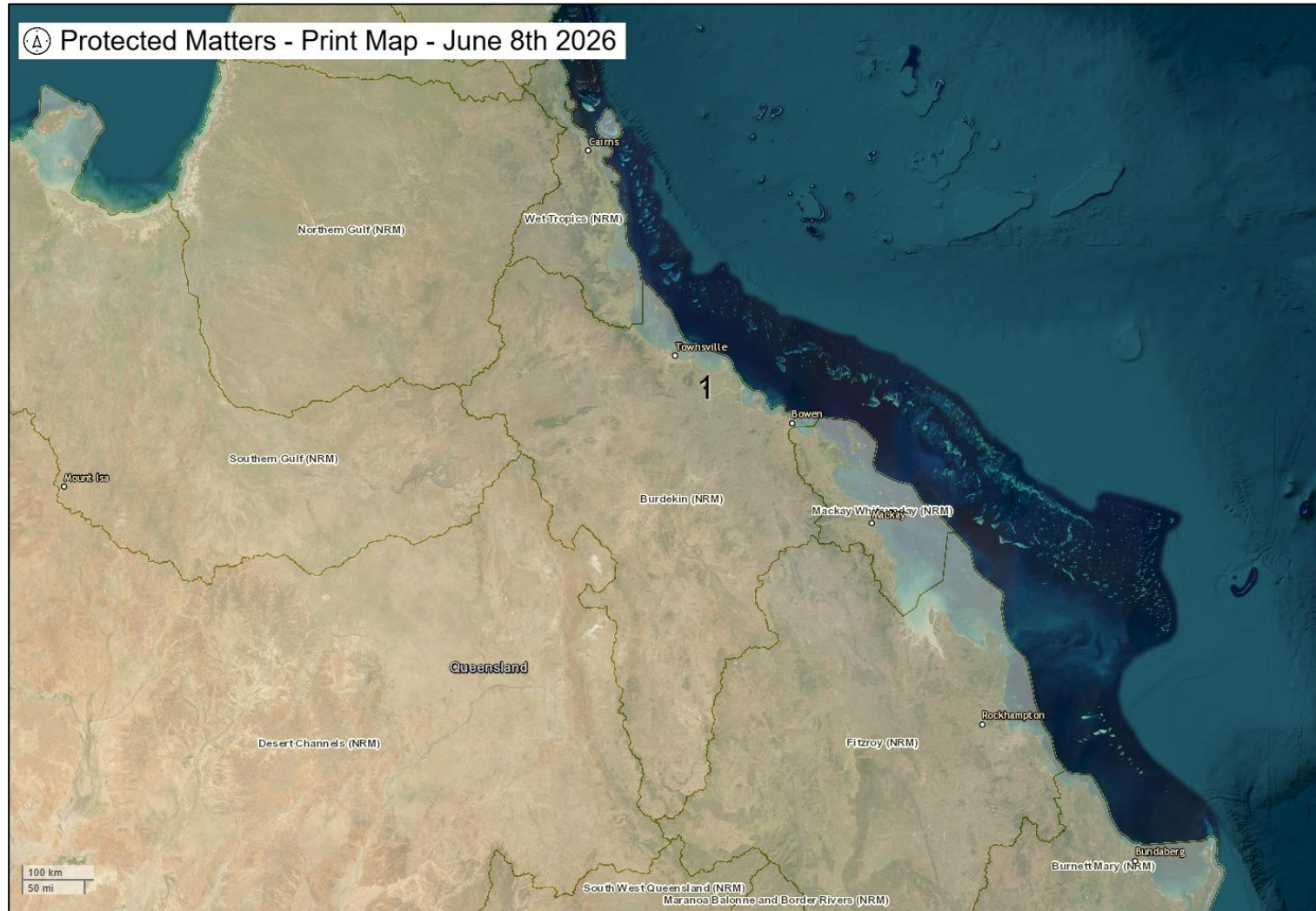
Leaflet | Powered by Esri | Earthstar Geographics

Demo

The screenshot displays a web-based interface for a Protected Matters Search Tool. The interface is divided into several sections:

- Header:** Australian Government logo and text: "Australian Government Department of Climate Change, Energy, the Environment and Water".
- Search Bar:** A search input field with the placeholder text "Enter address" and a link for "Advanced Search".
- Protected Matters Search Tool:** A sidebar on the left containing navigation options: Upload, Draw, My Features, Layers, Report, and About.
- Map:** A satellite-style map of Queensland, Australia, showing various NRM regions such as Northern Gulf (NRM), Southern Gulf (NRM), Burdekin (NRM), Mackay Whitsunday (NRM), Fitzroy (NRM), and others. A red box highlights a specific area near Townsville, marked with a "1".
- Map Controls:** A vertical toolbar on the right side of the map with icons for home, zoom in (+), zoom out (-), info (i), location (G), XY coordinates, share, and print (highlighted with a red box).
- Footer:** Coordinates (Lng: 139.7131 Lat: -15.2418), a scale bar (100 km / 50 mi), and attribution text: "Leaflet | Powered by Esri | Earthstar Geographics".

Demo



Demo

Australian Government
Department of Climate Change, Energy, the Environment and Water

Protected Matters Search Tool

- Upload >
- Draw >
- My Features >
- Layers >
- Report <**
- About >

Generate your report [X]

Review the features you have selected for your report.

- Uploaded shapefile [trash] [search]
- 1 [trash] [search]

1 feature
1,023.04 ha (Total area)

Multiselect is disabled
Enable **Multiselect** to select multiple feature for exploration.

Buffer: 0 km
Buffer must be between 0 and 50 kms.

[CLOSE] [EXPLORE]

1

West Barratta Creek
Barratta Creek

GENERATE PDF REPORT

GENERATE EXCEL REPORT

Leaflet | Powered by Esri | Vantor

Demo

The screenshot displays the 'Protected Matters Search Tool' interface. On the left is a dark blue sidebar with the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water. The sidebar contains a search bar at the top and a menu with options: Upload, Draw, My Features, Layers, Report, and About. The main area is a satellite map of agricultural fields. A search results popup is centered on the map, titled 'Protected matters categories (65)' with a '0 km buffer applied'. The popup lists the following categories:

- Matters of National Environmental Significance**
 - Migratory Species (14)
 - Threatened Species (26)
 - Wetlands of International Importance (Ramsar Wetlands) (1)
- Other Matters Protected by the EPBC Act**
 - Listed Marine Species (23)
- Extra Information**
 - EPBC Act Referrals (1)

A 'GENERATE REPORT' button is located at the bottom of the popup. The map includes a search bar at the top left, a scale bar (500 m / 2000 ft) at the bottom left, and a coordinate display (Lng: 147.1561 Lat: -19.5713) at the bottom left. The map is powered by Esri and Vantor.

Demo

Enter address

Threatened Species (26)
0 km buffer applied

Scientific Name	Common Name	Class ↑	Status	View on map	Zoom to feature
<i>Tyto novaehollandiae kimberli</i>	Masked Owl (northern)	Bird	Vulnerable		
<i>Erythrotriorchis radiatus</i>	Red Goshawk	Bird	Endangered		
<i>Poephila cincta cincta</i>	Southern Black-throated Finch	Bird	Endangered		
<i>Neochmia ruficauda ruficauda</i>	Star Finch (eastern), Star Finch (southern)	Bird	Endangered		
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover	Bird	Vulnerable		
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Bird	Vulnerable		
<i>Hirundapus caudacutus</i>	White-throated Needletail	Bird	Vulnerable		
<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)	Bird	Vulnerable		
<i>Rostratula australis</i>	Australian Painted Snipe	Bird	Endangered		
<i>Falco hypoleucos</i>	Grey Falcon	Bird	Vulnerable		
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	Bird	Critically Endangered		
<i>Tringa nebularia</i>	Common Greenshank, Greenshank	Bird	Endangered		
<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe	Bird	Vulnerable		
<i>Calidris ferruginea</i>	Curlew Sandpiper	Bird	Critically Endangered		
<i>Saccolaimus saccolaimus nudiclunius</i>	Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat	Mammal	Vulnerable		

COLLAPSE SIDEBAR

500 m
2000 ft

Leaflet | Powered by Esri | Vantor

Demo

Poephila cincta cincta
0 km buffer applied

Species ID
64447

Scientific Name
Poephila cincta cincta

Common Name
Southern Black-throated Finch

Class
Bird

Presence
Species or species habitat lik...

Threatened Category
Endangered

Migratory Status
--

Migratory Category
--

Marine Status
--

Cetacean Status
--

Buffer Status
--

Enter address
[Advanced Search](#)

Queensland

Cairns
Townsville
Bowen
Mackay
Rockhampton
Bundaberg

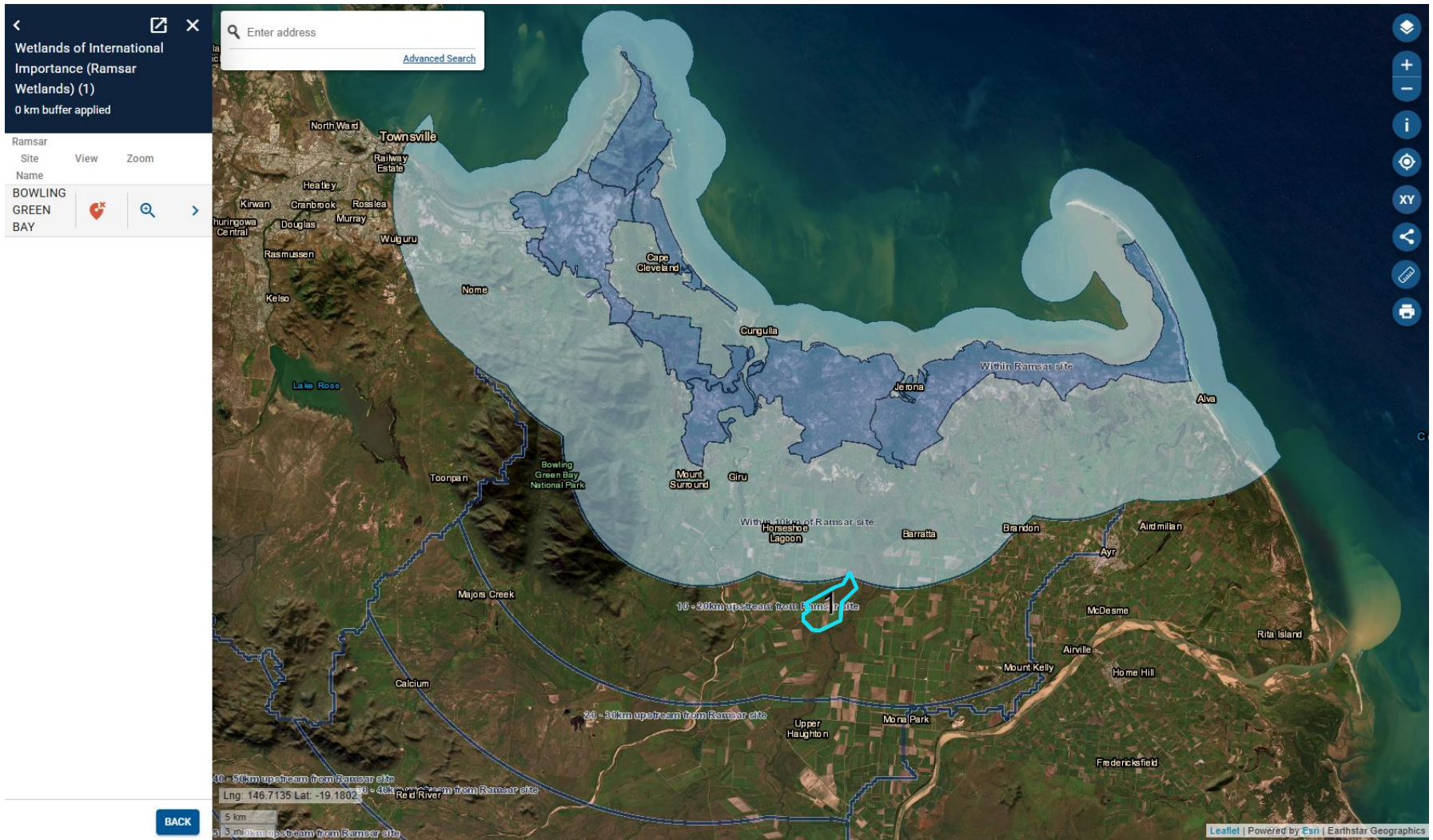
1

Lng: 142.1851 Lat: -16.6151

100 km
50 mi

Leaflet | Powered by Esri | Earthstar Geographics

Demo



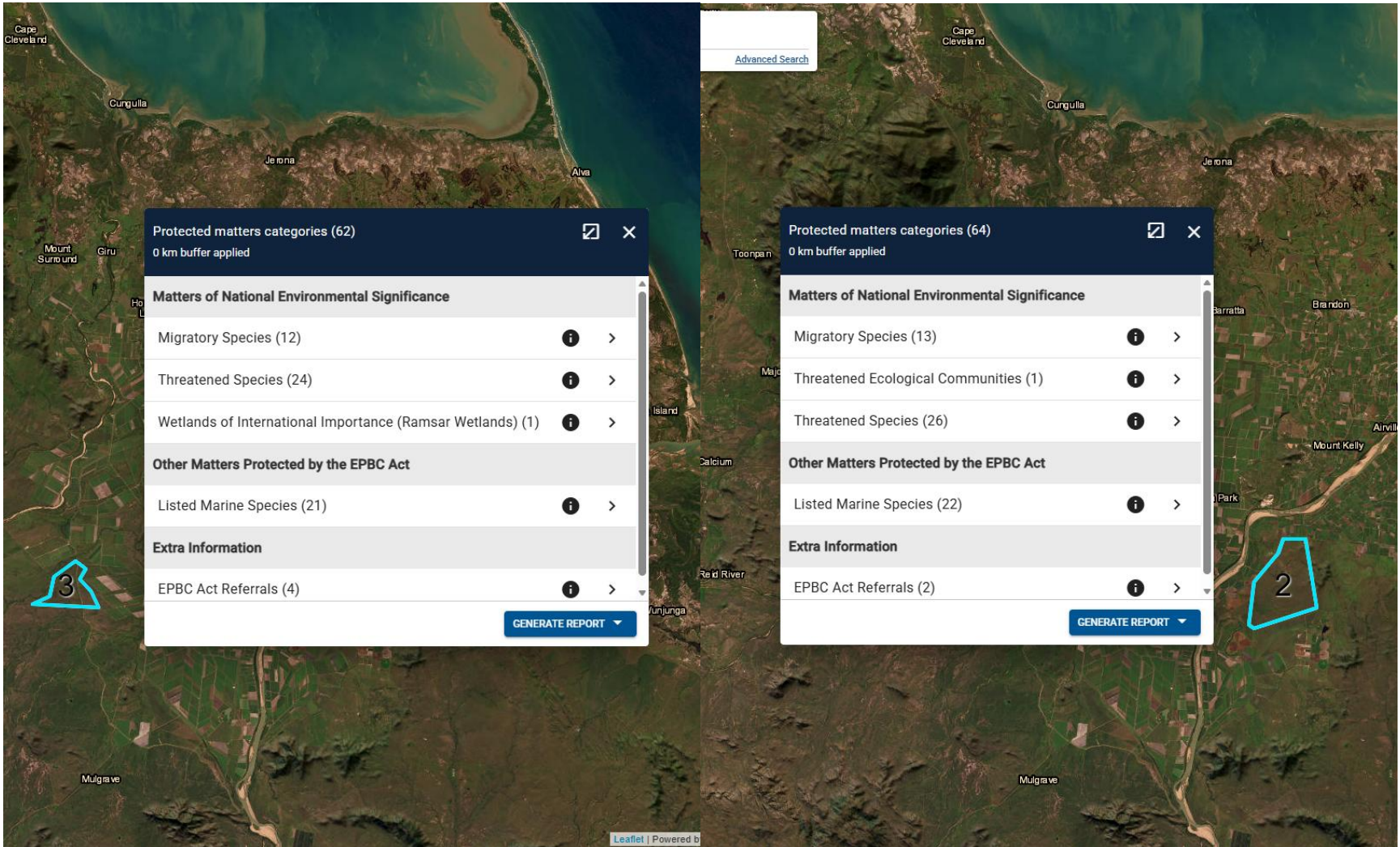
Demo

The screenshot displays the 'Protected Matters Search Tool' interface. On the left is a dark blue sidebar with the Australian Government logo and the text 'Department of Climate Change, Energy, the Environment and Water'. Below this, the title 'Protected Matters Search Tool' is shown. The sidebar contains several menu items: 'Upload', 'Draw' (highlighted with a red border), 'My Features', 'Layers', 'Report', and 'About'. At the bottom of the sidebar is a 'COLLAPSE SIDEBAR' button. The main area of the interface is a map showing a rural landscape with a river and various fields. Three green polygons are drawn on the map, labeled '1', '2', and '3'. A 'Draw' tool panel is open over the map, titled 'Draw' with a close button. It contains the instruction 'Draw a shape on the map' and a section 'Select a shape to draw' with three options: 'Draw a polygon' (with a pentagon icon), 'Draw a rectangle' (with a rectangle icon), and 'Draw a line' (with a line icon). On the right side of the map, there is a vertical toolbar with various map navigation and interaction icons. At the bottom right of the map, there is a small text box that reads 'Leaflet | Powered by Esri | Earthstar Geographics'.

Demo

The screenshot displays the Protected Matters Search Tool interface. On the left is a dark blue sidebar with the Australian Government logo and navigation options: Upload, Draw, My Features, Layers, Report, and About. The main area shows a satellite map of a region with three blue-shaded features labeled 1, 2, and 3. A white configuration panel is overlaid on the map, showing '3 features' with a total area of 4,834.92 ha. A red box highlights the 'Multiselect is enabled' toggle, which is turned on. Below it, another red box highlights the 'Buffer' field set to '2 km', with a note that the buffer must be between 0 and 50 kms. The panel includes 'CLOSE' and 'EXPLORE' buttons. At the bottom left of the map, coordinates are shown as 'Lng: 147.2477 Lat: -19.5624' and a scale bar for 5 km and 3 miles. The bottom right corner of the map area contains the text 'Leaflet | Powered by Esri | Earthstar Geographics'.

Demo



Contact us

Geospatial Helpdesk
GeoSpatial@dceew.gov.au

Government tools for nature-related sensitive location assessments

[Australian Water Outlook](#)
[Water Storage Information Dashboard](#)

11 June 2026

Elizabeth Johnston



Australian Government
Bureau of Meteorology

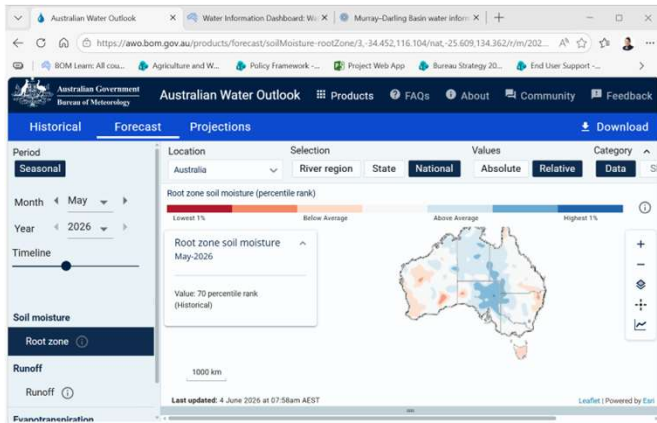


Acknowledgement of Country

*The Bureau of Meteorology
acknowledges the Traditional
Custodians and Elders of country
throughout Australia and their
connection to land, sea and community.*



Context - Bureau's Water Information Responsibilities

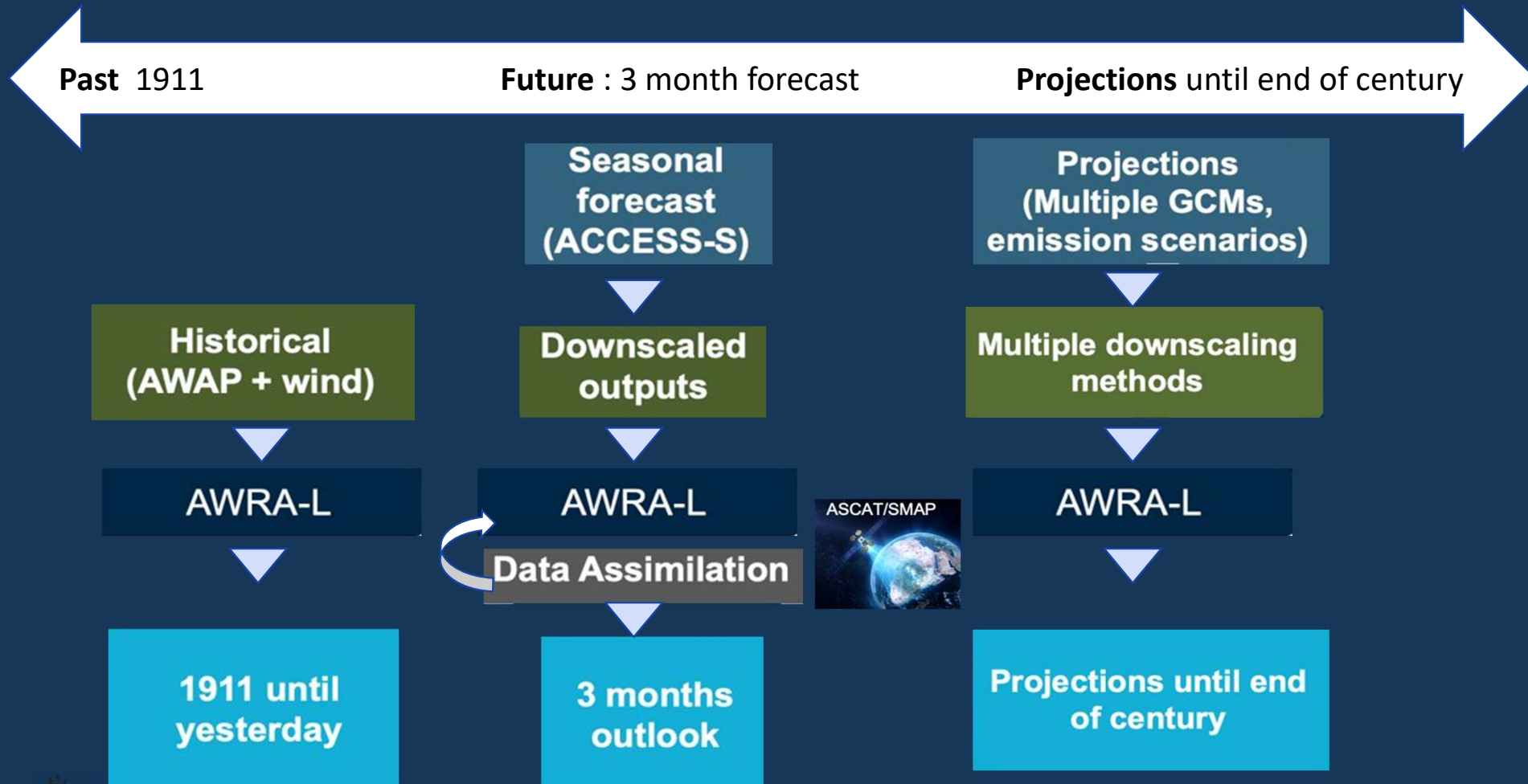


Bureau specific statutory functions related to water information:

- issuing national water information standards and providing advice
- collecting and publishing water information
- conducting regular national water resources assessments
- publishing an annual National Water Account
- providing regular water availability forecasts
- enhancing understanding of Australia's water resources
- water market reforms

Water Act 2007 under Part 7 – Water Information (and Part 7A – water markets).

