

3.8

CLIMATE-RELATED PHYSICAL RISKS

Useful information for assessing physical risks

Important notice

This unit is part of a package of learning materials designed to support understanding of foundational concepts relating to climate-related financial disclosures. These learning materials do not constitute application or regulatory guidance for the preparation of climate-related financial disclosures and are not intended to represent legal or professional advice. We encourage you to seek your own professional advice to find out how the Corporations Act 2001 (Corporations Act) and other relevant laws may apply to you and your circumstances, as it is your responsibility to determine your obligations and comply with them.



Key topics

- › Useful information sources
- › Climate projection tools
- › Global, national and regional scales

Relevance for climate-related disclosures

There are a number of useful sources of information that are publicly available to help in understanding more about climate-related physical risks that might affect your entity. Over time, it is expected that further useful sources will emerge.

In this unit, you will learn about some of the useful sources of climate data on current and future climate-related physical risks that are freely available. These authoritative sources may be valuable inputs as your entity assesses climate-related physical risks, alongside various other inputs. Use will depend on your entity's individual facts and circumstances.

Overview

Australian entities have access to many different sources of public information to support them in better understanding their exposure to climate-related physical risks.

The Intergovernmental Panel on Climate Change (IPCC) provides global assessments of climate impacts, risks and opportunities for adaptation. In addition to its comprehensive reports, the IPCC provides accessible summaries to help you get across the main issues.

Every two years, the Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO) publish a State of the Climate report. These reports are useful for anyone wishing to understand the impacts of climate change in Australia.

For access to more detailed data and projections a variety of different tools and datasets are available through the Australian Climate Service, other Commonwealth agencies, and State and Territory governments. You should consider your entity's particular circumstances when deciding what information and sources to use.



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Sources that can help with assessment of climate-related physical risks

There are a wide range of public sources of information to aid in assessing your entity's exposure to climate-related physical risks. These range from easy-to-use interactive maps to downloadable datasets for use with specialised geospatial mapping software. You should consider your entity's particular circumstances when deciding what information and sources to use.

This unit highlights only some of the key sources of information, including reports and other resources from the Intergovernmental Panel on Climate Change (IPCC), and information provided by Commonwealth and State/Territory agencies in Australia. Other sources may be suitable depending on an entity's particular facts and circumstances.

Some key global resources

As outlined in Module 2, the IPCC is the leading global authority on climate science, impacts and solutions. Working Group II of the IPCC covers the vulnerability of human and natural systems to climate change, the impacts of climate change, and options for adaptation. The full Working Group II contribution to the Sixth Assessment Report has hundreds of pages and includes a detailed chapter on Australasia (Chapter 11). The Summary for Policymakers provides a concise and accessible overview. For an even simpler summary of the most relevant information on Australia, you may wish to start with the 2-page fact sheet on Australasia.

- › [Climate Change 2022: Impacts, Adaptation and Vulnerability \(The Working Group II contribution to the Sixth Assessment Report\)](#)
- › [Chapter 11 - Australasia](#)
- › [Fact sheet - Australasia](#)

Working Group I of the IPCC, which covers the physical science of climate change, has provided an interactive atlas for exploring projected changes in temperature, rainfall, wind and many other variables. This tool may be particularly useful for those looking to understand climate impacts beyond our shores, and the potential for risk transmission across international value chains (see Unit 4 of this Module).

- › [IPCC Interactive Atlas](#)

Some key Australian resources

National

State of the Climate Reports

Every two years, the Bureau of Meteorology and CSIRO publish a [State of the Climate](#) report. These reports are written in accessible language, are relatively concise, and are essential reading for anyone wishing to understand the impacts of climate change in Australia. They offer a synthesis of the latest national and international climate research and an assessment of current changes in Australia and globally, as well as projections for our future. The reports cover all main types of both acute and chronic physical risks, including fire weather, heavy rainfall, tropical cyclones, marine heatwaves, sea level rise, and ocean acidification.

National Climate Risk Assessment - Australian Climate Service

The Australian Climate Service (ACS) combines expertise and resources from multiple Commonwealth agencies, including the Bureau of Meteorology, CSIRO, Geoscience Australia and the Australian Bureau of Statistics. The ACS published Australia's first [National Climate Risk Assessment](#) in September 2025, which provides an assessment of risk across 8 key systems and 11 regions, prioritising key risks both within each system and across systems. The National Climate Risk Assessment provides new data and analyses assembled in a nationally consistent way that can be used by entities to understand key climate risks at



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national, regional and local scales. It includes a number of comprehensive reports on future climate and hazards, sectoral and economic risks, and data exploration tools.

[Climate Change in Australia](#)

The [Climate Change in Australia](#) website is a public information platform providing a range of climate projection tools and data for Australia, suitable for beginners through to advanced users. This includes specific tools for exploring extreme weather events, such as the number of days above a particular temperature (the thresholds calculator), and for seeing what the future climate of a given location may feel like by comparing it to the current climate of another place in Australia (climate analogues).

Additional resources: As at September 2025, the Commonwealth Department of Climate Change, Energy, the Environment and Water is in the process of preparing new advice on sources of climate risk information, as well as a set of plausible climate futures to assist entities with understanding their climate-related risks. These are anticipated to be released by the end of 2025.

National Adaptation Plan

The [National Adaptation Plan](#) was released by the Australian Government in September 2025. 'It is a framework for adapting to the physical climate risks that are nationally significant.'

The Plan sets out 3 principles to prioritise Australian Government action:

- targeted - focused on nationally significant risks and risks affecting groups that are disproportionately vulnerable to the impacts of climate change
- evidence-based - benefits outweigh the costs and success can be measured
- collaborative - place-based and inclusive.

It outlines roles and responsibilities for the Australian Government; State and Territory governments; Local governments; and industry, business, households and community organisations. Entities should review the plan to understand the Commonwealth's policy framing. See Module 2 unit 8 for more information on the National Adaptation Plan.

States and Territories

In addition to resources available from the Australian Government, most Australian states and territories have provided detailed information and tools for understanding climate-related physical risks. Depending on specific needs, these resources may be useful for understanding your own entity's exposure, as they offer some of the most accessible and user-friendly sources of information.

Table 1 provides a summary of tools and resources provided by State and Territory governments. While up to date as of October 2025, governments are regularly developing new