Australian Water Outlook – Under the hood



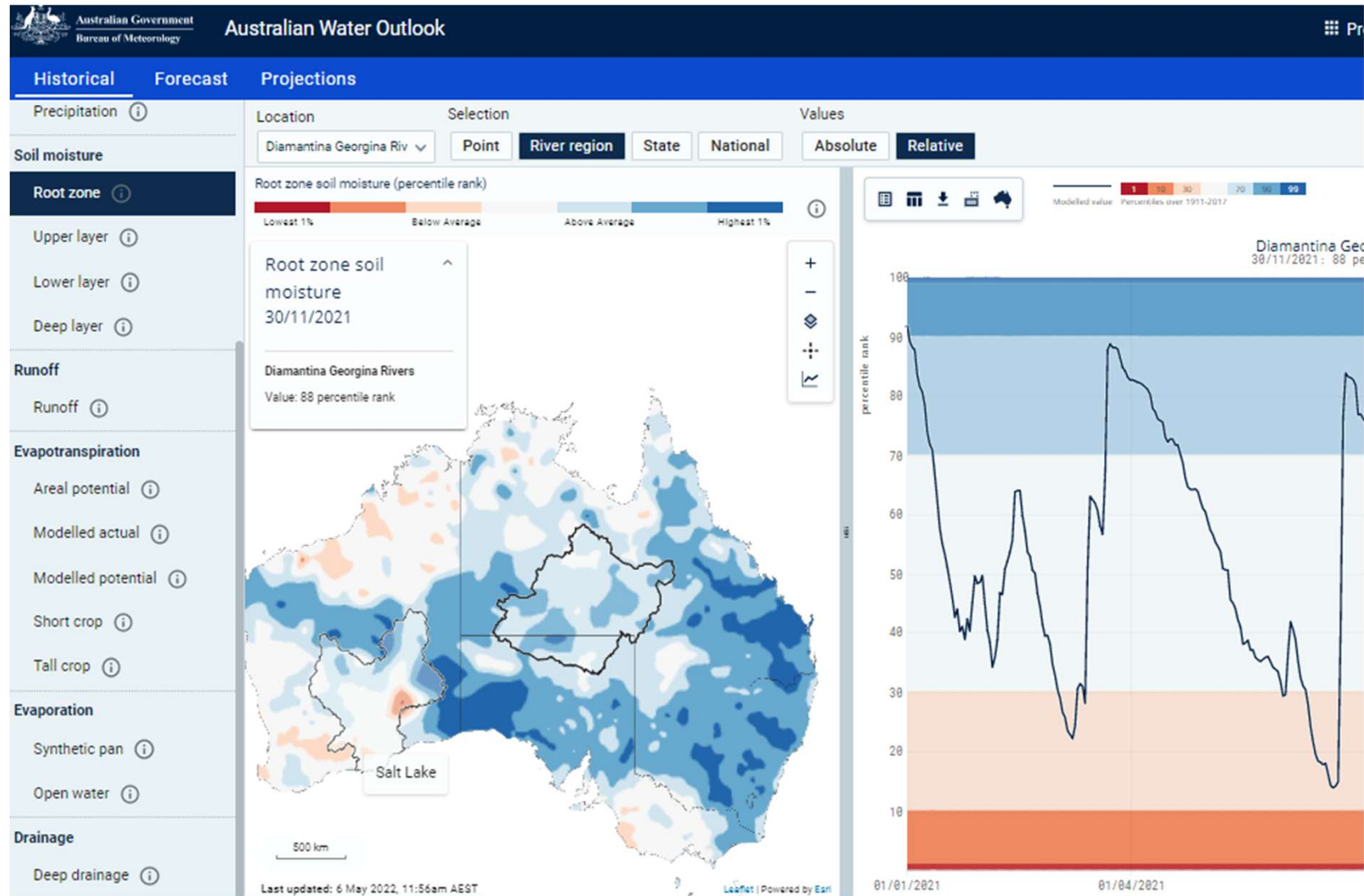
OFFICIAL

Australian Water Outlook – Landing Page

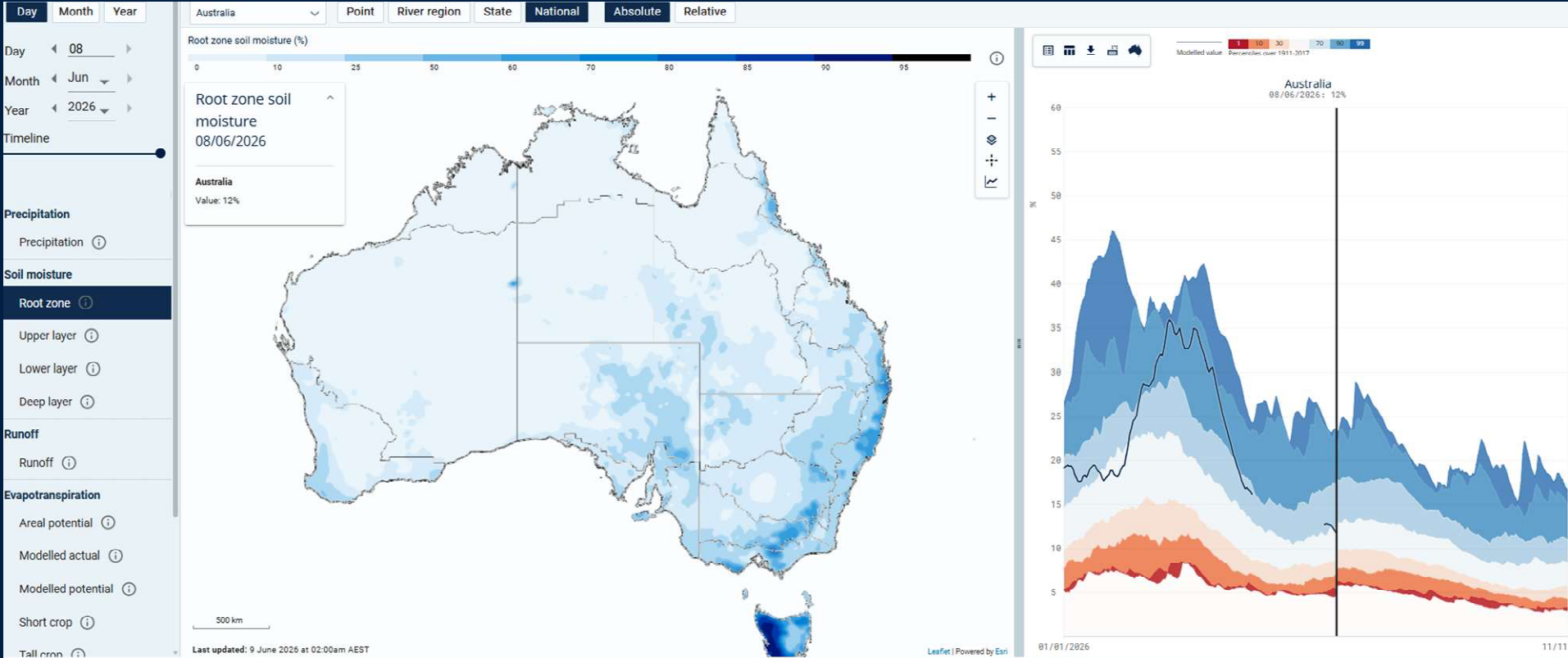
[Australian Water Outlook](#)

BoM's Operational Platform

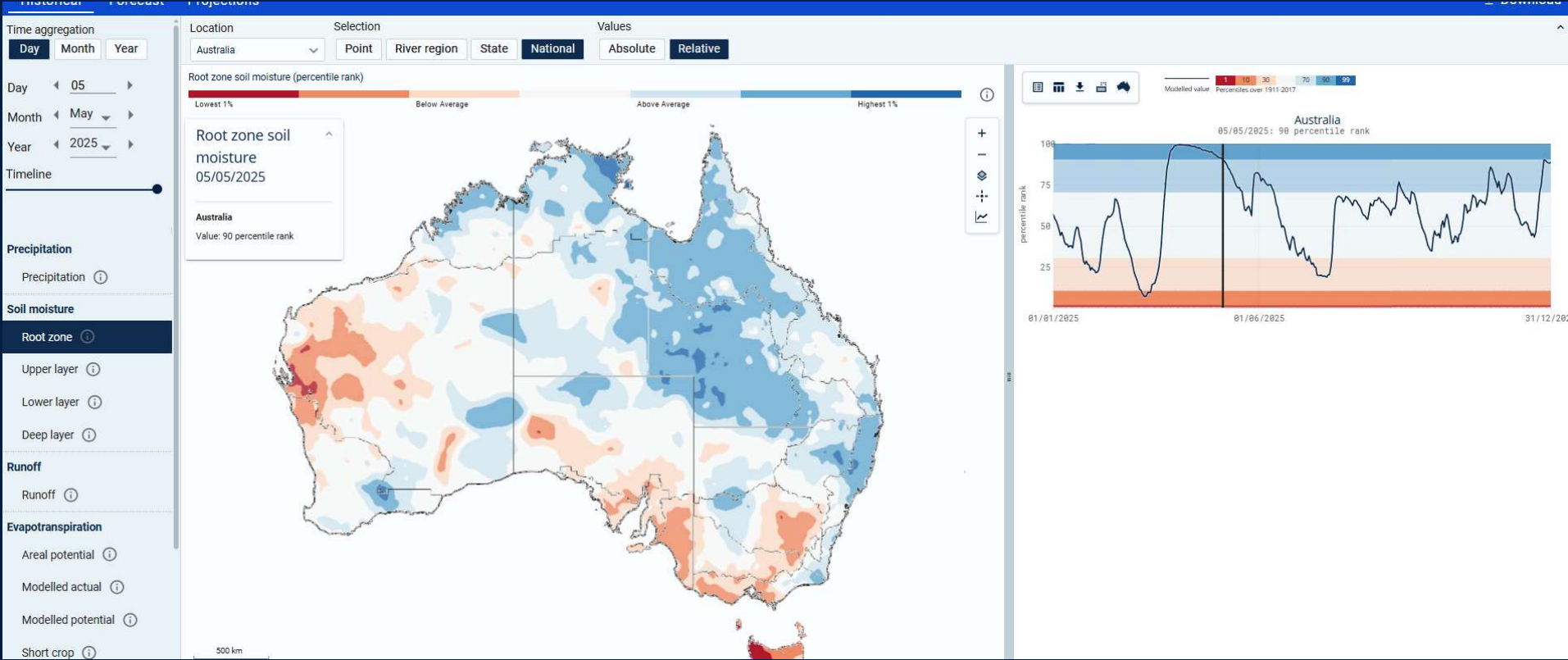
- Since Nov. 2021
- Historical data (V7)
- Forecast (V6)
- Projections (V6)



Australian Water Outlook – (Historical) - % soil moisture

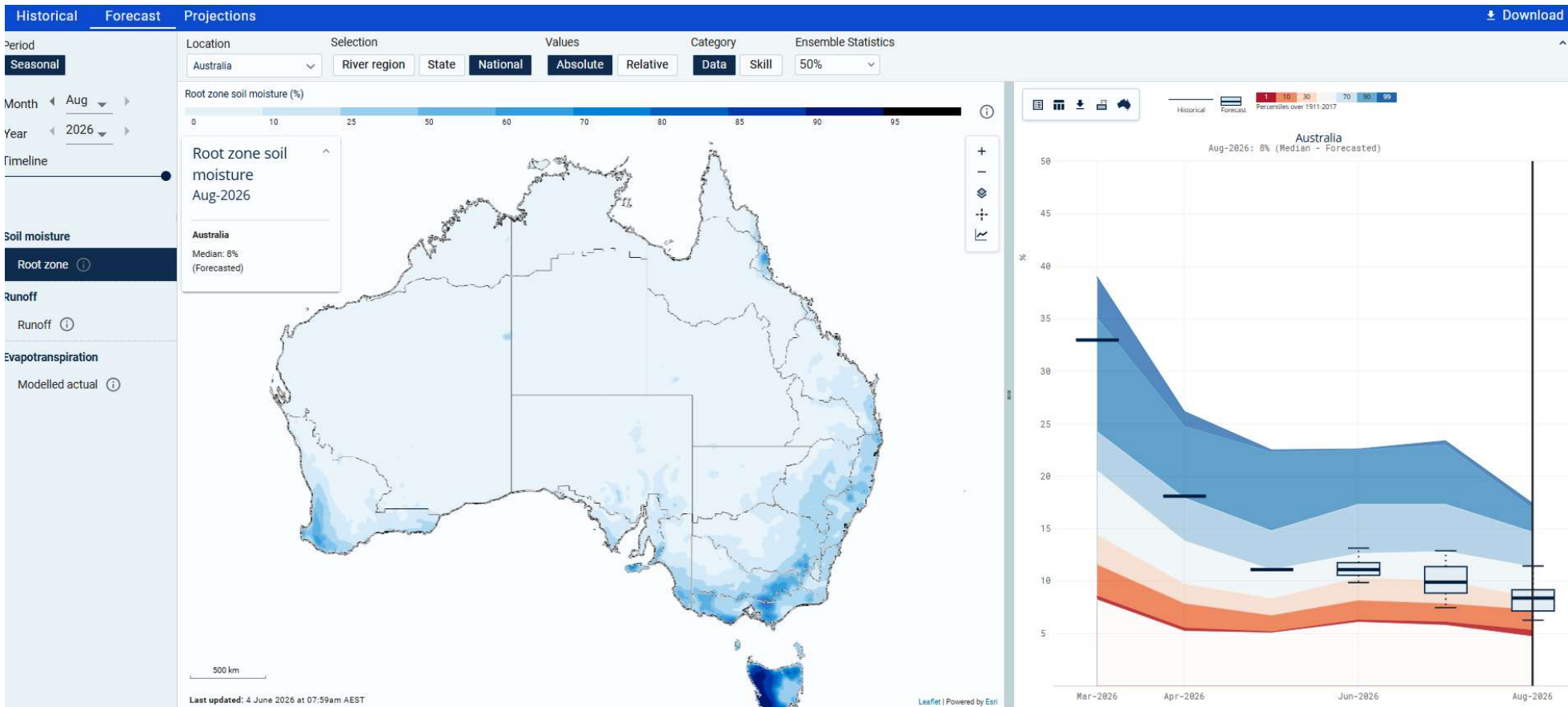


Australian Water Outlook –(Historical) - Percentile soil moisture



OFFICIAL

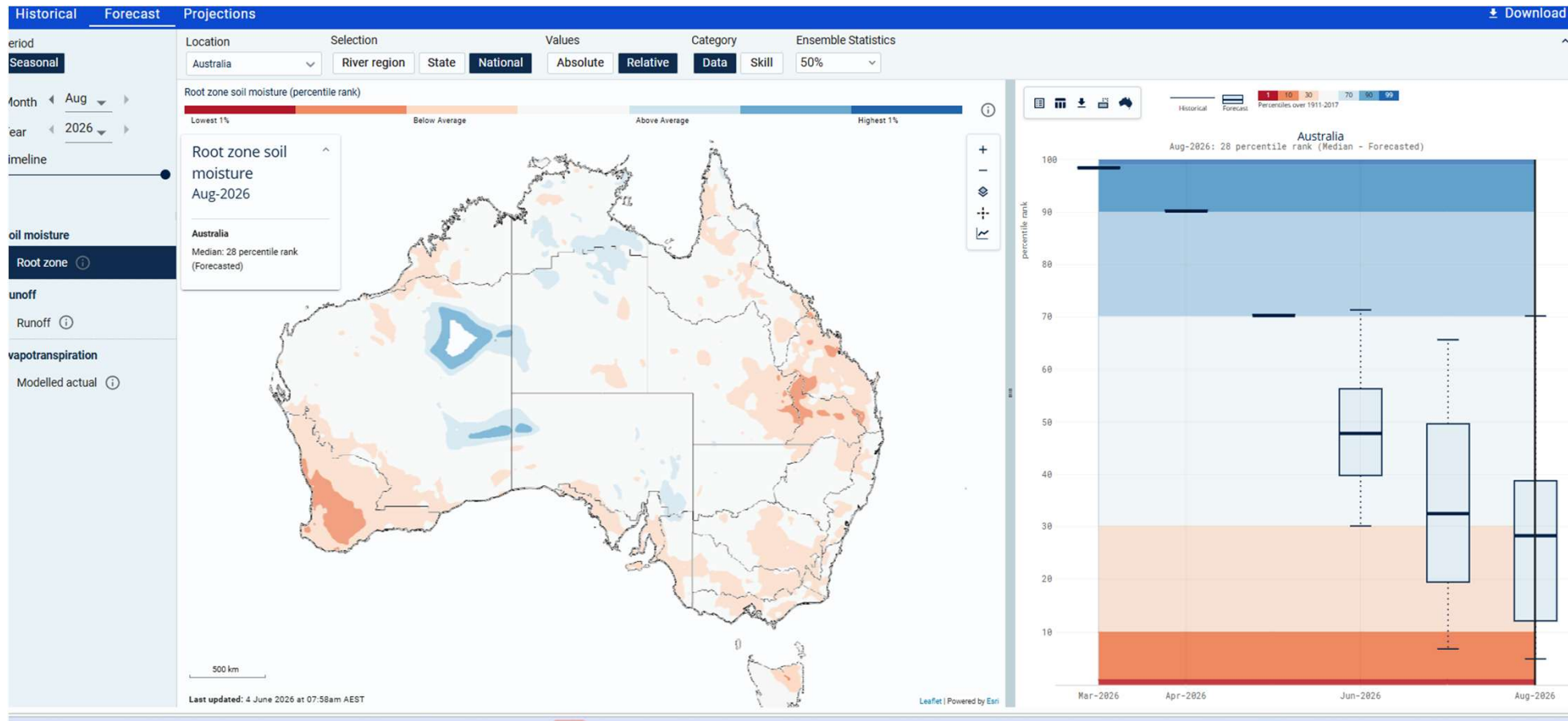
Australian Water Outlook – (Forecasts) – 3 months ahead- Absolute



OFFICIAL

OFFICIAL

Australian Water Outlook – (Forecasts) – 3 months ahead - relative



OFFICIAL

Accessing data displayed in the Australian Water Outlook

1. Australian Water Outlook website:

<https://www.bom.gov.au/waterdata/>

- This is the simplest way to access data, but is not designed to be accessed programmatically, which may be limiting.
- Data for the full period of record can be viewed and downloaded from this website.

2. Australian Water Data Service (AWDS)

<https://portal.wsapi.cloud.bom.gov.au/arcgis/apps/sites/#/australian-water-data-service>

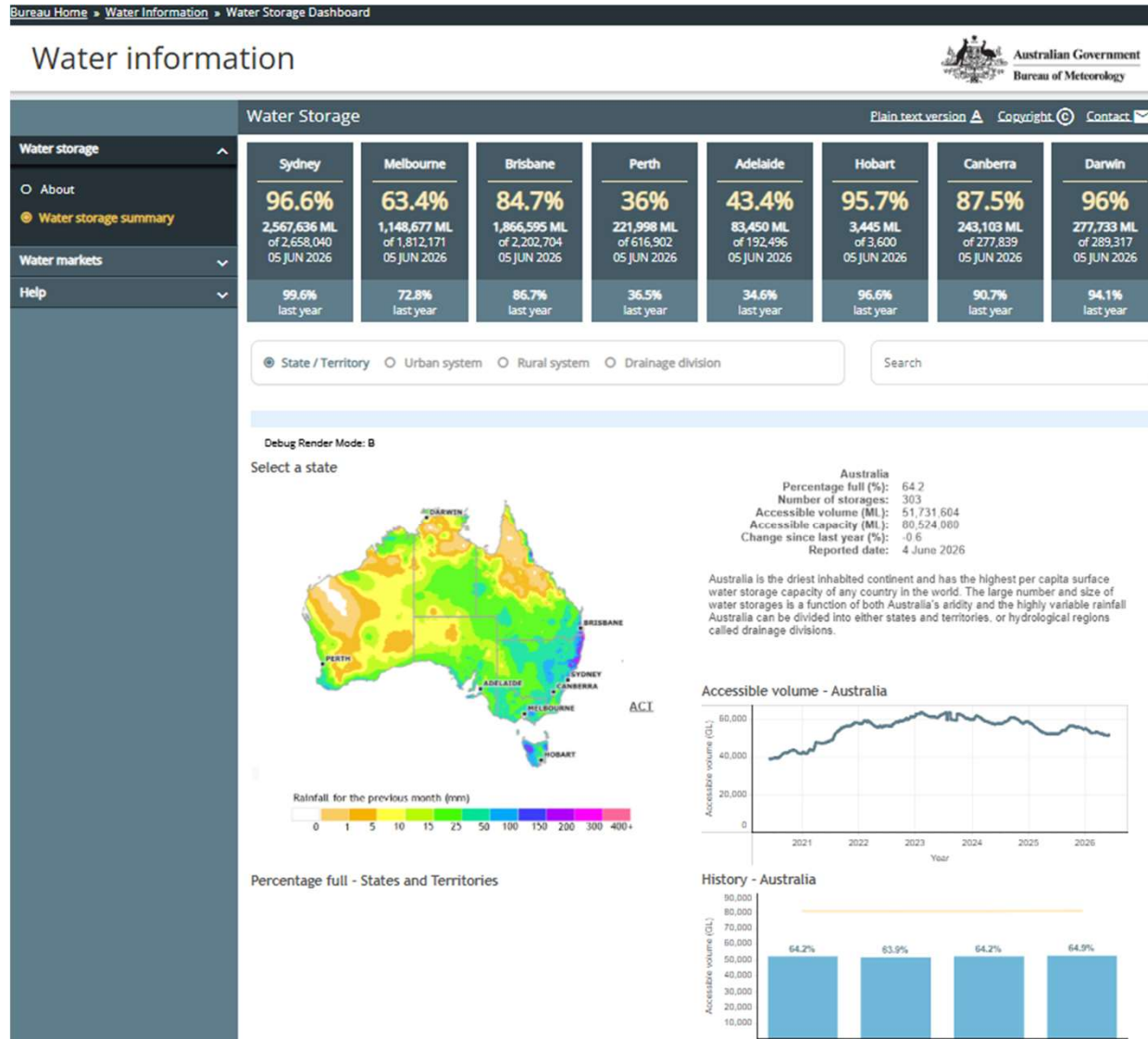
This service includes key AWRA-L model outputs, which are regularly updated with the latest model outputs.

3. NCI - THREDDS server

https://geonetwork.nci.org.au/geonetwork/srv/eng/catalog.search#/metadata/f6683_9441_8676_1139

- The Bureau have partnered with the NCI to host an Australian Water Outlook Data Collection on their national scientific data repository. - - NCI uses the mature and open-source THREDDS technology to allow API access to the dataset.
- [README file](#) as part of the AWO Historical sub-collection to help customers understand the contents of each hosted file - which includes several post-processed aggregated products.

Water Information Dashboard – Landing Page (water storage summary)



Water Information Dashboard – Example, step-through. Storage volumes

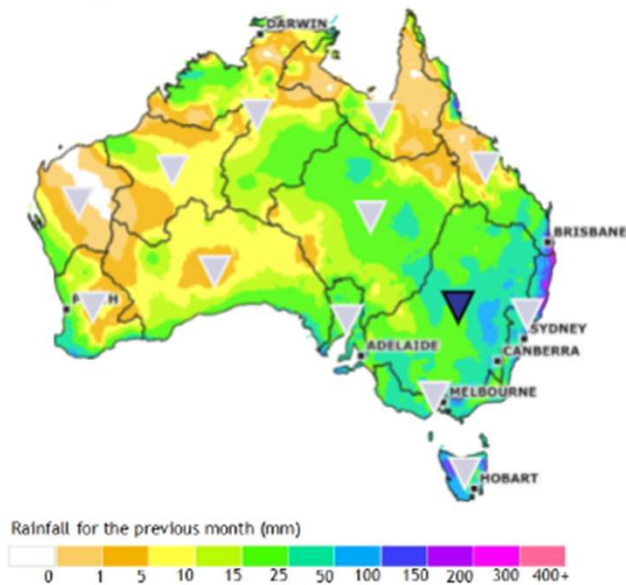
State / Territory
 Urban system
 Rural system
 Drainage division

Search

[Click to view storage location and information for Murray-Darling Basin](#)

Debug Render Mode: B

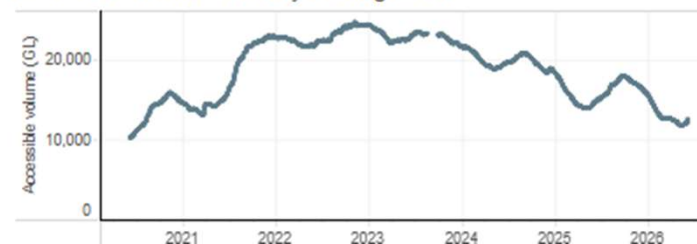
Select a drainage division



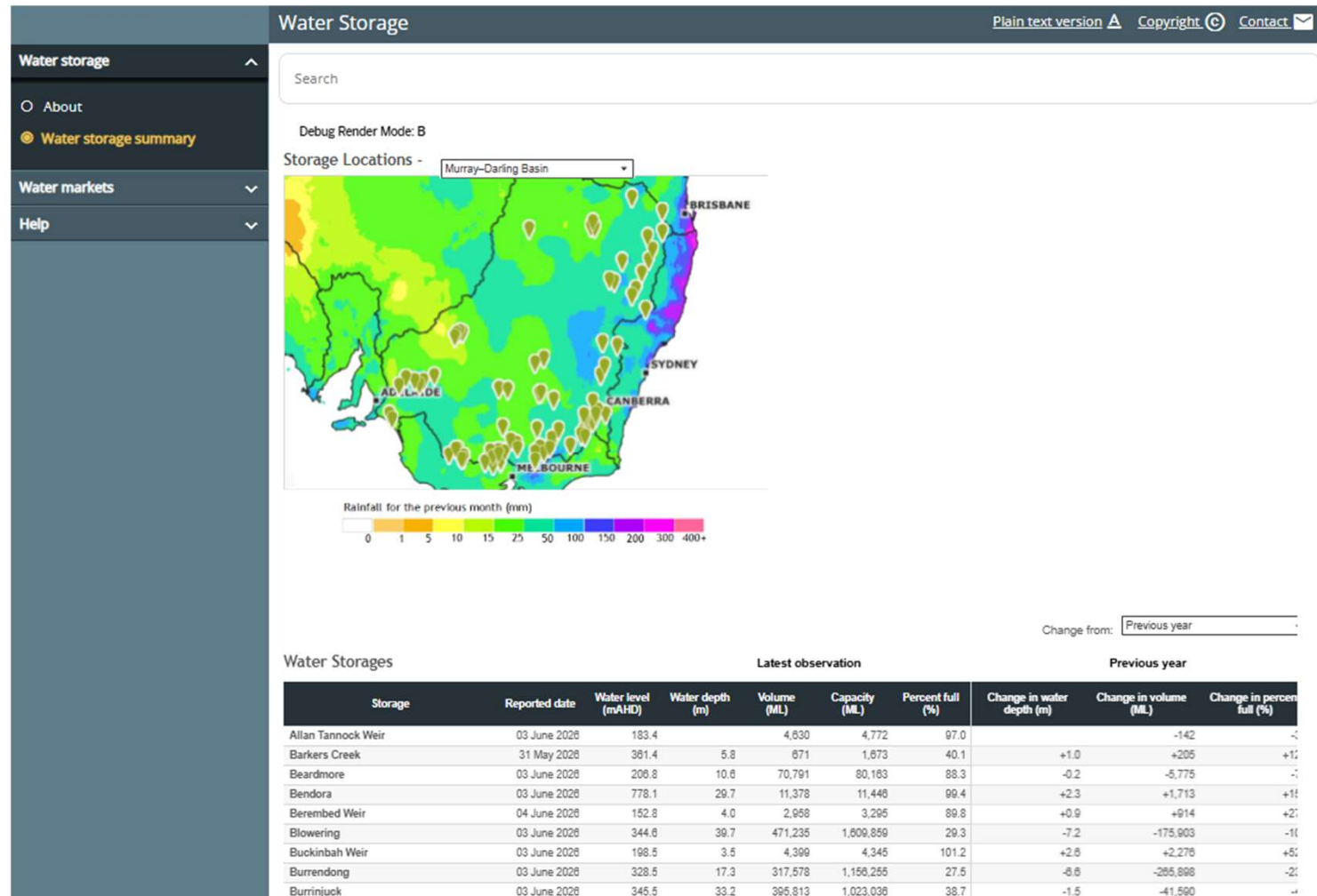
Murray–Darling Basin (MDB)
 Percentage full (%): 49.3
 Number of storages: 91
 Accessible volume (ML): 12,302,119
 Accessible capacity (ML): 24,938,519
 Change since last year (%): -8.9
 Reported date: 4 June 2026

The Murray–Darling Basin drainage division entirely contains the Australian Capital Territory and overlaps four states: Victoria; New South Wales; Queensland; and South Australia. Major rivers in this division include the Murray, Darling and Murrumbidgee Rivers.

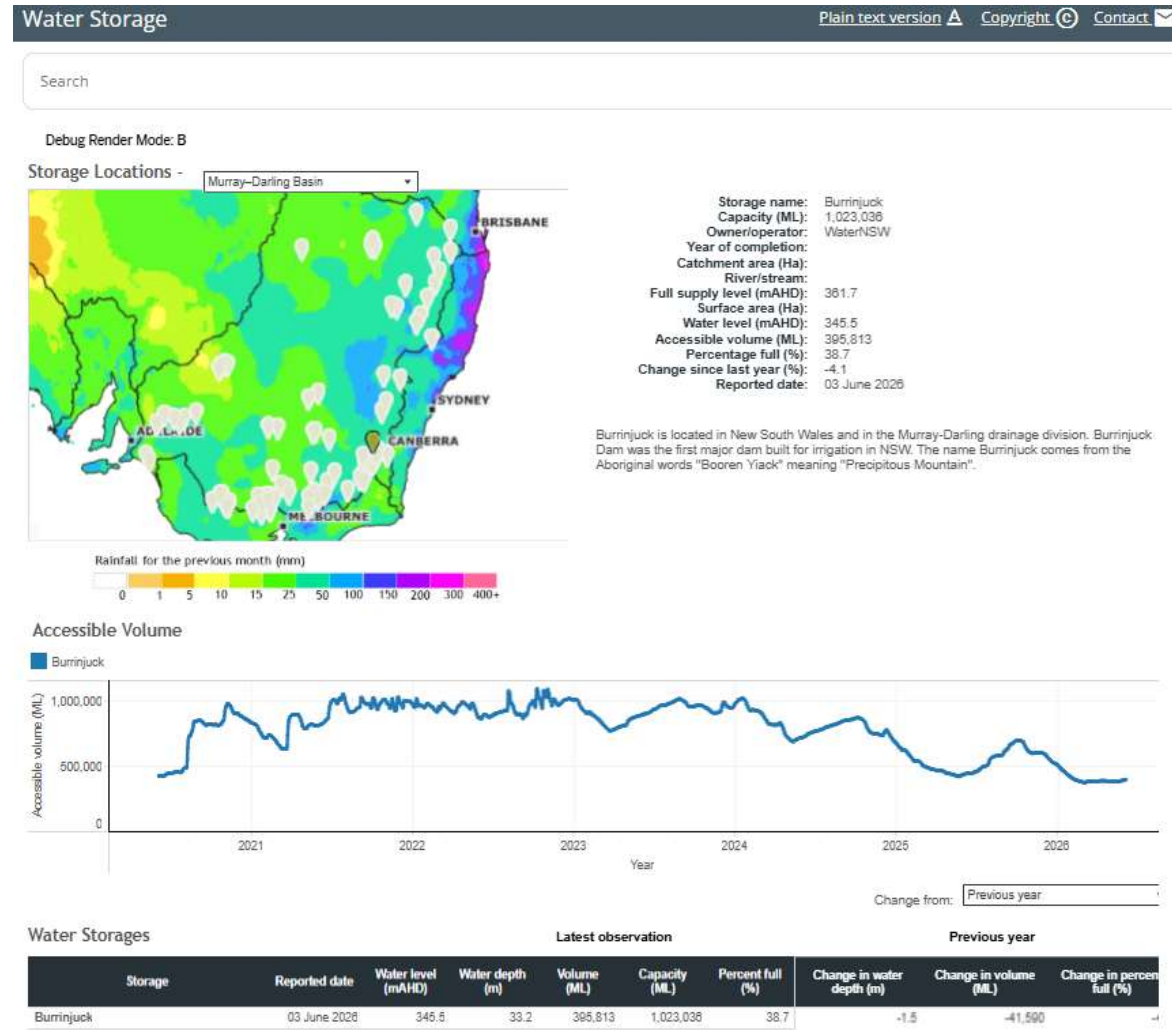
Accessible volume - Murray-Darling Basin



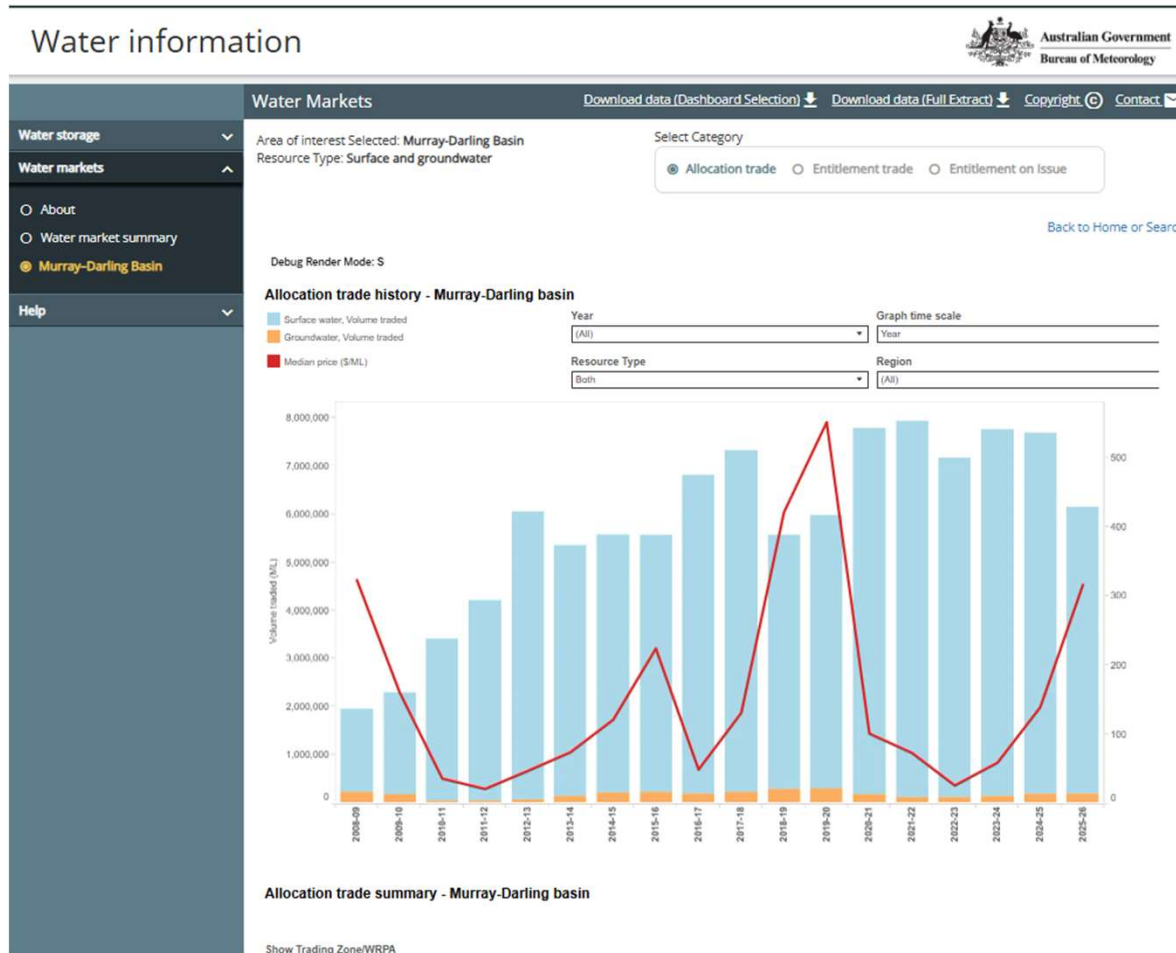
Water Information Dashboard – Example, step-through. Storage volumes



Water Information Dashboard – Example, step-through. Storage volumes

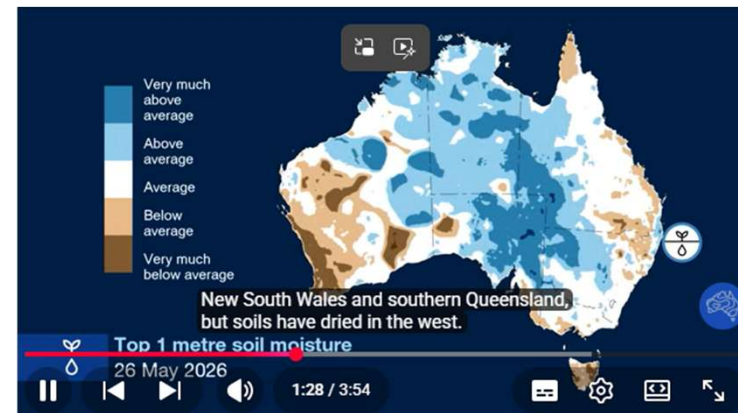
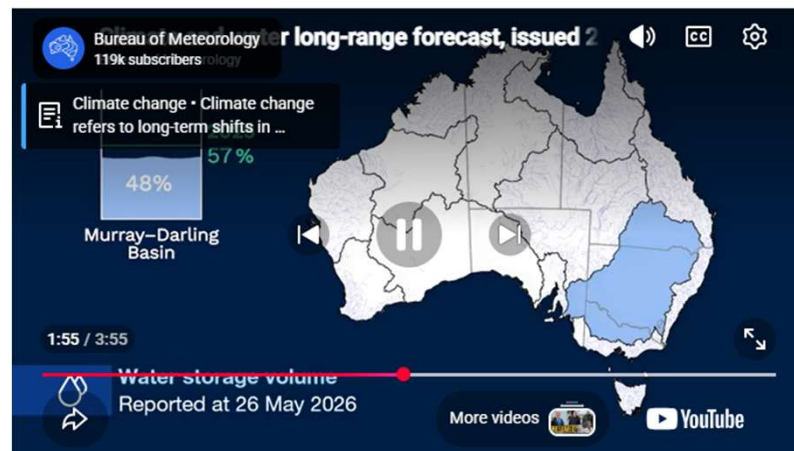
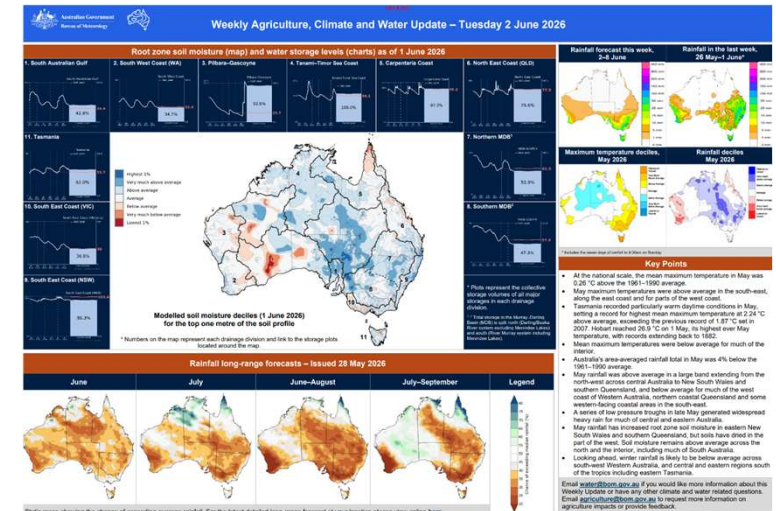


Water Information Dashboard – Example, step-through. Water markets dashboard



How can this information be used?

- Internally to produce insights
 - e.g Weekly Agriculture, Climate and Water Update (subscription)
 - Bureau Climate Outlook – [Overview – Video - Long-range forecasts](#)
- Usage in the public e.g academia, consultants, ag /irrigation industry, modellers, government, Department of Water in WA.



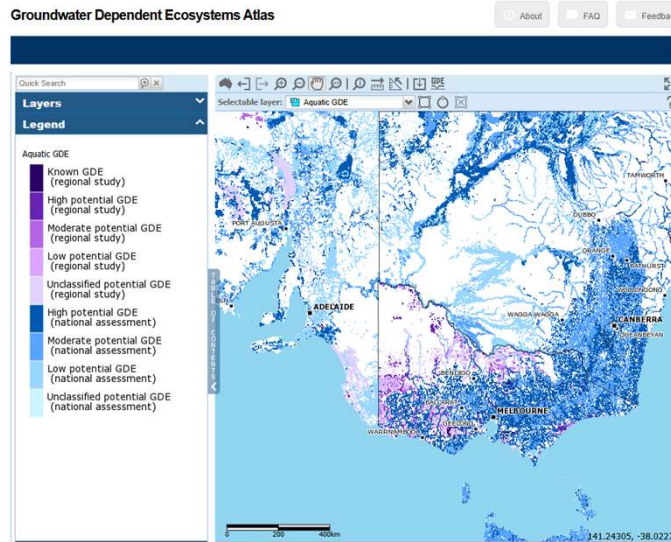
What's coming & other products?

- Water Market Reforms - Water Data Hub & Website
 - Water Markets Data and Decisions
- Murray-Darling Basin Water Information Portal
 - Water trades and allocations



Murray–Darling Basin

- GDE Atlas



Demo ?

- Bureau's Water information tools
 - [Australian Water Outlook](#)
 - [Water Information Dashboard: Water Information: Bureau of Meteorology](#)

Thank you
water@bom.gov.au

Elizabeth Johnston

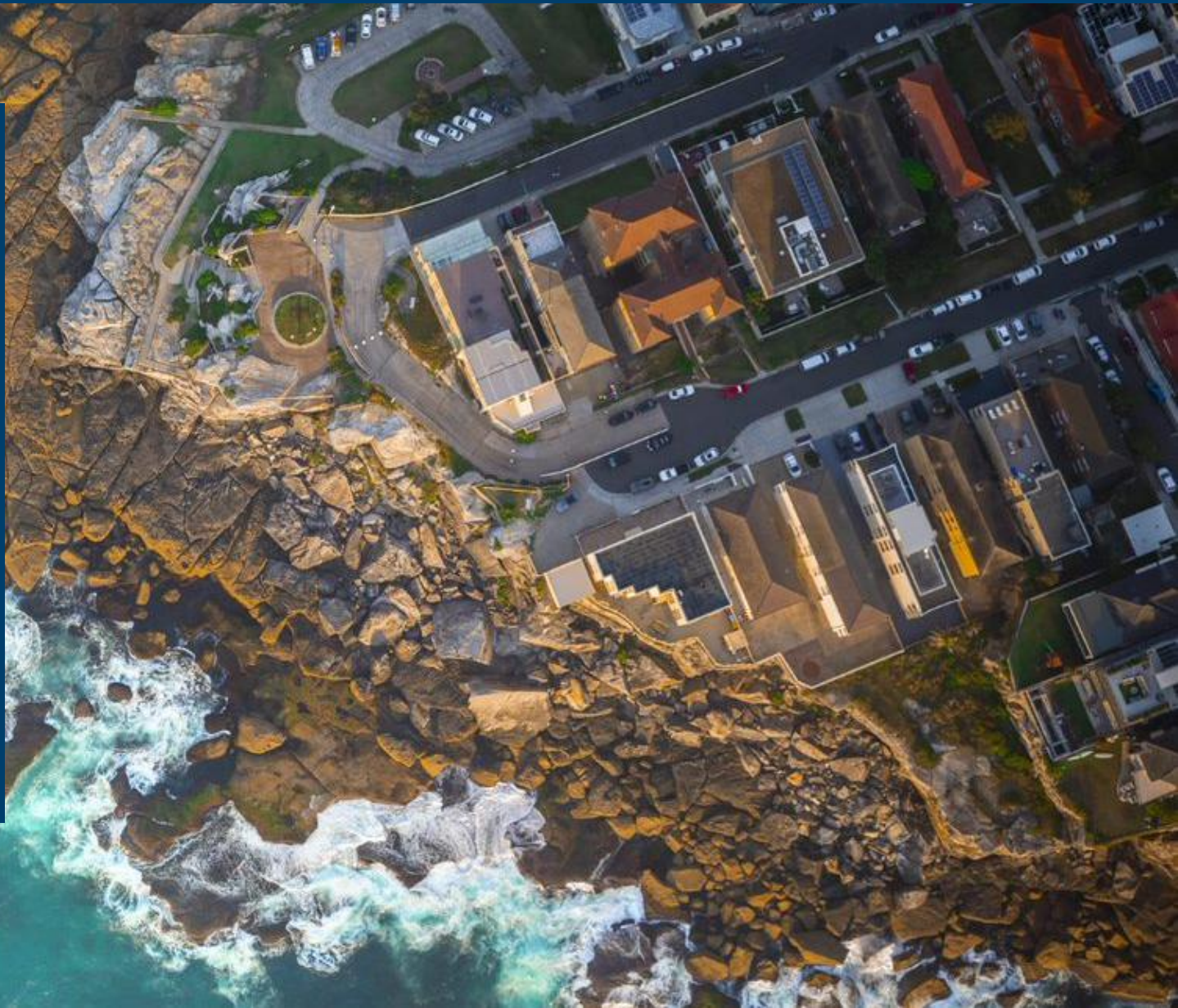


Australian Government
Bureau of Meteorology

Australian Climate Service tools for nature-related sensitive location assessments

Climate Risks to the Natural Environment

Tanya Schneider
ACS General Manager, Delivery



Acknowledgement of Country

The Australian Climate Service pays respect to Aboriginal and Torres Strait Islander peoples and their Nations of Australia.

We acknowledge their deep cultural, social, environmental, spiritual and economic connection to their lands and waters.

The Australian Climate Service values the role Aboriginal and Torres Strait Islander peoples' knowledges and cultural values can provide in understanding and responding to Australia's climate and natural hazard risks.



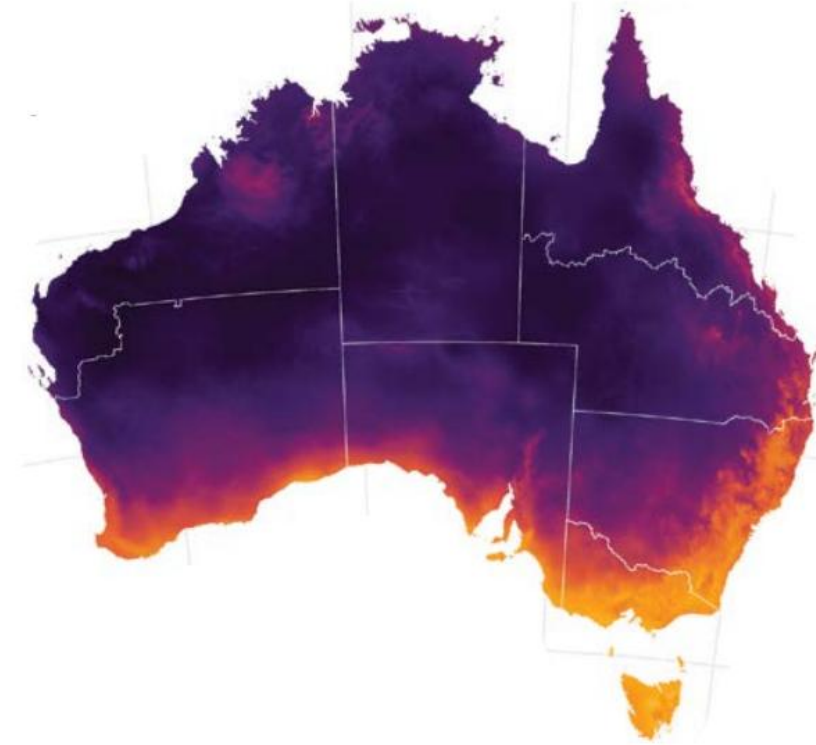
The Australian Climate Service helps Australia use climate risk information where it matters most. We turn complex climate risk into decision ready information, build shared national foundations that make risk understandable across systems and time, and steward the capability that allows information to be used and reused with confidence.



IPCC 2022 and Simpson 2021

Why is the ACS relevant for nature-related sensitive location assessments?

- Central source of climate, hazard, exposure, vulnerability and risk data
- Complements detailed biodiversity or asset level data
- ACS data and information provides the opportunity to:
 - Assess where assets overlap with climate risks
 - Assess risks under different climate scenarios
 - Identify potential ecosystem stress
 - Provide data inputs for disclosures



Benefits of using ACS information

- Aggregates authoritative national datasets into one place
- Provides consistent, standardised geospatial formats
- Enables forward-looking scenario analysis
- Offers open access data
- Continuing to grow

- ACS is strongest in climate interface risks, rather than detailed biodiversity condition

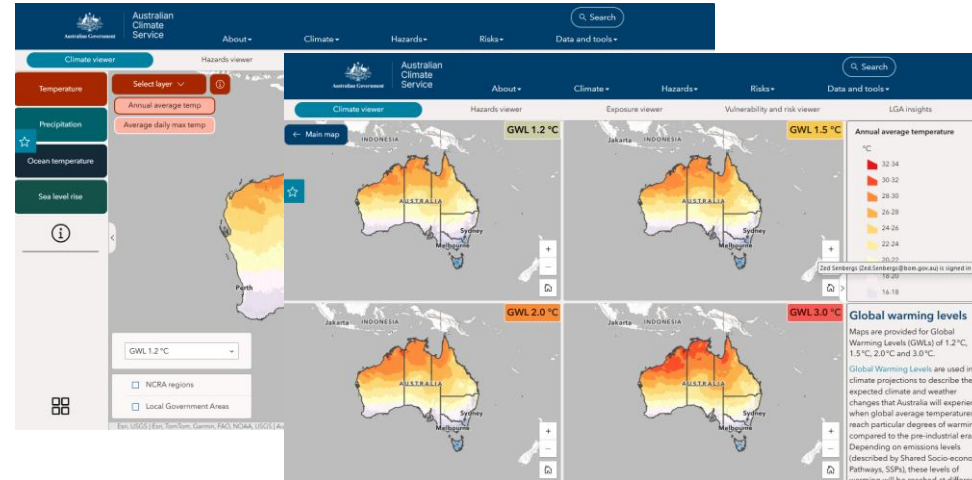


ACS Data Explorer

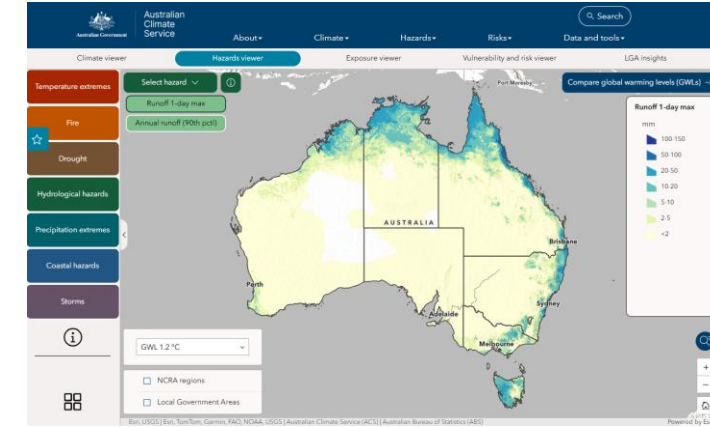
The ACS data explorer enables visualisation of data across hazard, exposure, and vulnerability and risk maps, as well as insights at the Local Government Area level.

<https://www.acs.gov.au/pages/data-explorer>

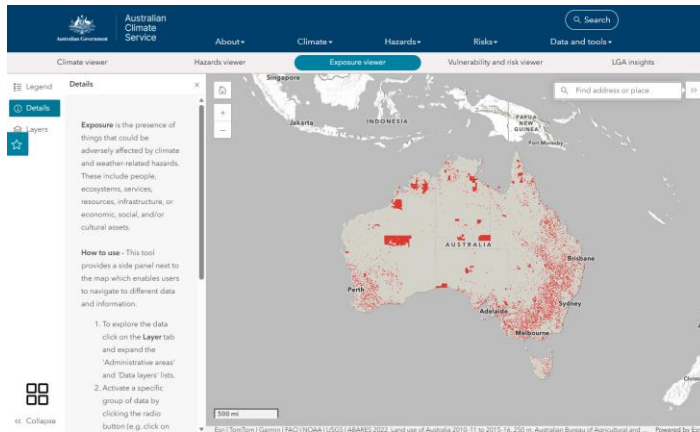
Climate



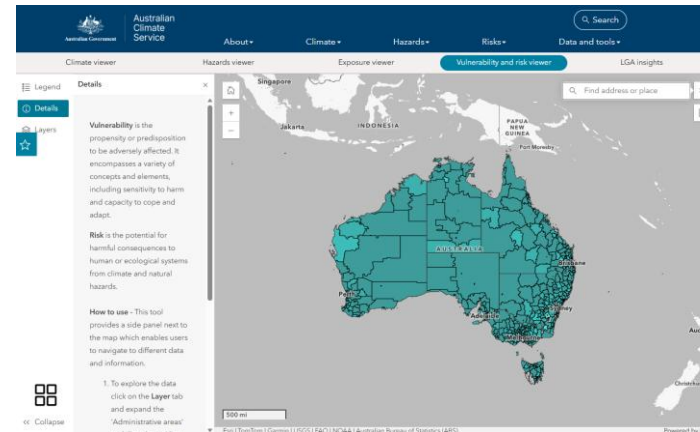
Hazard



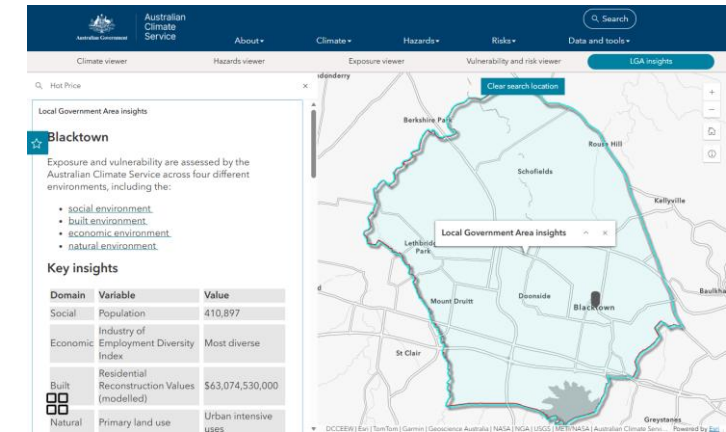
Exposure



Vulnerability and risk



LGA insights



ACS Data Catalogue

Most data on the Explorer is available on the Catalogue

48 datasets including:

- 16 Climate and Hazard Scientific Data sets with over 50 indices available
- New exposure and vulnerability datasets
- Data available in varying formats including webservices, image services and raw data
- Links to data other data sources including Digital Atlas (GA) and Data Access Portal (CSIRO)

www.acs.gov.au/pages/catalogue

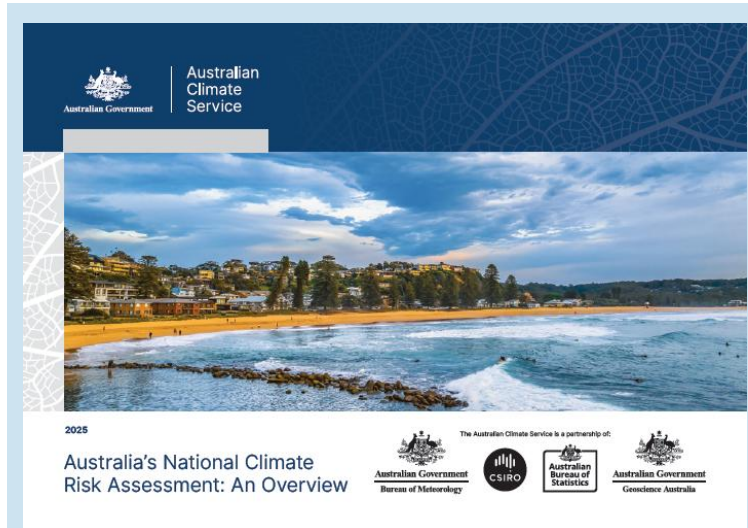
The screenshot shows the ACS Data Catalogue homepage. At the top is a navigation bar with 'About', 'Climate', 'Hazards', 'Risks', and 'Data and tools'. Below this is a search bar. The main content is divided into two sections: 'Climate datasets' and 'Hazard datasets'. Each section contains a grid of 16 dataset cards. Each card features a title, a small icon, the Australian Climate Service logo, and a brief description of the data. The 'Climate datasets' include Ocean temperature climate variables, Precipitation climate variables, Sea level variables, and Temperature climate variables. The 'Hazard datasets' include Coastal hazard variables, Convective storm variables, Drought variables, Extratropical storm variables, Fire variables, Hydrological hazard variables, Ocean chemistry variables, Ocean temperature hazard variables, Precipitation hazard variables, Temperature extremes and heat hazard variables, and Tropical cyclone variables.

Vulnerability and risk datasets

Two maps of Australia are shown. The left map is titled 'SA2 Australian Climate Social Vulnerability Index (ACSVI)' and shows a color-coded map of Australia with a legend. The right map is titled 'LGA Industry of Employment Diversity Index (IEDI)' and shows a color-coded map of Australia with a legend. Both maps include the Australian Bureau of Statistics logo.

The screenshot shows the search results page for 'Regional sea level rise (SLR) projections'. The page has a navigation bar with 'About', 'Climate', 'Hazards', and 'Risks'. The main content area is divided into two columns. The left column shows search filters for 'Source' (Geoscience Australia, Australian Bureau of Statistics, etc.), 'Tags' (National Climate Risk Assessment, etc.), and 'Categories' (Abs Data, Acs Key Themes, etc.). The right column shows the details for the selected dataset, including the title 'Regional sea level rise (SLR) projections', the source 'Geoscience Australia', the type 'File Geodatabase', and the date updated '17/07/2021'. There are also links to other related datasets like 'Extratropical storm variables' and 'Precipitation hazard variables'.

National Climate Risk Assessment



Australia's National Climate Risk Assessment: An Overview



Australia's National Climate Risk Assessment Report



Australia's Future Climate and Hazards Report

Find the **National Climate Risk Assessment** on the **Australian Climate Service** website acs.gov.au





Natural environment

Climate risks are determined by the interaction of risk elements, including hazards, exposures and vulnerabilities. This is a risk summary for the Natural environment system.



Climate and hazards

- Bushfires
- Drought
- Changes in temperature
- Flooding
- Ocean warming and acidification
- Changes in precipitation patterns

Exposures

- Aboriginal and Torres Strait Islander communities
- Carbon sequestration
- Communities that rely on ecosystem services
- Freshwater ecosystems
- Marine and estuarine ecosystems
- Terrestrial ecosystems
- Water quality and supply

Vulnerabilities

- Primary industries and tourism
- Biodiversity loss
- Ecosystem degradation
- Habitat connectivity
- Rural and remote communities
- Water use and availability



IMPACTS AND RISKS



Aboriginal and Torres Strait Islander peoples' connection to Country



Changes to ecosystem services underpinning other systems



Ecosystem collapse



Marine and terrestrial biodiversity loss



Reduction in ability to sequester carbon and mitigate climate change



Reduction in ecosystem adaptive capacity



Increased biosecurity risks and significant species loss



Tropicalisation of temperate marine ecosystems



Additional resources



<https://www.acs.gov.au/pages/systems-natural>



Find the National Climate Risk Assessment and supporting technical resources on the Australian Climate Service website
[acs.gov.au](https://www.acs.gov.au)



Demonstration

Climate risk knowledge for Australia



National Climate Risk Assessment

This is the first national assessment of climate risks for Australia.

The National Assessment identifies key risks and impacts to systems. It provides national climate risk information to help guide future adaptation across Australia.

[Learn more](#)

Temperature

Precipitation

Ocean temperature

Sea level rise

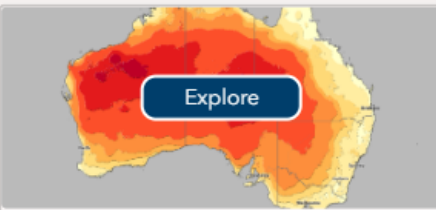


Select layer ▾



Australian Climate Service

Data explorer



Explore

Climate viewer

Visualise Australian climate variables at the national level



Explore

Hazards viewer

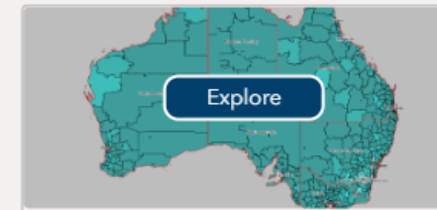
Visualise hazards across a range of global warming levels



Explore

Exposure viewer

Visualise exposure data at the national level



Explore

Vulnerability and risk viewer

Visualise vulnerability and risks at the national level



Explore

LGA insights

Explore climate risk by Local Government Area (LGA) to get summarised information



Open

Data catalogue

Search the Australian Climate Service data catalogue



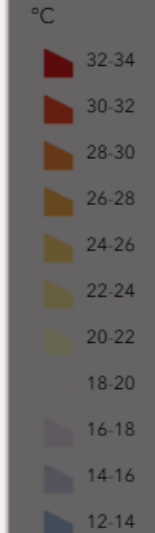
Data sources

Access additional information on the data used in this application

View

Disclaimer: This web application is designed to provide visualisations of some of the climate risk information that the Australian Climate Service currently has available. Its intended audience is climate adaptation practitioners and policy makers and is intended for use in conjunction with other information sources. This information included in this application may be improved and updated over time.

Annual average temperature



Local Government Areas

Temperature

Precipitation

Ocean temperature

Sea level rise

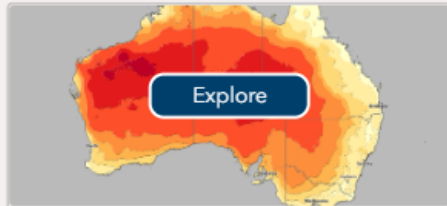


Select layer



Australian Climate Service

Data explorer



Explore

Climate viewer

Visualise Australian climate variables at the national level



Explore

Hazards viewer

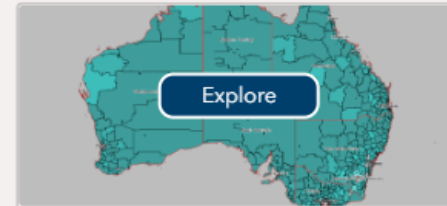
Visualise hazards across a range of global warming levels



Explore

Exposure viewer

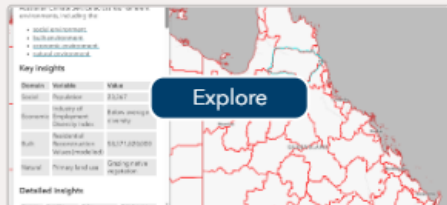
Visualise exposure data at the national level



Explore

Vulnerability and risk viewer

Visualise vulnerability and risks at the national level



Explore

LGA insights

Explore climate risk by Local Government Area (LGA) to get summarised information



Open

Data catalogue

Search the Australian Climate Service data catalogue



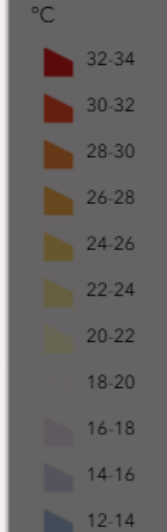
Data sources

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View

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Annual average temperature





Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Select layer

Annual average temp

Average daily max temp

Precipitation

Ocean temperature

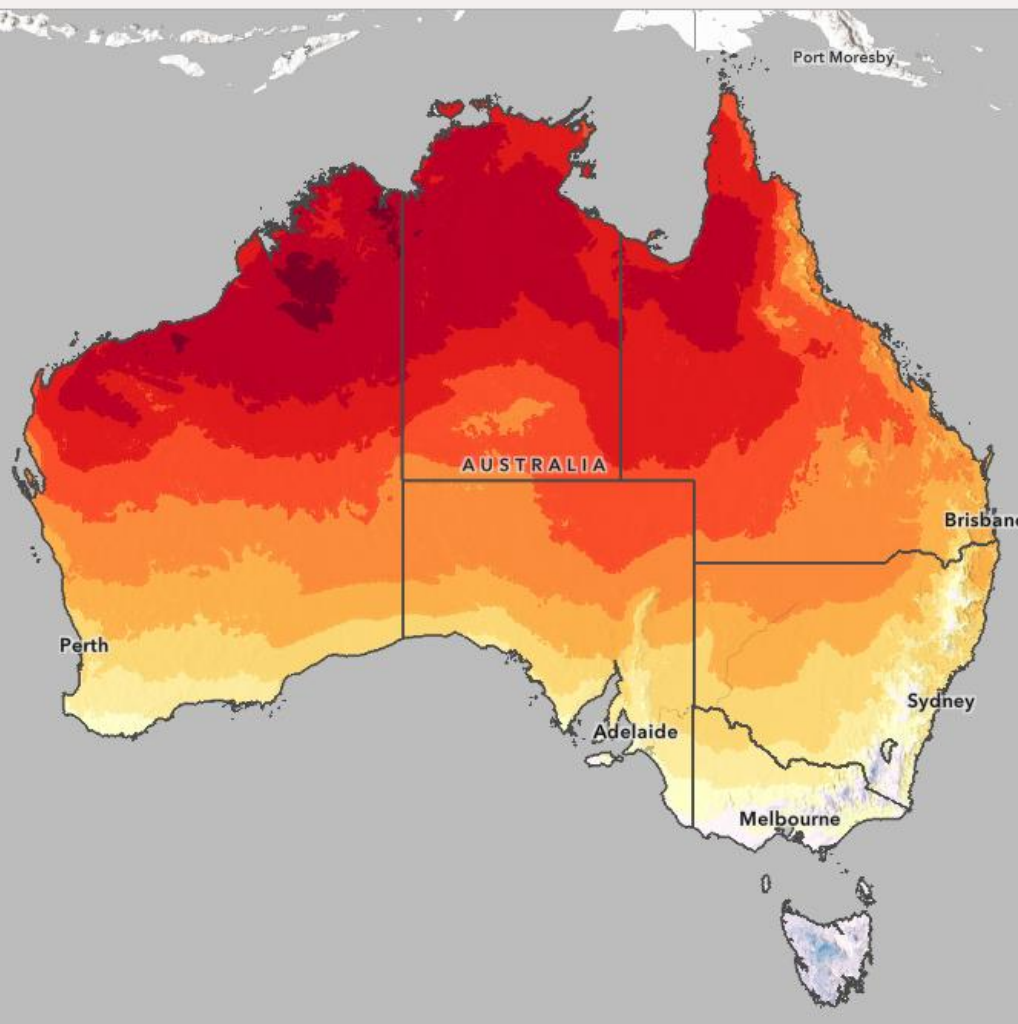
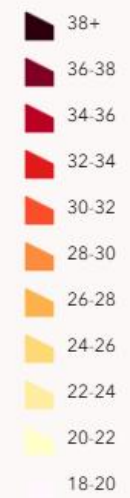
Sea level rise



Compare global warming levels (GWLs)

Average daily max temperature

°C



GWL 1.2 °C

NCRA regions

Local Government Areas



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

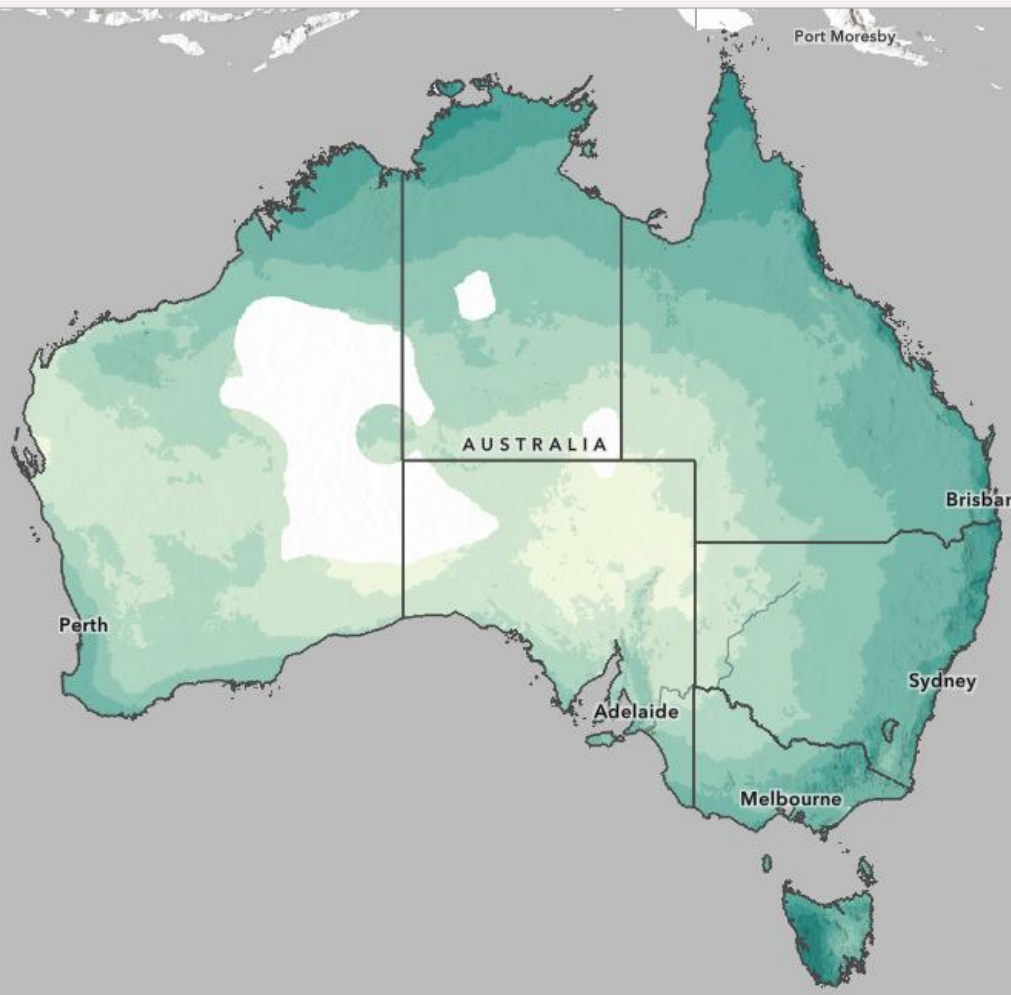
- Temperature
- Precipitation
- Ocean temperature
- Sea level rise

Select layer

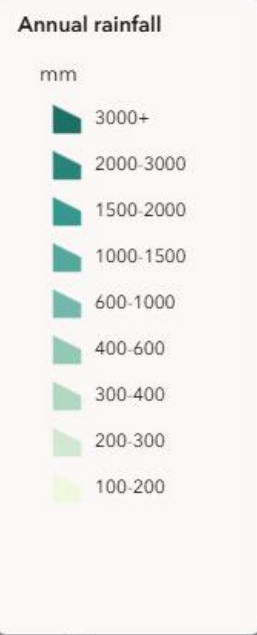
Annual rainfall

Dry season rainfall

Wet season rainfall



Compare global warming levels (GWLs)



50th percentile

GWL 3.0 °C

NCRA regions

Local Government Areas



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Select layer

Sea surface temp

Precipitation

Ocean temperature

Sea level rise



GWL 1.2 °C

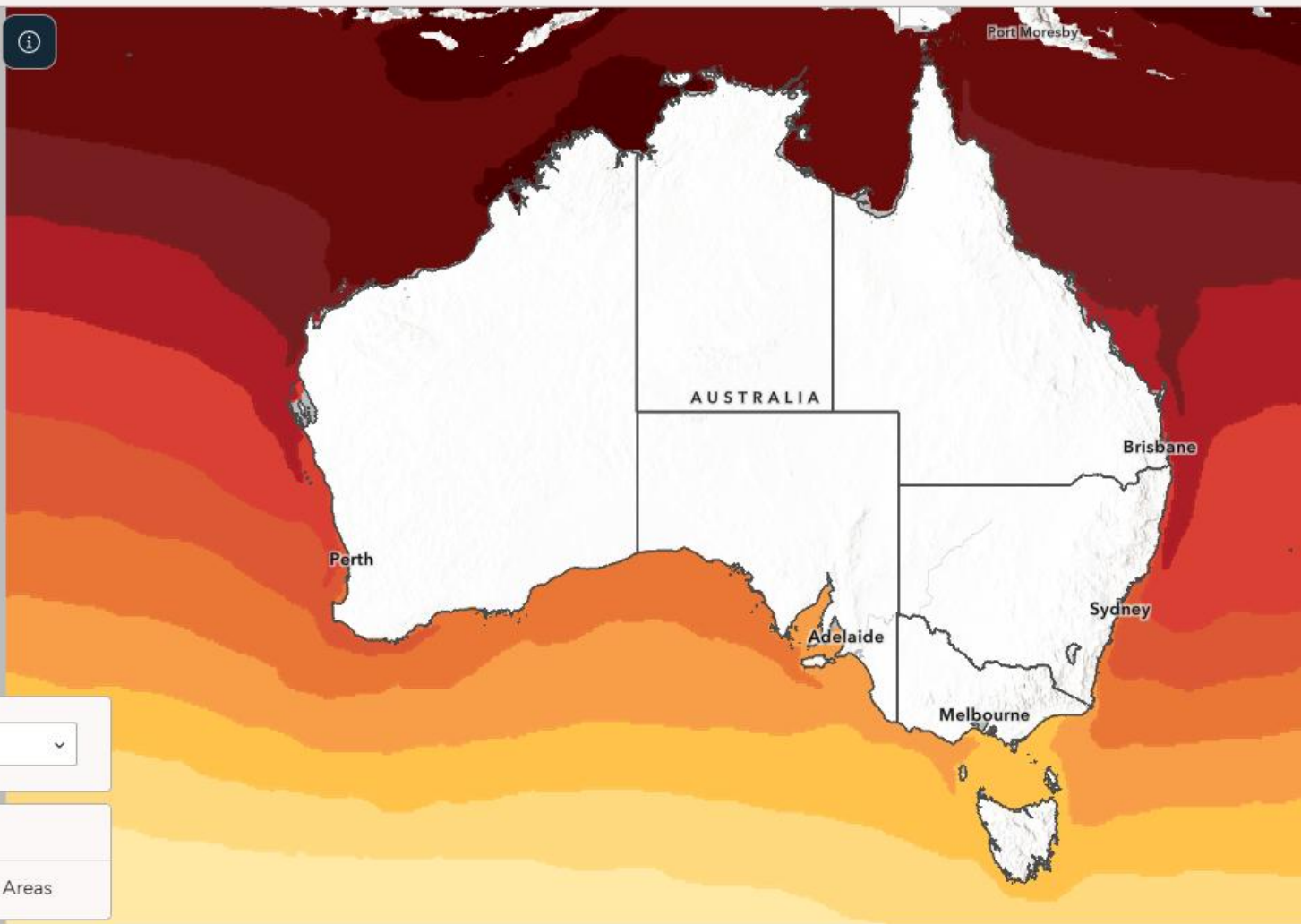
NCRA regions

Local Government Areas

Compare global warming levels (GWLs)

Sea surface temperature

°C



Auckland

Christchurch



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Precipitation

Ocean temperature

Sea level rise

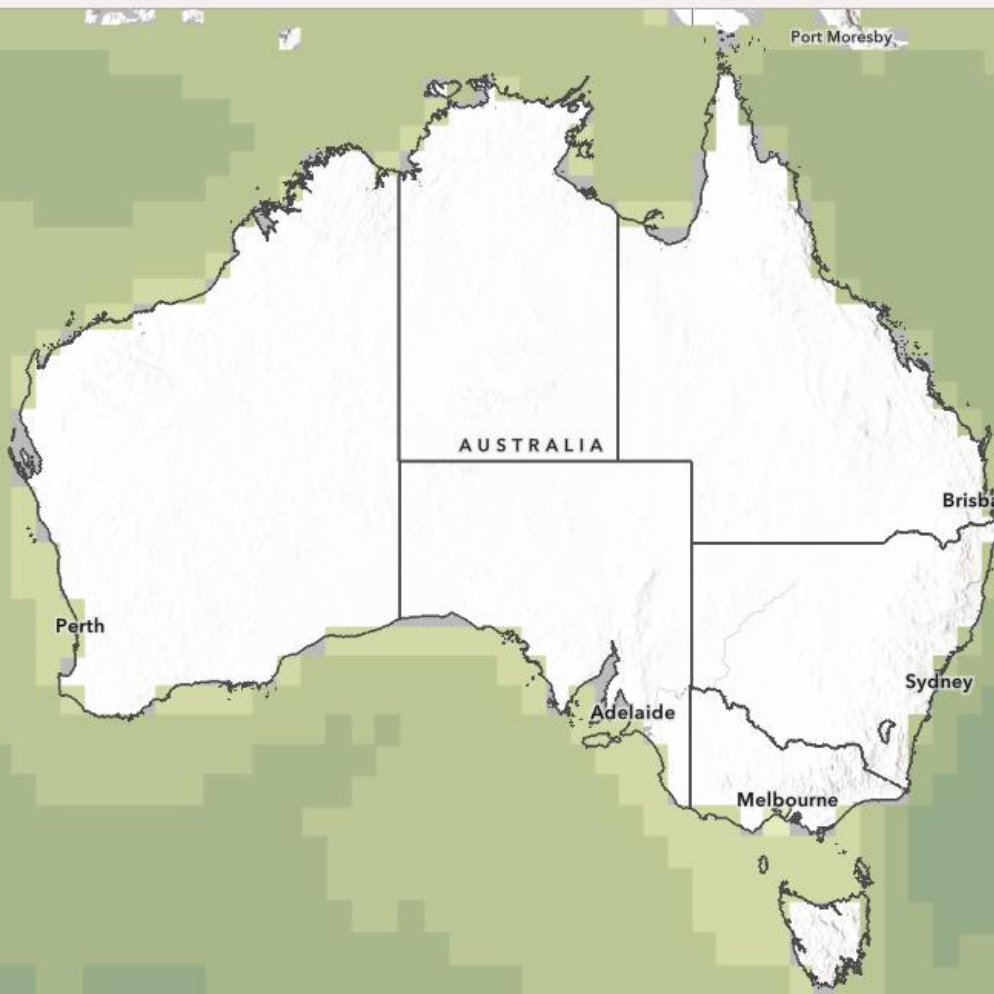
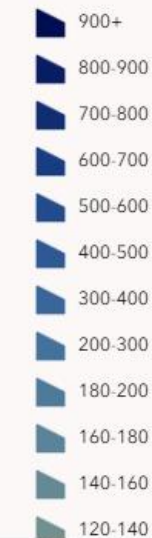
Select layer

Sea level rise

Compare sea level rise (SLR) →

Sea level rise

mm



SLR 0.06 m

NCRA regions

Local Government Areas



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Select layer



Annual average temp

Average daily max temp

Precipitation

Ocean temperature

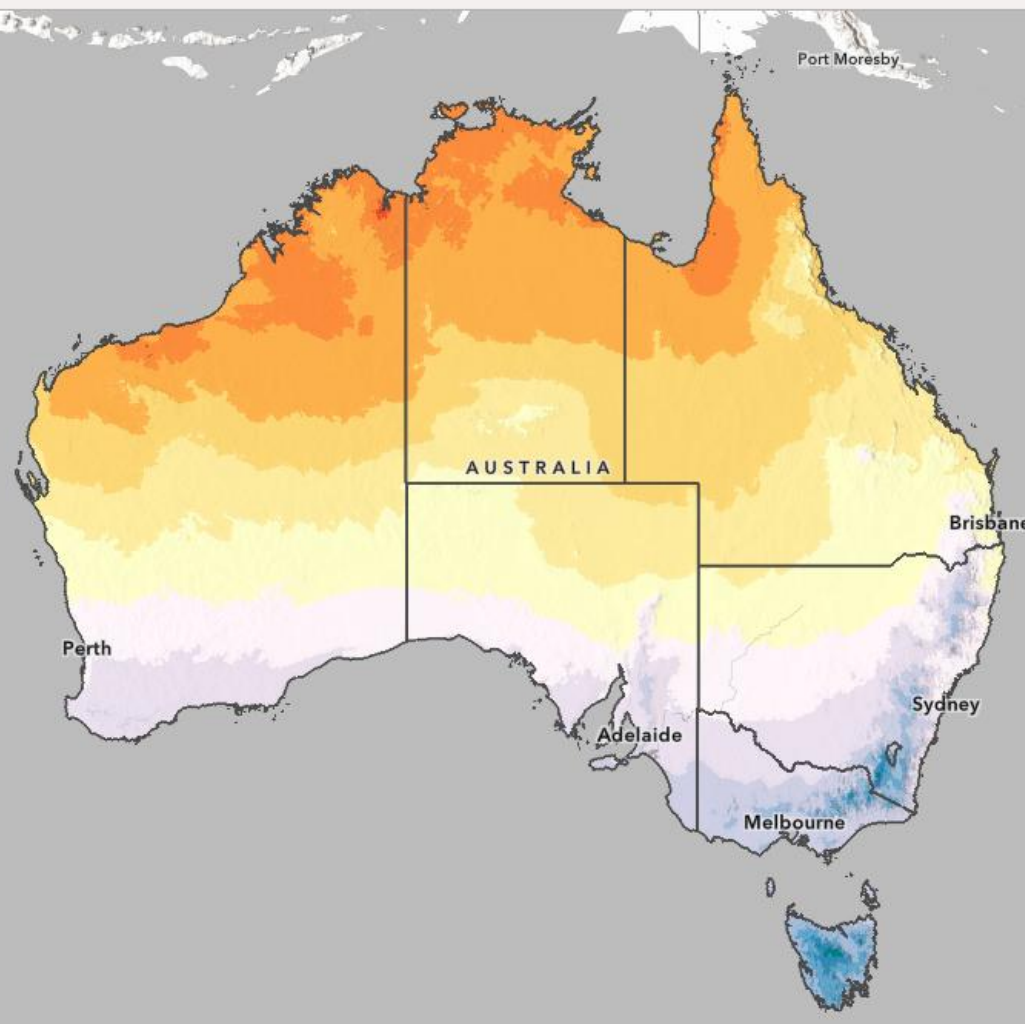
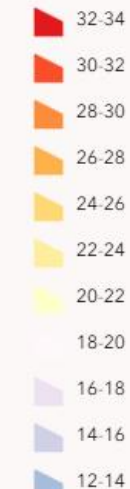
Sea level rise



Compare global warming levels (GWLs)

Annual average temperature

°C



GWL 1.2 °C

NCRA regions

Local Government Areas



Climate



★ What are the climate variables?

The climate viewer provides information on a number of climate variables:

Temperature - the annual average temperature and annual average of daily maximum temperatures

Precipitation - the annual rainfall, the rainfall for April to October (dry season) and rainfall for November to March (wet season)

Ocean temperature - the annual average sea surface temperature

Sea level rise - the change in sea level from present day.

What observation data is used?

Some inputs into modelled rainfall, runoff, drought and temperature, for example, use gridded rainfall data from the Australian Gridded Climate Dataset (AGCD, previously named AWAP) over the period 1991-2020. These grids are created from all available daily rainfall observations, based on the total rainfall recorded over the 24 hours to 9am local time. This allows the spatial patterns of rainfall extremes to be visualised across the whole of Australia, rather than at just the locations with a rainfall gauge.

In data-sparse areas extreme events tend to be under-reported, meaning that extremes indices in those locations will be biased and should not be used. Therefore, regions with sparse station coverage - mainly in central areas of WA, SA and NT - where station observations had little influence on the final gridded fields on at least 20% of days (a weight less than 1) are not shown.

Further details can be found on the Bureau of Meteorology's [Rainfall Maps](#) page.

Further information

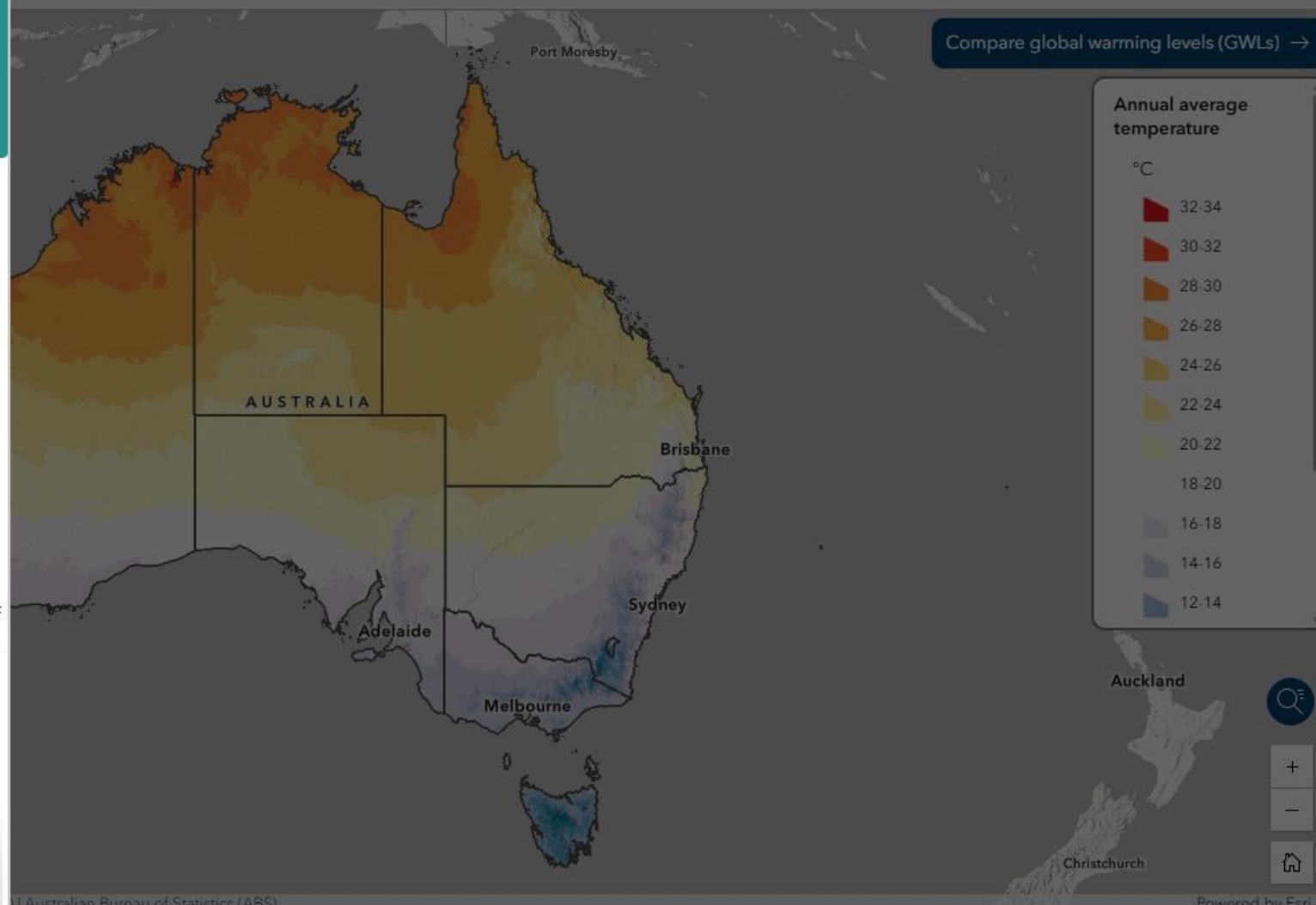


Exposure viewer

Vulnerability and risk viewer

LGA insights

Compare global warming levels (GWLs) →



Australian Bureau of Statistics (ABS)

Powered by Esri



Climate viewer

Hazards viewer

Exposure viewer

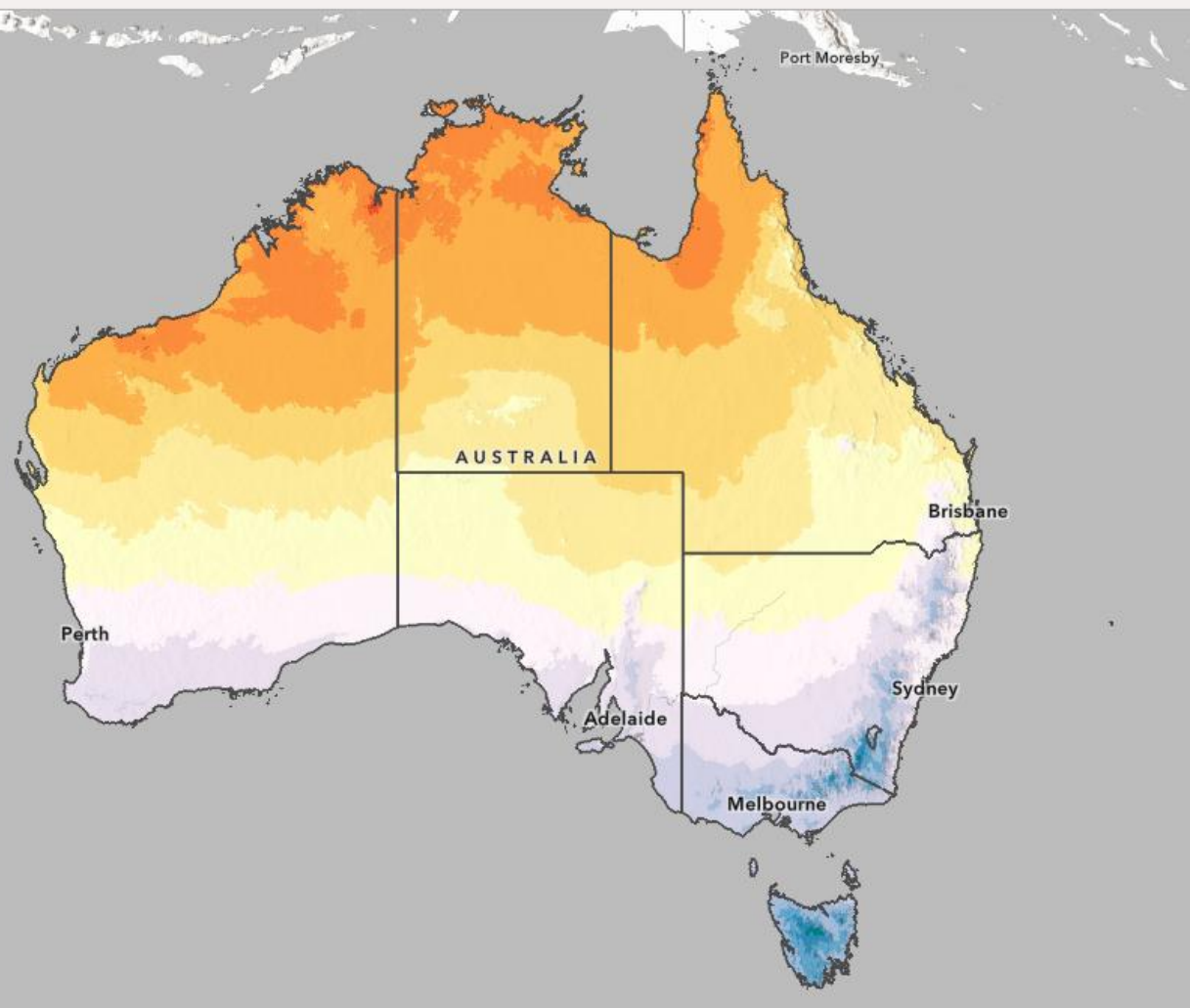
Vulnerability and risk viewer

LGA insights

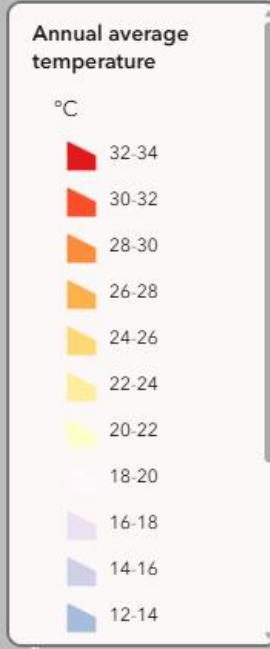
- Temperature
- Precipitation
- Ocean temperature
- Sea level rise

Select layer

- Annual average temp
- Average daily max temp



Compare global warming levels (GWLs) →



GWL 1.2 °C

NCRA regions

Local Government Areas



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

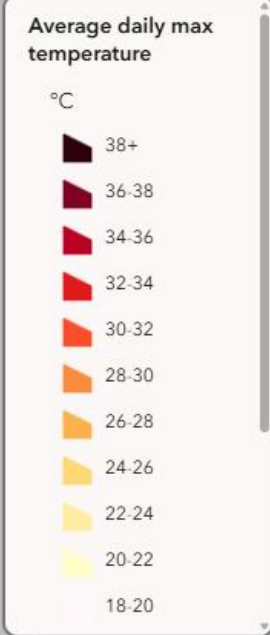
LGA insights

- Temperature
- Precipitation
- Ocean temperature
- Sea level rise

Select layer

- Annual average temp
- Average daily max temp

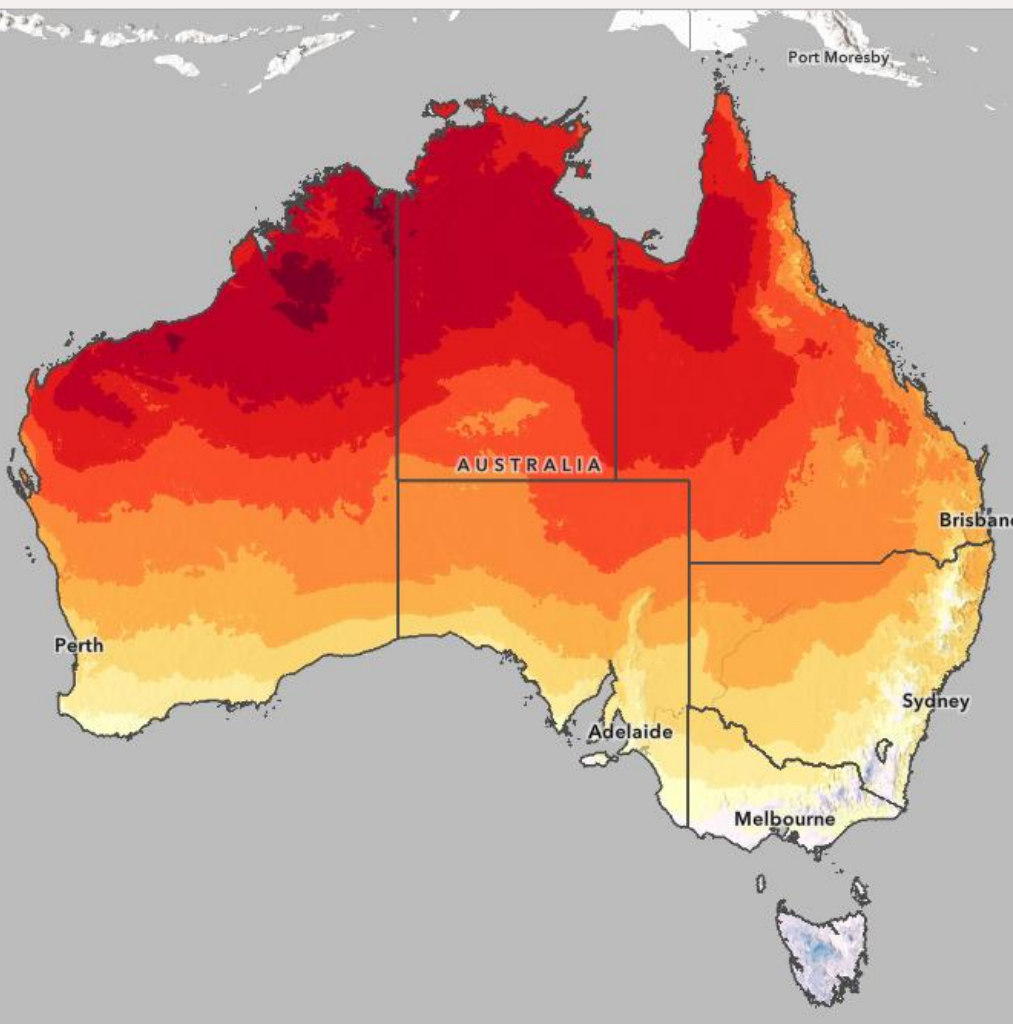
Compare global warming levels (GWLs) →



GWL 1.2 °C

NCRA regions

Local Government Areas



Auckland

Christchurch

Map navigation controls: search, zoom in (+), zoom out (-), home



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Select layer

Annual average temp

Average daily max temp

Precipitation

Ocean temperature

Sea level rise



GWL 1.2 °C

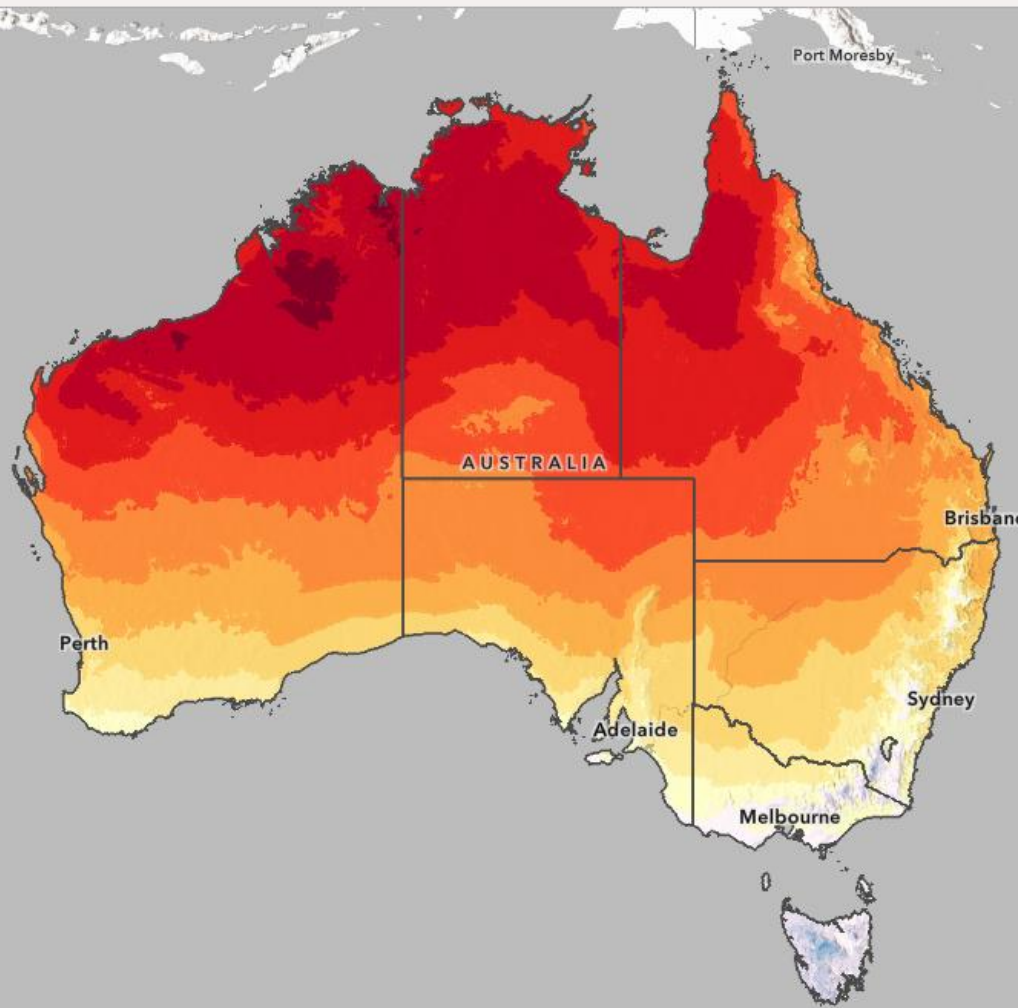
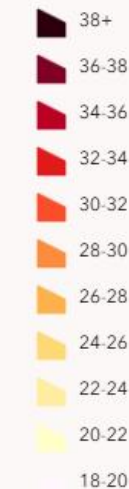
NCRA regions

Local Government Areas

Compare global warming levels (GWLs)

Average daily max temperature

°C



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability viewer

Temperature

Select layer

Annual average temp

Average daily max temp

Precipitation

Ocean temperature

Sea level rise



GWL 1.2 °C

NCRA regions

Local Government Areas

Esri, USGS | Esri, TomTom, Garmin, FAO, NOAA, USGS | Australian Climate Service (ACS) | Australian Bureau of Statistics (ABS)



Temperature

The temperature category in the climate viewer includes maps for:

Annual average temp - the annual mean of daily average temperatures in degrees Celsius (°C)

Average daily max temp - the annual mean of daily maximum temperatures in degrees Celsius (°C).

The annual average temperature uses the average of a daily maximum temperature and daily minimum temperature (i.e. $T_{mean} = (T_{max} + T_{min}) / 2$), which is then averaged across a year.

The maps show the 50th percentile from 13 climate models. The 50th percentile is the median value, i.e. the value such that 6 models have higher totals for that period and 6 models have lower totals.

The maps include Global Warming Levels 1.2°C, 1.5°C, 2.0°C and 3.0°C (with respect to the pre-industrial 1850-1900 mean value) using data from climate model simulations.

Temperature information

Surface air temperature is a foundational indicator of climate change and is used as a measure for targets such as the Paris Agreement (UNFCCC, 2015). Both land and sea surface temperatures have widespread influence on climate and weather, while around 90% of the excess heat attributable to greenhouse gas emissions has been absorbed into the deeper oceans. Extreme land and sea temperatures can have profound and widespread impacts on both natural systems and human activities including health, environment, agriculture and energy.



Search

Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Precipitation

Ocean temperature

Sea level rise

Select layer

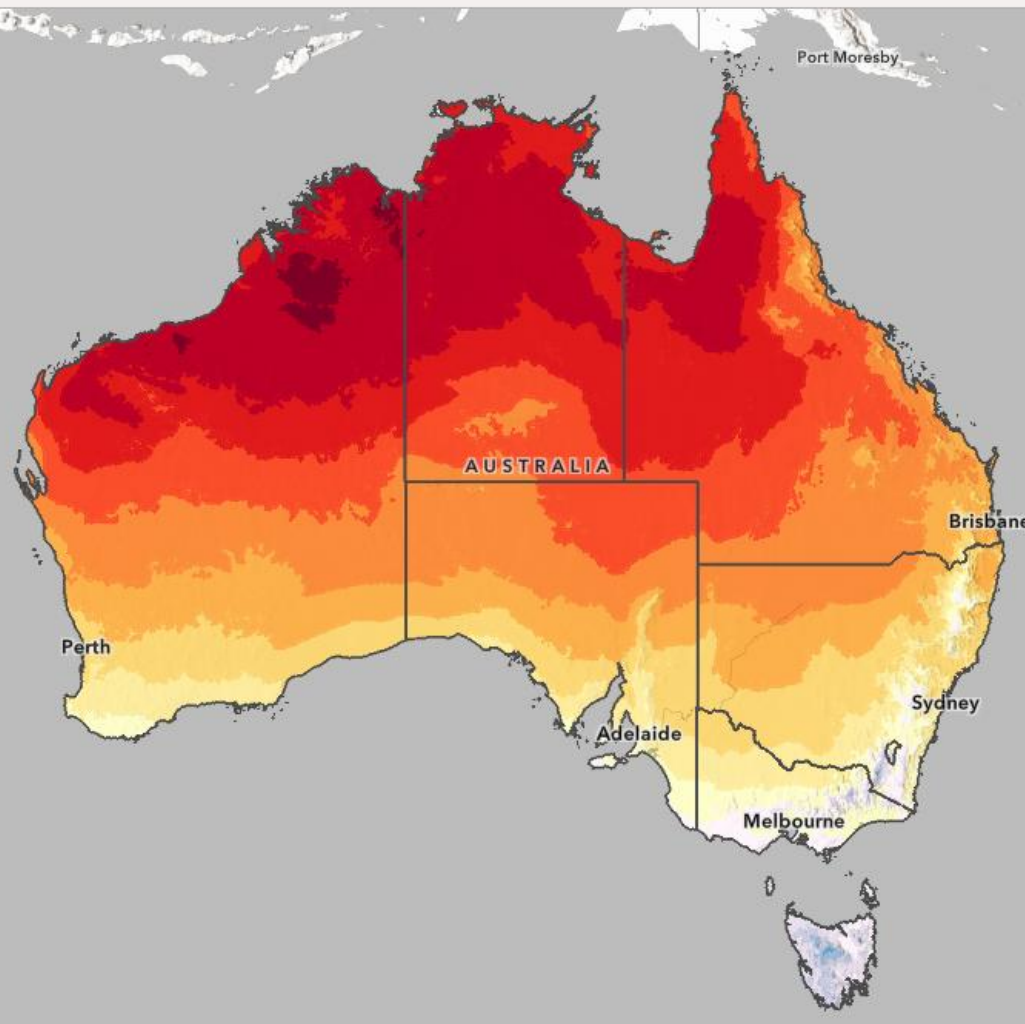
Annual average temp

Average daily max temp

Compare global warming levels (GWLs)

Average daily max temperature

°C



Search

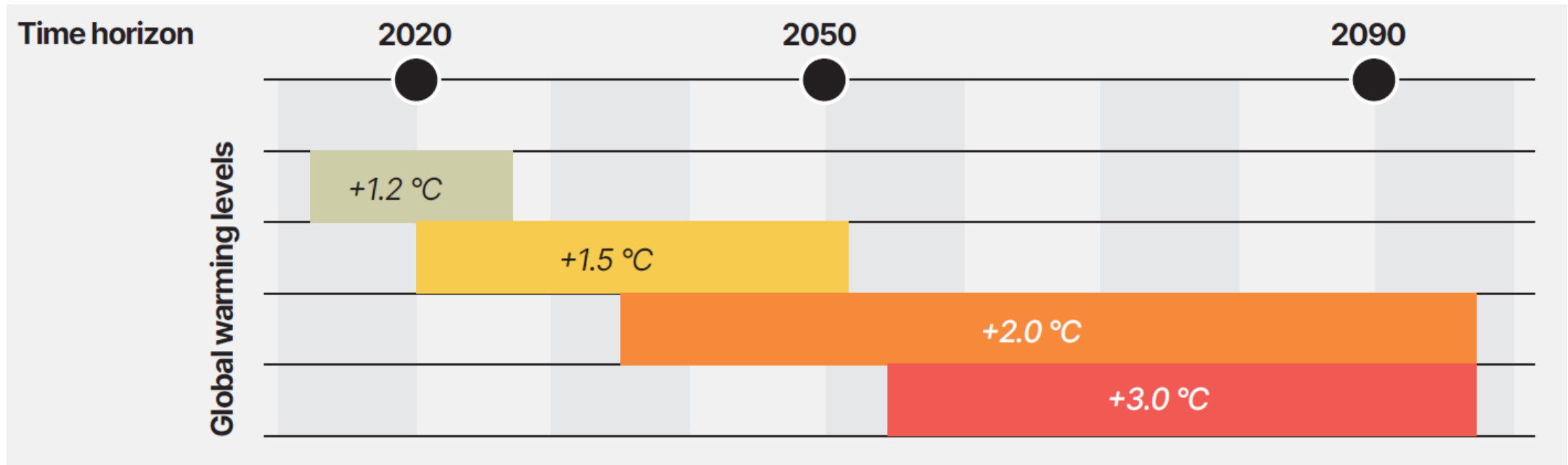
- ✓ GWL 1.2 °C
- GWL 1.5 °C
- GWL 2.0 °C
- GWL 3.0 °C

GWL 1.2 °C

NCRA regions

Local Government Areas

Global warming levels and time horizons





Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Precipitation

Ocean temperature

Sea level rise

Select layer

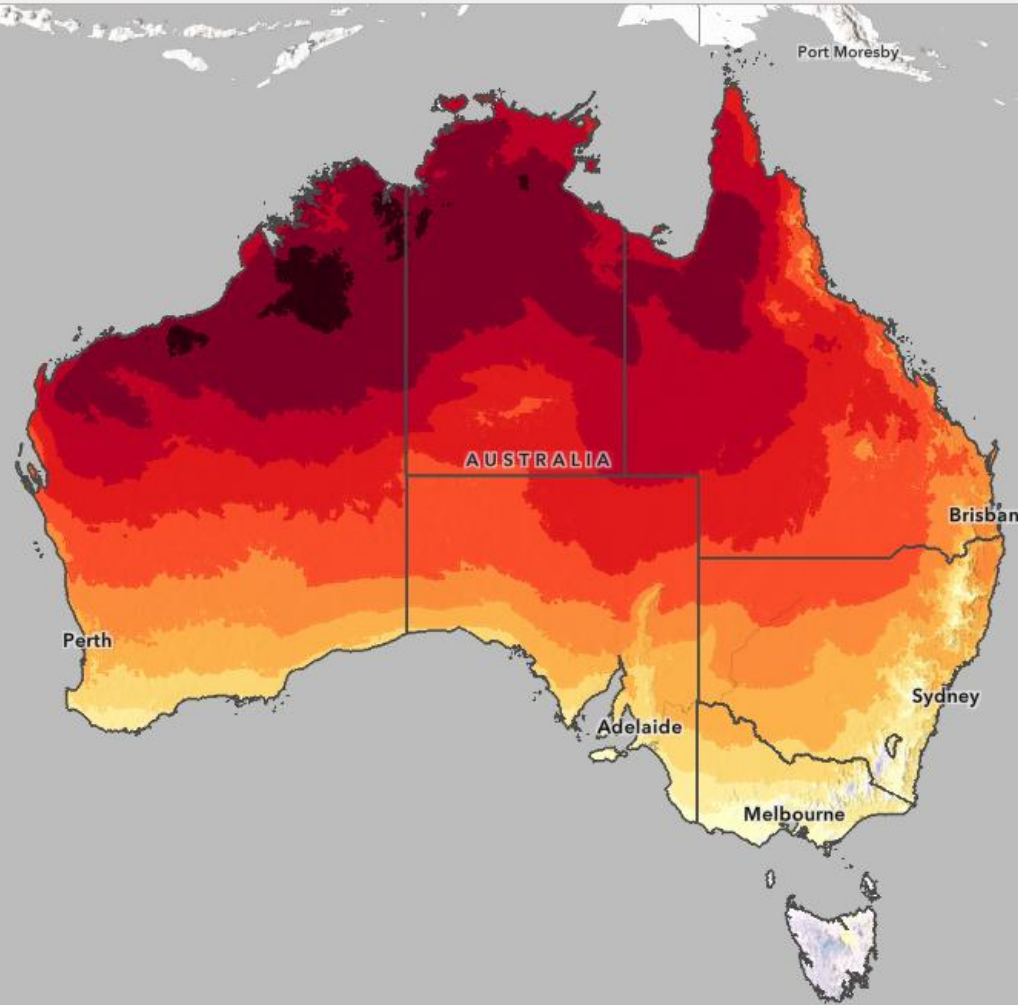
Annual average temp

Average daily max temp

Compare global warming levels (GWLs)

Average daily max temperature

°C



GWL 3.0 °C

NCRA regions

Local Government Areas



Search

Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

- Temperature
- Precipitation
- Ocean temperature
- Sea level rise

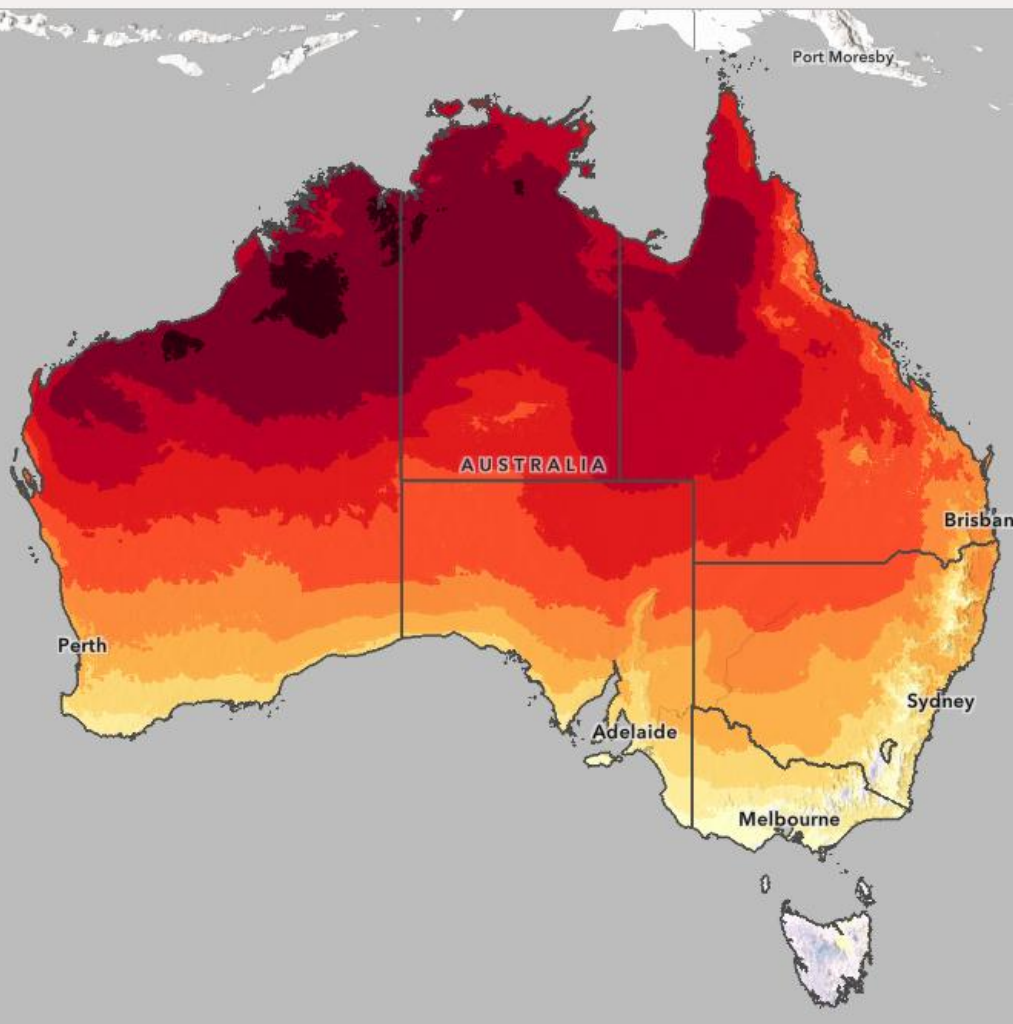
Select layer

- Annual average temp
- Average daily max temp



GWL 3.0 °C

- NCRA regions
- Local Government Areas



Compare global warming levels (GWLs)





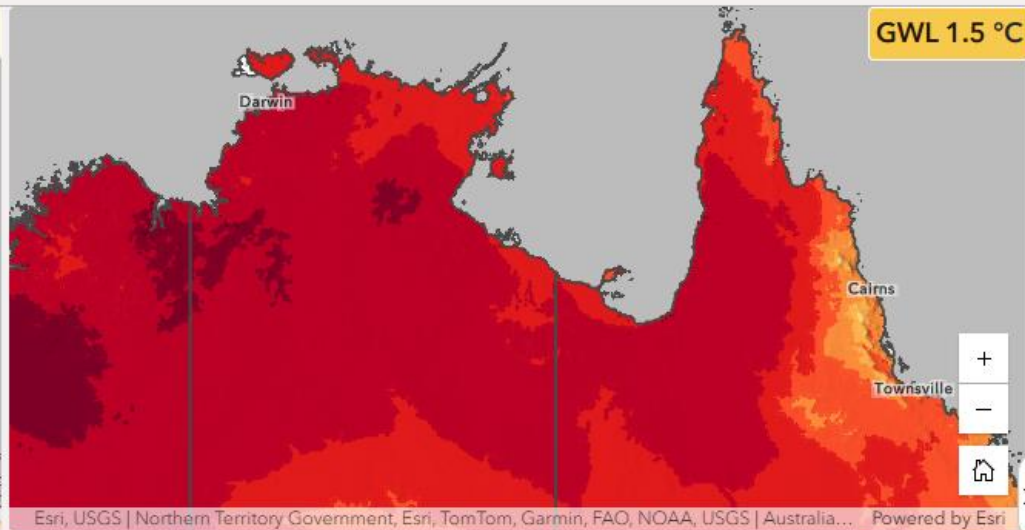
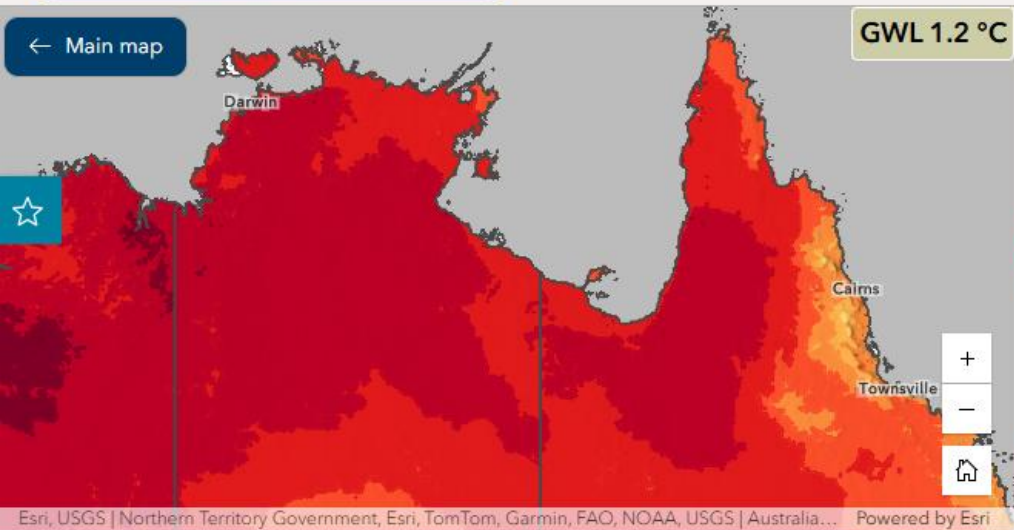
Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

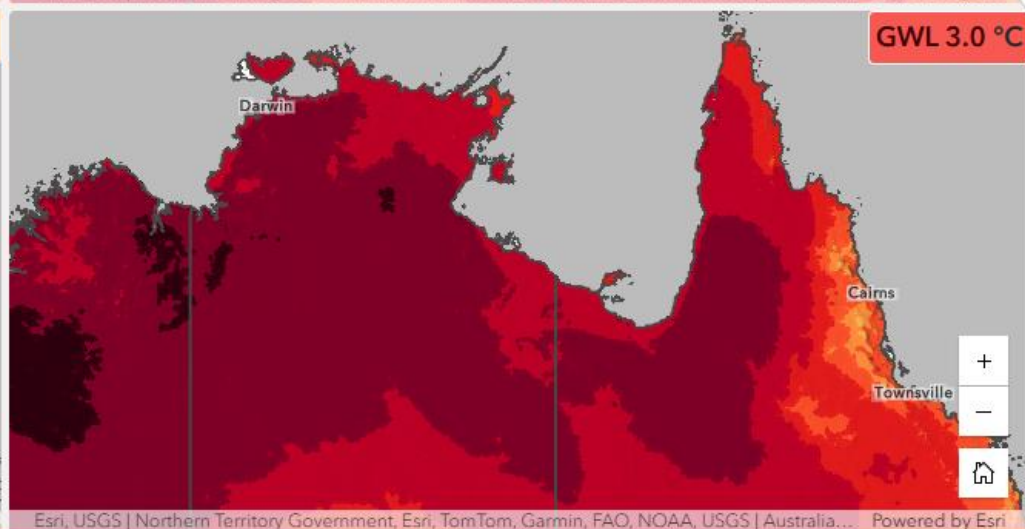
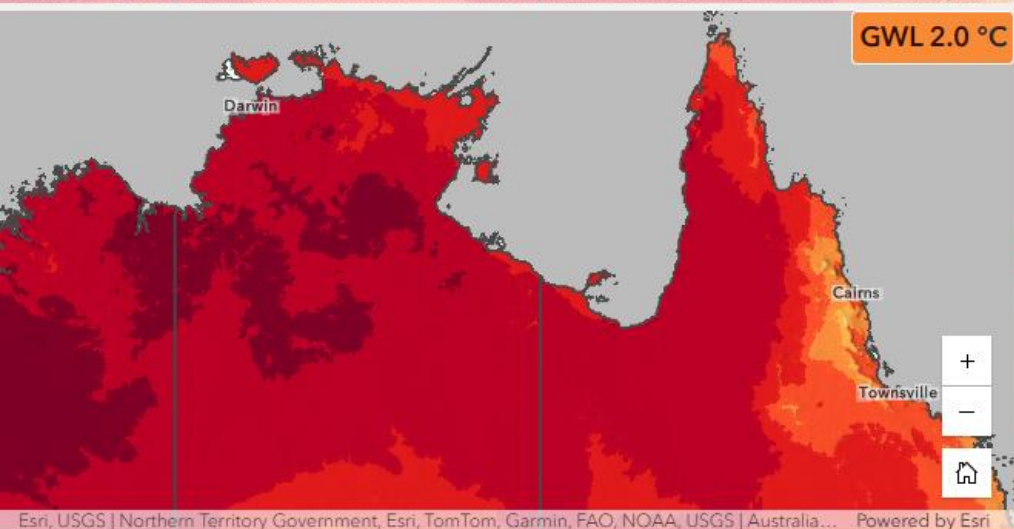
LGA insights



Average daily max temperature

°C

- 38+
- 36-38
- 34-36
- 32-34
- 30-32
- 28-30
- 26-28
- 24-26
- 22-24



Global warming levels

Maps are provided for Global Warming Levels (GWLs) of 1.2°C, 1.5°C, 2.0°C and 3.0°C.

Global Warming Levels are used in climate projections to describe the expected climate and weather changes that Australia will experience when global average temperatures reach particular degrees of warming compared to the pre-industrial era. Depending on emissions levels (described by Shared Socio-economic Pathways, SSPs), these levels of warming will be reached at different time periods. Advantages of using the Global Warming Levels are that they are informative and easy to understand, are recognised



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

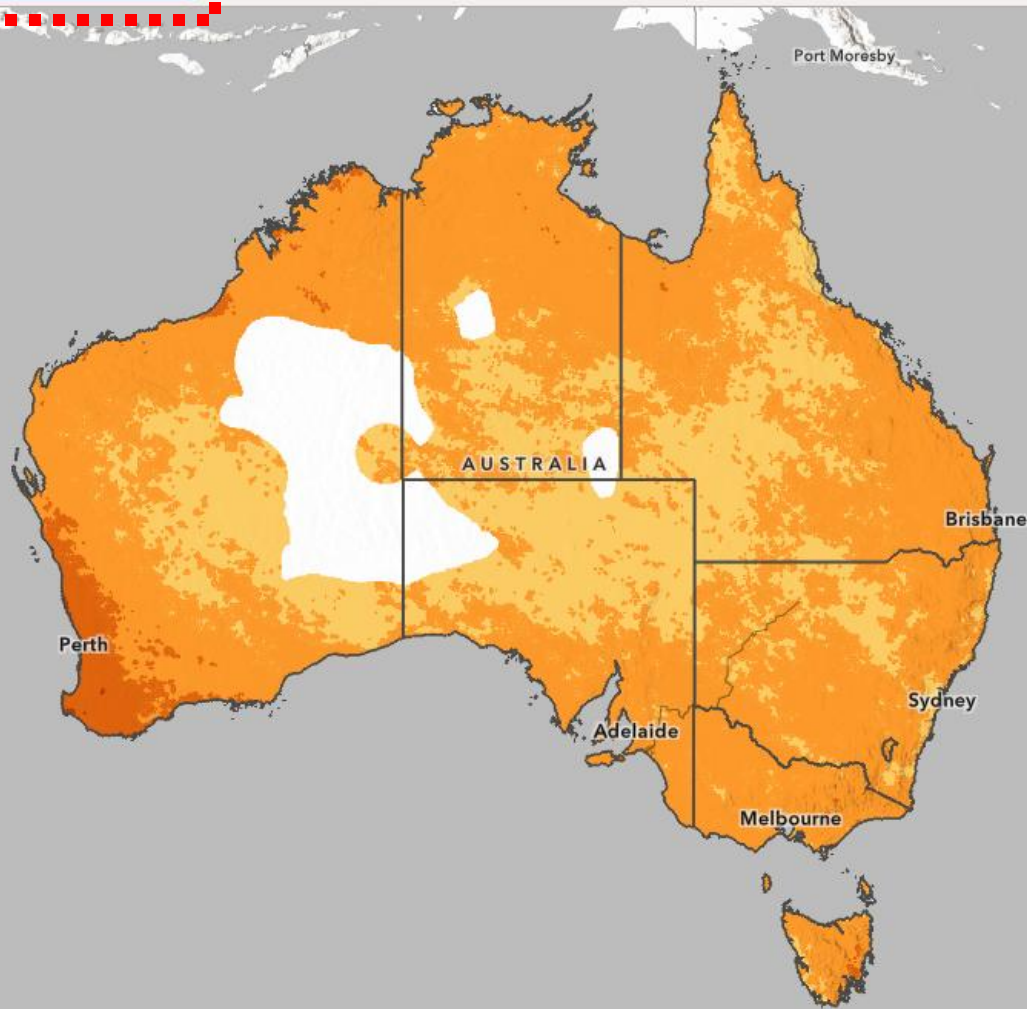
- Temperature extremes
- Fire
- Drought
- Hydrological hazards
- Precipitation extremes
- Coastal hazards
- Storms

Select hazard

- Time in drought
- Aridity index
- Rainfall 3-month (15th pct)

GWL 1.2 °C

- NCRA regions
- Local Government Areas



Compare global warming levels (GWLs)

Time in drought

% of time

- 30+
- 25-30
- 20-25
- 15-20
- 10-15
- 5-10
- <5



Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

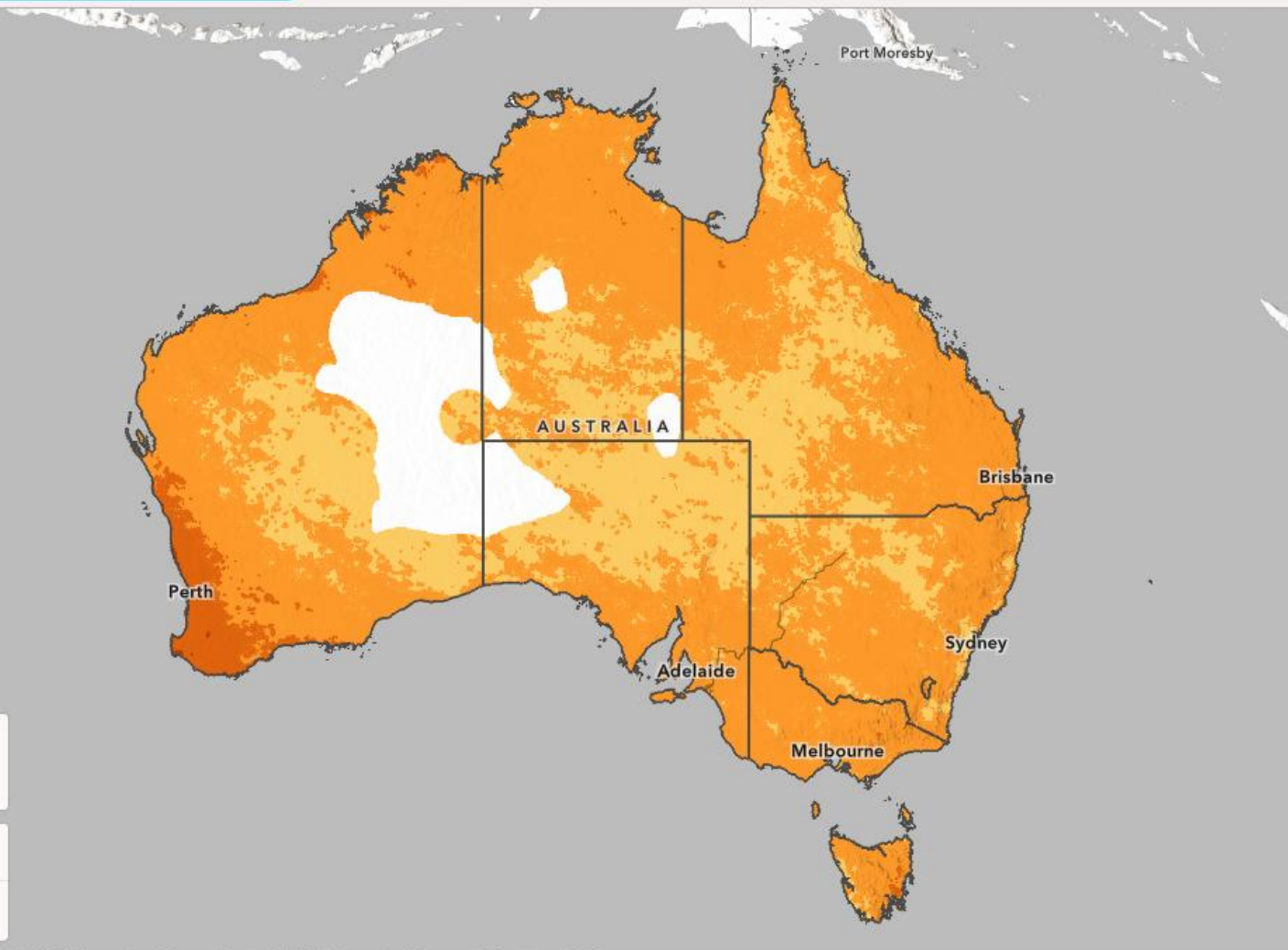
- Temperature extremes
- Fire
- Drought
- Hydrological hazards
- Precipitation extremes
- Coastal hazards
- Storms

Select hazard

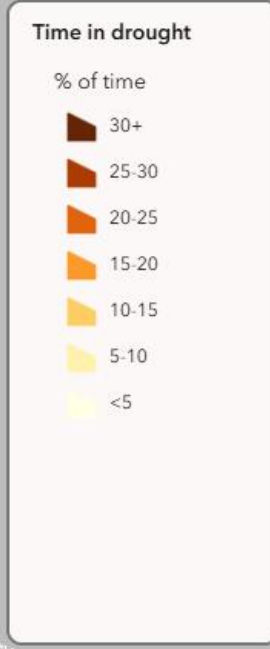
- Time in drought
- Aridity index
- Rainfall 3-month (15th pct!)

GWL 1.2 °C

- NCRA regions
- Local Government Areas



Compare global warming levels (GWLs)



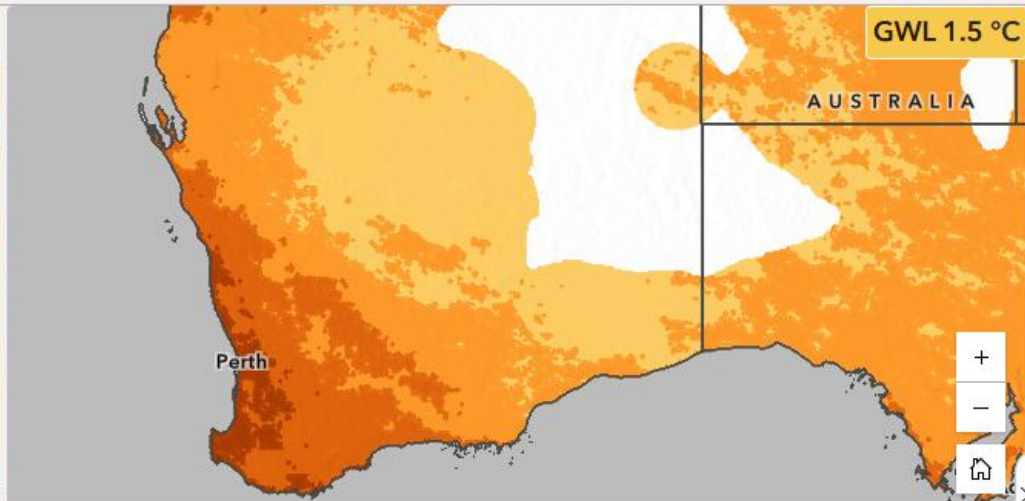
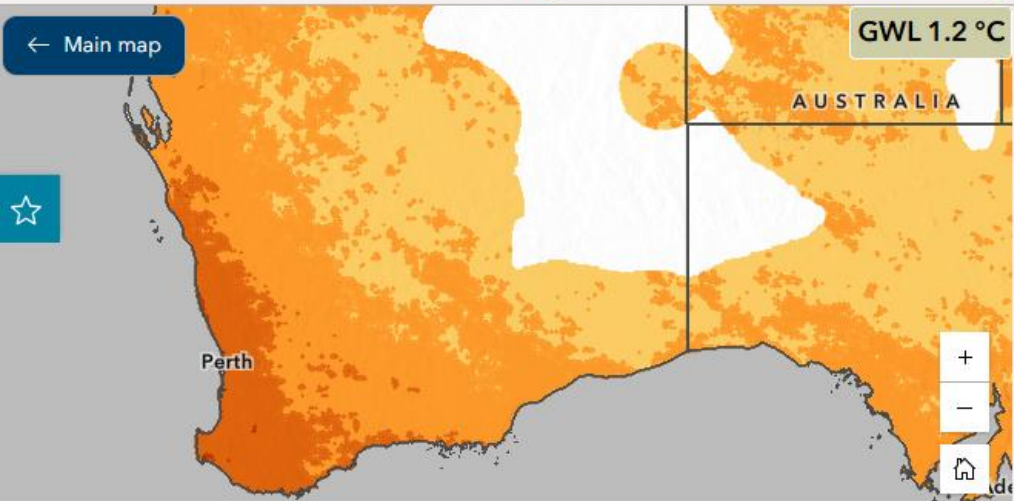
Climate viewer

Hazards viewer

Exposure viewer

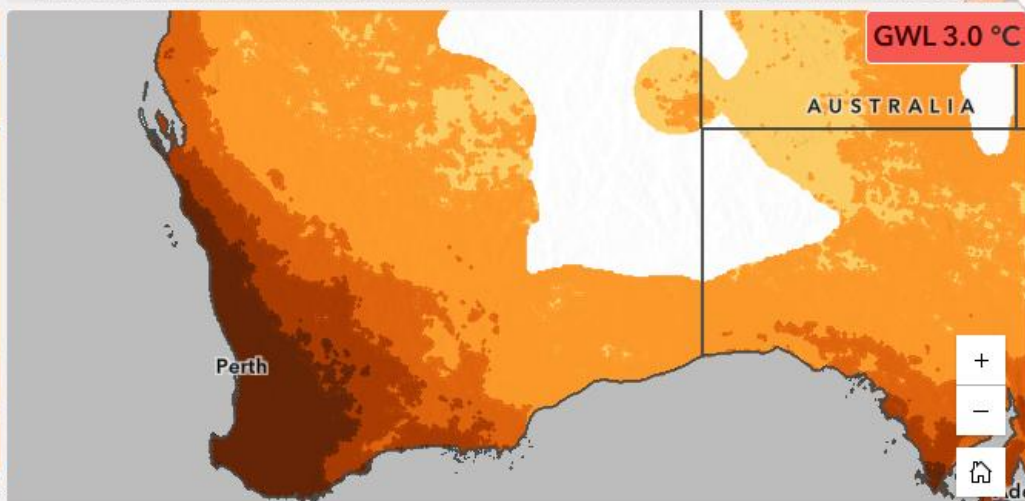
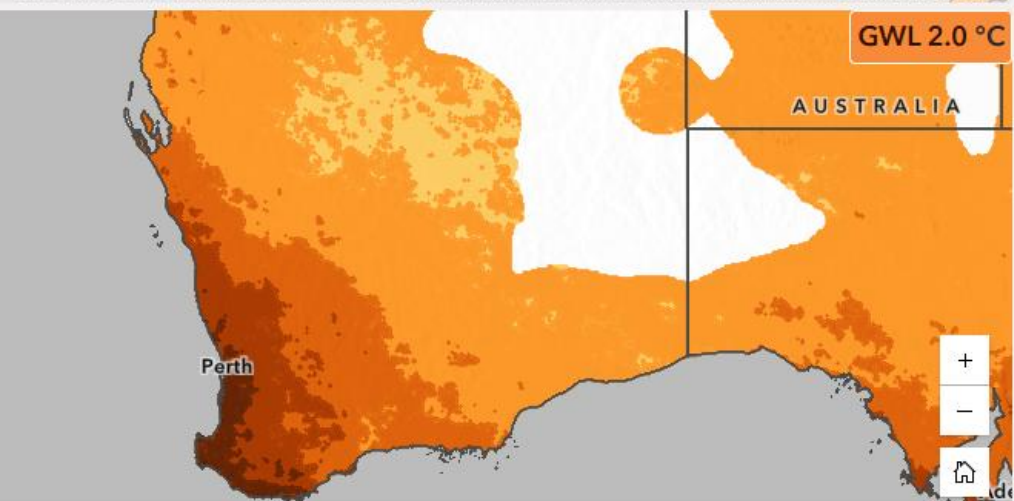
Vulnerability and risk viewer

LGA insights



Esri, USGS | Esri, TomTom, Garmin, FAO, NOAA, USGS | Australian Climate Service (ACS) | Australia... Powered by Esri

Esri, USGS | Esri, TomTom, Garmin, FAO, NOAA, USGS | Australian Climate Service (ACS) | Australia... Powered by Esri



Global warming levels

Maps are provided for Global Warming Levels (GWLs) of 1.2°C, 1.5°C, 2.0°C and 3.0°C.

Global Warming Levels are used in climate projections to describe the expected climate and weather changes that Australia will experience when global average temperatures reach particular degrees of warming compared to the pre-industrial era. Depending on emissions levels (described by Shared Socio-economic Pathways, SSPs), these levels of warming will be reached at different time periods. Advantages of using the Global Warming Levels are that they are informative and easy to understand, are recognised

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Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

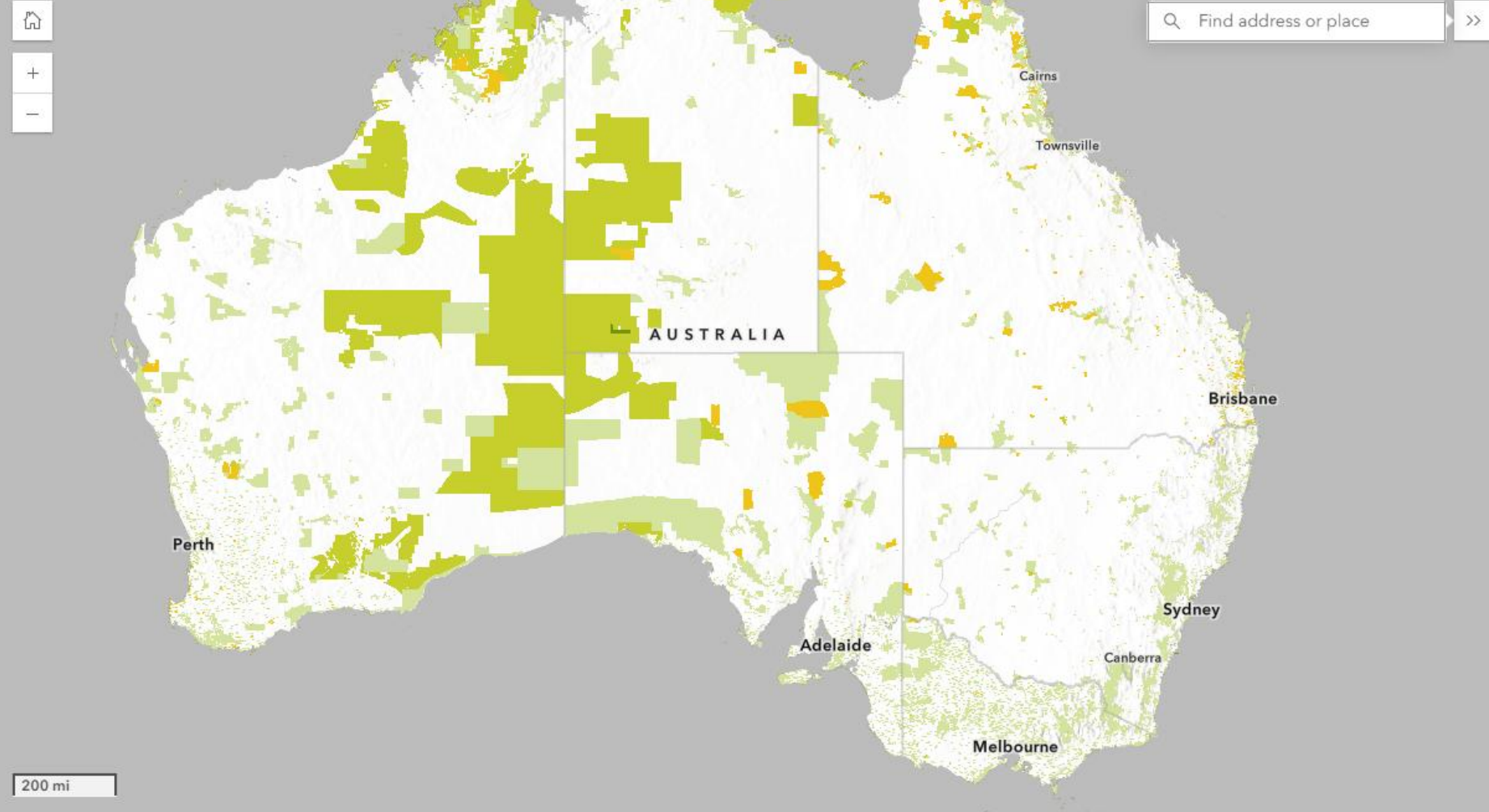
Legend

Details

Layers

Layers

- > Administrative areas
- > Data layers
 - > Social environment
 - > Economic environment
 - > Built environment
 - > Natural environment
 - Collaborative Australian Protected Areas Database (CAPAD) - Terrestrial
 - > Land use of Australia 2010 11 to 2015 16





About

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Vulnerability and risk viewer

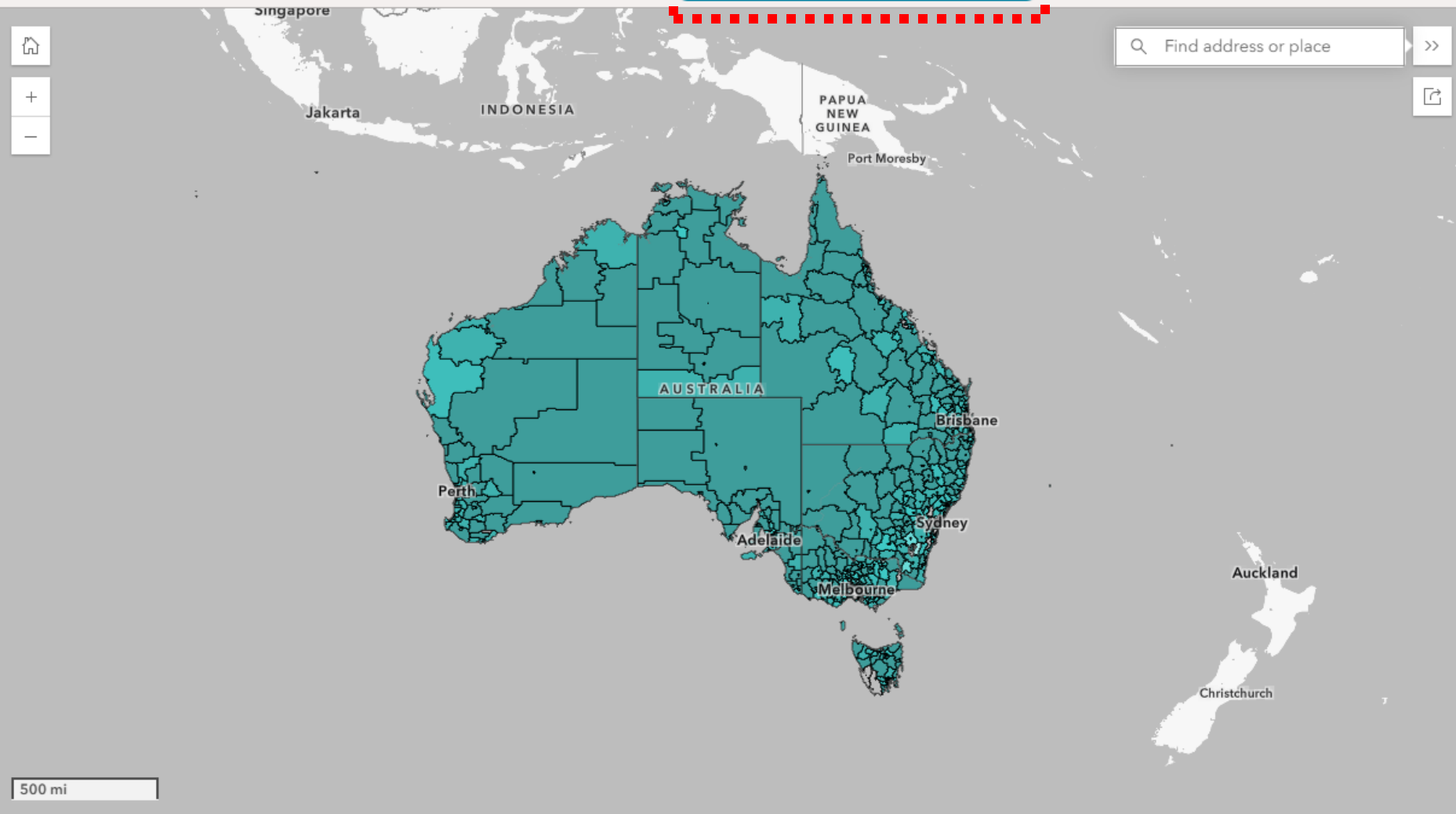
LGA insights

- Legend
- Details
- Layers
- Star icon

Layers

- Administrative areas
- Data layers
 - Climate Social Vulnerability Index (ACSVI) by Statistical Area Level 2
 - Industry of Employment Diversity Index (IEDI) by Local Government Area
 - Heat-Health Risk Index (HHRI) by Statistical Area Level 2

Map navigation controls: Home, Zoom in (+), Zoom out (-)



500 mi

Esri | TomTom | Garmin | USGS | FAO | NOAA | Australian Bureau of Statistics (ABS)

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2830, Dubbo, New South Wales

Clear search location



Local Government Area insights

Dubbo Regional

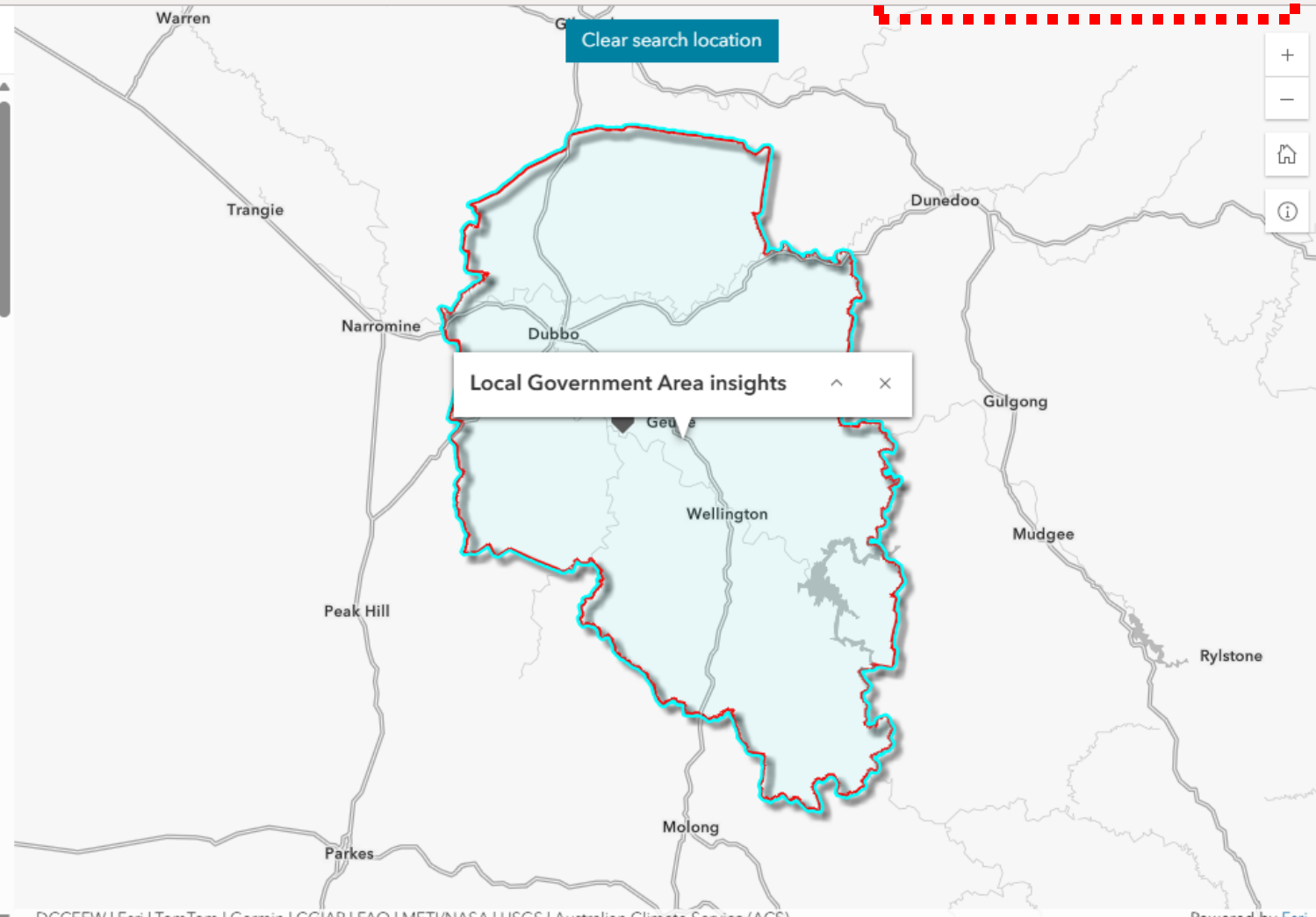
Exposure and vulnerability are assessed by the Australian Climate Service across four different environments, including the:

- [social environment](#)
- [built environment](#)
- [economic environment](#)
- [natural environment](#)

Key insights

Domain	Variable	Value
Social	Population	55,894
Economic	Industry of Employment Diversity Index	Most diverse
Built	Residential Reconstruction Values (modelled)	\$18,318,390,000
Natural	Primary land use	Grazing modified pastures

Detailed insights





Climate viewer

Hazards viewer

Exposure viewer

Vulnerability and risk viewer

LGA insights

Temperature

Select layer

Annual average temp

Average daily max temp

Precipitation

Ocean temperature

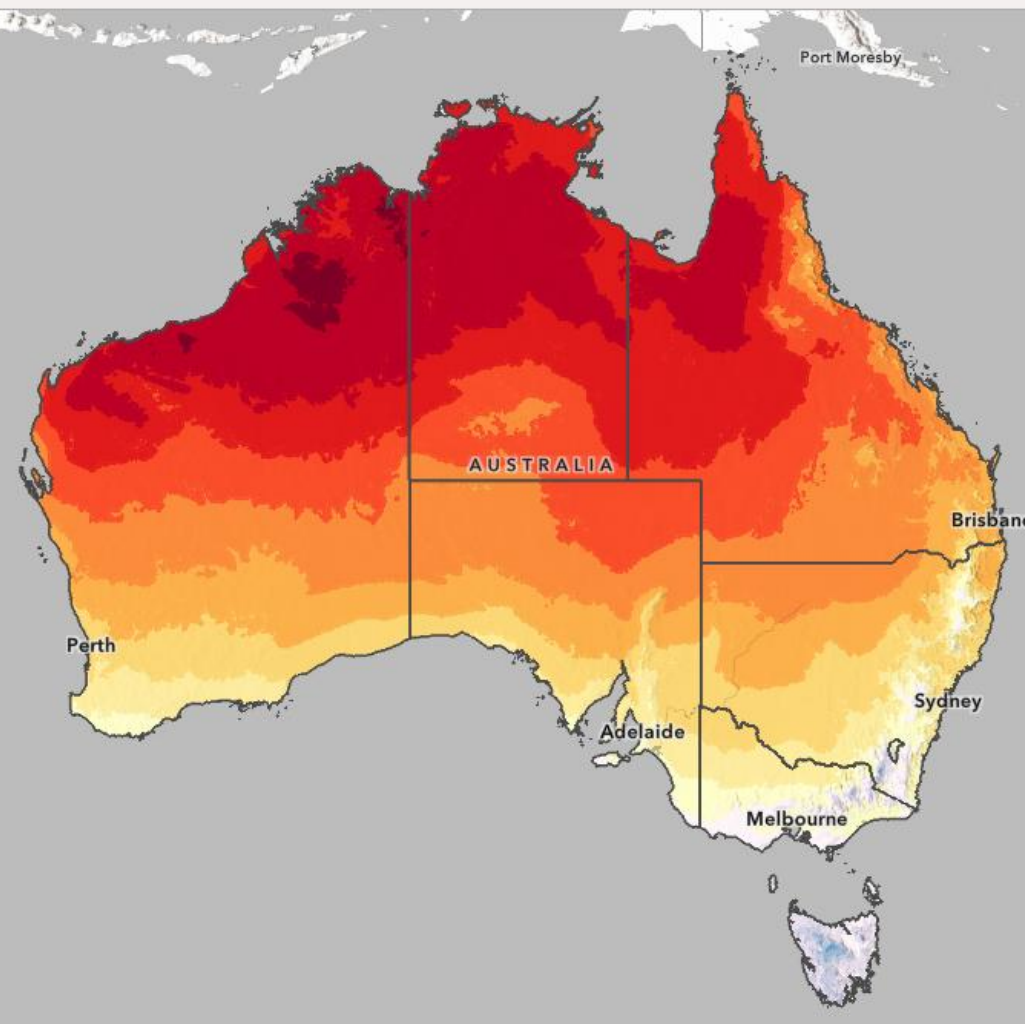
Sea level rise



Compare global warming levels (GWLs)

Average daily max temperature

°C



GWL 1.2 °C

NCRA regions

Local Government Areas

Temperature

Precipitation

Ocean temperature

Sea level rise

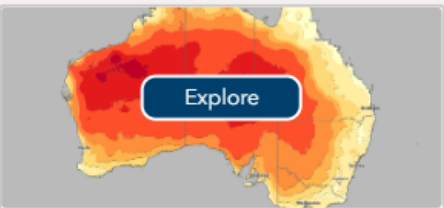


Select layer ▾



Australian Climate Service

Data explorer



Explore

Climate viewer

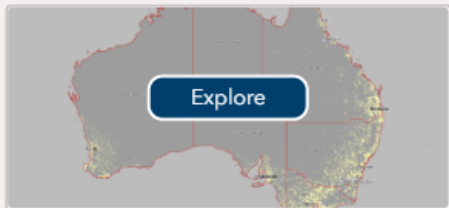
Visualise Australian climate variables at the national level



Explore

Hazards viewer

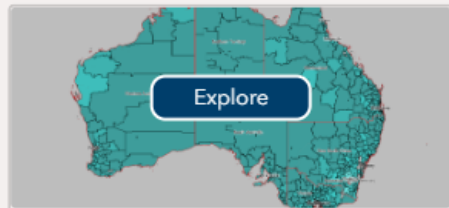
Visualise hazards across a range of global warming levels



Explore

Exposure viewer

Visualise exposure data at the national level



Explore

Vulnerability and risk viewer

Visualise vulnerability and risks at the national level



Explore

LGA insights

Explore climate risk by Local Government Area (LGA) to get summarised information



Open

Data catalogue

Search the Australian Climate Service data catalogue



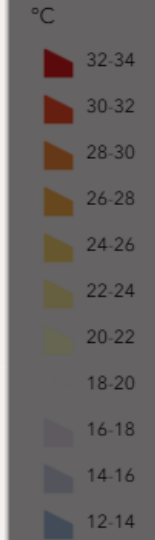
Data sources

Access additional information on the data used in this application

View

Disclaimer: This web application is designed to provide visualisations of some of the climate risk information that the Australian Climate Service currently has available. Its intended audience is climate adaptation practitioners and policy makers and is intended for use in conjunction with other information sources. This information included in this application may be improved and updated over time.

Annual average temperature



Data sources and feedback

[Feedback](#)[Data sources](#)[Defined regions](#)[Climate data](#)[Hazard data](#)[Exposure data](#)[Vulnerability and risk data](#)[LGA insights](#)

Feedback

The Australian Climate Service is committed to enhancing authoritative data and information and making this more accessible. We are interested in your feedback on your data and information needs. We will use this feedback to target efforts, improve information and build national capability.

Let us know what information and insights you would like to see in future applications by completing our [contact form](#).



Climate data

Climate refers to the long-term patterns and variability of temperature, precipitation, and atmospheric conditions that influence ecosystems, human health, infrastructure, and the availability of environmental resources.

Dataset name	Dataset description	Dataset custodian	Dataset source	Metadata source
Temperature climate variables	Temperature climate variables, including annual average maximum and mean temperatures.	Bureau of Meteorology (BOM)	Temperature climate variables	Temperature climate variables metadata
Precipitation climate variables	Precipitation climate indices, including annual average rainfall	Bureau of Meteorology (BOM)	Precipitation climate variables	Precipitation climate variables metadata

Temperature extremes and heat hazard variables


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Temperature extremes and heat hazard variables



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Summary

Temperature hazard indices, including hottest day, days above or below certain temperature thresholds, and several heatwave metrics.

Overview

Temperature extremes and heat hazard variables are provided on a ~5 km grid covering Australia for global warming levels +1.2 °C, +1.5 °C, +2.0 °C and +3.0 °C. The data are outputs of bias-adjusted outputs of dynamically downscaled CMIP6 global climate models.

Extreme temperatures threaten Australia's health, infrastructure, agriculture, and natural environment. Heatwaves cause more deaths and a higher proportion of hospitalisations than any

[Read More ▾](#)
[Temperature](#)
[Cold snaps](#)
[ACS key themes](#)
[+3 Categories](#)

Details


Data File

File Geodatabase


17 March 2026 at 5:35:31 pm AEDT

Info Updated


17 March 2026 at 5:35:31 pm AEDT

Data Updated


13 February 2026 at 3:12:01 pm AEDT

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Catalogue



Data



Documents



Tools

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Climate datasets

<p>Ocean temperature climate variables</p> <p>Ocean temperature climate variables</p> <p>Sea surface temperature (SST) climate indices, including annu...</p>	<p>Precipitation climate variables</p> <p>Precipitation climate variables</p> <p>Precipitation climate indices, including annual average rainf...</p>	<p>Sea level variables</p> <p>Sea level variables</p> <p>Regional sea level rise (SLR) projections.</p>	<p>Temperature climate variables</p> <p>Temperature climate variables</p> <p>Temperature climate variables, including annual average...</p>
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Hazard datasets

<p>Coastal hazard variables</p> <p>Coastal hazard variables</p> <p>Coastal hazard indices, including coastal erosion and coastal...</p>	<p>Convective storm variables</p> <p>Convective storm variables</p> <p>Convective Available Potential Energy (CAPE) and Convective...</p>	<p>Drought variables</p> <p>Drought variables</p> <p>Drought and aridity hazard indices, including proportion o...</p>	<p>Extratropical storm variables</p> <p>Extratropical storm variables</p> <p>Extratropical storm data, in terms of the percentage of time...</p>
<p>Fire variables</p> <p>Fire variables</p> <p>Fire hazard indices, including days above Forest Fire Danger...</p>	<p>Hydrological hazard variables</p> <p>Hydrological hazard variables</p> <p>Hydrological hazard indices, including maximum 1-day run...</p>	<p>Ocean chemistry hazard variables</p> <p>Ocean chemistry variables</p> <p>Ocean chemistry indices, including annual average...</p>	<p>Ocean temperature hazard variables</p> <p>Ocean temperature hazard variables</p> <p>Ocean temperature and Sea surface temperature (SST) haza...</p>
<p>Precipitation hazard variables</p> <p>Precipitation hazard variables</p> <p>Precipitation hazard variables for rainfall extremes, including...</p>	<p>Temperature extremes and heat hazard variables</p> <p>Temperature extremes and heat hazard variables</p> <p>Temperature hazard indices, including hottest day, days...</p>	<p>Tropical cyclone variables</p> <p>Tropical cyclone variables</p> <p>Historical and modelled tropical cyclone datasets, spanning...</p>	

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Vulnerability and risk datasets

<p>SA2</p> <p>Australian Climate Social Vulnerability Index (ACSVI)</p> <p>Australian Climate Social Vulnerability Index (ACSVI) 2021 (beta) by SA2</p> <p>The Australian Climate Social Vulnerability Index (ACSVI) (beta) is a nationally consistent comparative metric that estimates social...</p>	<p>LGA</p> <p>Industry of Employment Diversity Index (IEDI)</p> <p>Industry of Employment Diversity Index (IEDI) 2021 (beta) by LGA</p> <p>The Industry of Employment Diversity Index (IEDI) (beta) is a nationally consistent measure of the diversity of industries in which people are...</p>
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National Climate Risk Assessment publications

View publications released as part of the National Climate Risk Assessment.

[View NCRA publications](#)

temperature

Filters

Reset

1 - 12 of 39 results

Sort by: Relevance

List

Location

Find address or place

Results: 39

Filter as map moves

Type

- Filter options
- PDF (7)
 - Hub Page (18)
 - Feature Service (0)
 - File Geodatabase (14)
 - Microsoft Word (0)

Dataset

Temperature climate variables

Temperature climate variables, including annual average maximum and mean temperatures.

Type: File Geodatabase

Date updated: 17/03/2026

Tags: National Climate Risk Assessment, data, climate, temp... Categories: Temperature, Climate

Dataset

Ocean temperature climate variables

Sea surface temperature (SST) climate indices, including annual and monthly averages in degrees Celsius (°C).

Type: File Geodatabase

Date updated: 17/03/2026

Tags: National Climate Risk Assessment, data, climate, ocea... Categories: Sea surface temperature, Ocean temperature, C...

Document

44 Hazard snapshot - Temperature

As part of the National Climate Risk Assessment, the Australian Climate Service has developed climate change projections to understand how extreme temperatures are expected to change.

Type: PDF

Date updated: 11/09/2025

temperature

Filters Reset

1 - 12 of 39 results

Sort by: Relevant

Grid

Location

Map of Australia with search bar and filter options.

Type

- Filter options
PDF (7)
Hub Page (18)
Feature Service (0)
File Geodatabase (14)
Microsoft Word (0)

Temperature climate variables dataset card.

Ocean temperature climate variables dataset card.

Changes in temperature, including heatwaves document card.



Ocean temperature hazard variables dataset card.

Temperature extremes and heat hazard variables dataset card.

Air Quality and Communicable Diseases Technical Report document card.




Precipitation hazard variables



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Precipitation hazard variables

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Summary

Precipitation hazard variables for rainfall extremes, including maximum 1-hour, 1-day and 5-day precipitation.

Overview







Precipitation hazard variables are provided on a ~5 km grid covering Australia for global warming levels +1.2 °C, +1.5 °C, +2.0 °C and +3.0 °C. The precipitation data is based on bias-adjusted outputs of dynamically downscaled CMIP6 global climate models.

Changes in rainfall directly impact all of us. Australia's rainfall is variable, but its natural systems have evolved within typical rainfall ranges. Changes in rainfall duration, intensity and frequency influence the supply of water, and affect infrastructure planning, leisure activities and more. Such changes can also cause risks to life and livelihoods when associated with floods, landslides and droughts. Precipitation is closely related to hazards such as convective storms, aridity and drought, and can even impact global ocean currents. It is at the heart of the global hydrological cycle.


Maximum 1-day and 5-day rainfall are very widely used indices, which were defined as part of the key indices from the World Climate Research Program's Expert Team on Climate Change Detection and Indices. While these indices were designed for application to daily data, maximum 1-hour rainfall can be calculated by applying the same methods to hourly rainfall.

Longer-duration extreme rainfall can be linked to riverine flooding, while shorter-duration extreme

Details

-  **Data File**
File Geodatabase
-  **17 March 2026 at 5:35:45 pm AEDT**
Info Updated
-  **17 March 2026 at 5:35:45 pm AEDT**
Data Updated
-  **13 February 2026 at 3:17:30 pm AEDT**
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Precipitation hazard variables

Australian Climate Service

Technical details

The data consists of gridded data covering Australia in NetCDF format. Data are provided for global warming levels +1.2 °C, +1.5 °C, +2.0 °C and +3.0 °C, and were created using bias-adjusted output from climate model simulations.

Global warming levels represent 20-year periods where the average global temperature reaches +1.2 °C, +1.5 °C, +2.0 °C and +3.0 °C above the global average temperature for the pre-industrial period (1850-1900). Global warming level +1.2 °C is sometimes referred to as the "current" climate as it covers 2011-2030.

An ensemble of 13 simulations was produced using 2 regional climate models (BARPA and CCAM) that dynamically downscale 8 CMIP6 global climate models to a resolution of ~10-15 km. These downscaled model simulations were then further statistically interpolated to a ~5 km grid before the indices were calculated.

To prepare the data for publishing the ACS has applied consistent land, sea and data void masks.

Supporting documents

- A technical report that describes the creation of the data:

Jakob D, Risbey J, Bahramian K, Bende-Michl U, Bengert N, Bhardwaj J, Black M, Bongiovanni K, Bourbon H, Buchanan P, Carrara E, Do C, Evans A, Fox-Hughes P, Gregory R, Griesser A, Grose M, Hague B, Hoffmann D, Howard E, Irving D, Jacobs S, Jones D, Maguire S, Matear R, Narsey S, O'Grady J, Oke A, Osbrough S, Parker T, Pepler A, Peter J, Rafter T, Ramsay H, Rogers C, Sharples W, Stassen C, Stellema A, Su C-H, Takbash A, Thatcher M, Tolhurst G, Tozer C, Udy D, Watkins A and Zhang X (2025) [Climate Hazard Information developed for use in Climate Risk Assessment](#), Bureau Research Report, Australian Bureau of Meteorology

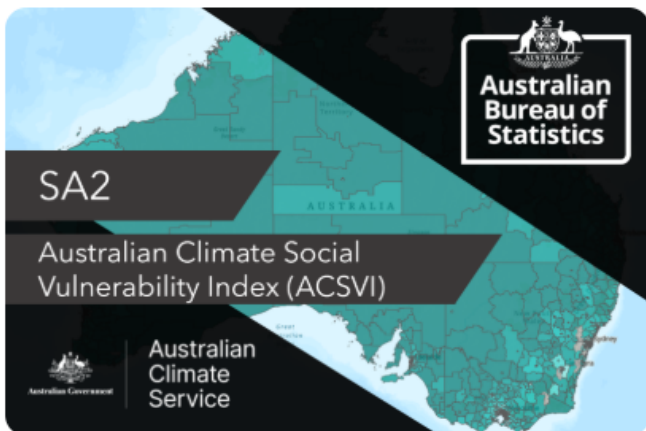
- A technical report that describes the climate projections and modelling underpinning the data:

CSIRO and Bureau of Meteorology (2025) [Australian Climate Service CMIP6-Next Generation downscaled climate change projections - approach and summary](#), Technical Report, CSIRO and Australian Bureau of Meteorology. doi:10.25919/9bde-a338.

- A National Climate Risk Assessment Report that describes conclusions drawn from the data:

Australian Climate Service (2025) [Australia's Future Climate Hazards Report](#), p. 100





Australian Climate Social Vulnerability Index (ACSVI) 2021 (beta) by SA2



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View Map

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Summary

The Australian Climate Social Vulnerability Index (ACSVI) (beta) is a nationally consistent comparative metric that estimates social vulnerability in the context of climate change and natural hazards.

Overview

The ACSVI (beta) combines area level social characteristics into scores to facilitate the analysis of spatial patterns in vulnerability across communities in Australia. It uses a multi-dimensional conceptual framework of 12 indicators covering income, employment, education, age, housing, and access to services.

The index is constructed using publicly available aggregate data, primarily 2021 Census of Population and Housing variables. Data is provided at 2021 Statistical Area Level 2 (SA2) - Australian Statistical Geography Standard (ASGS), Edition 3. Not every SA2 can be provided a meaningful index score. They do not receive an index score if:

- The area is classified as offshore or migratory or otherwise non-spatial.
- The usual resident population is less than or equal to ten.
- There are five or fewer employed people.
- Source data is otherwise not available for one or more indicators.

Details



Dataset
Feature Layer



As Needed
Info Updated: 11 December 2025 at 4:16:31 pm AEDT



As Needed
Data Updated: 4 December 2025 at 3:18:29 pm AEDT



1 December 2025 at 1:51:14 pm AEDT
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Records: 2,473
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Relevant Area



Australian Climate Social Vulnerability Index (ACSVI) 2021 (beta) by SA2

Australian Climate Service Private Organization

Summary

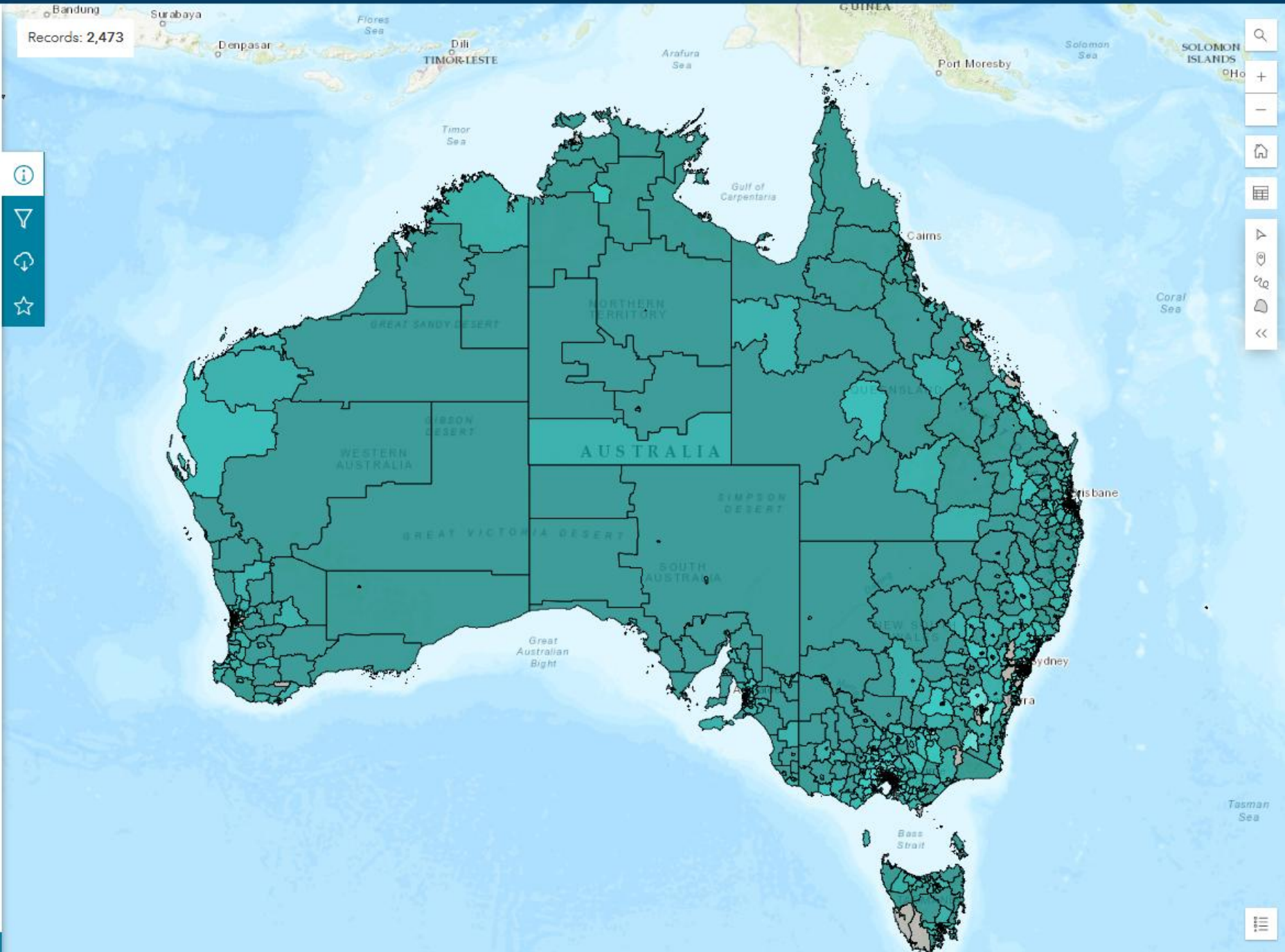
The Australian Climate Social Vulnerability Index (ACSVI) (beta) is a nationally consistent comparative metric that estimates social vulnerability in the context of climate change and natural hazards.

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Details

- Dataset**
Feature Layer
- As Needed**
Info Updated: 11 December 2025 at 4:16:31 pm AEDT
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Bioclimatic Ecosystem Resilience Index (BERI) for Australia

Australian Climate Service
Private Organization ⓘ

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Summary

The CSIRO Bioclimatic Ecosystem Resilience Index (BERI) for Australia is a spatial layer representing the estimated capacity of ecosystems to retain biological diversity in the face of ongoing, and uncertain, climate change. This item provides a link to the source data collection.

This data is hosted in a CSIRO collection, link: <https://doi.org/10.25919/cv09-pv10>

Overview

The CSIRO Bioclimatic Ecosystem Resilience Index (BERI) for Australia is a spatial layer representing the estimated capacity of ecosystems to retain biological diversity in the face of ongoing, and

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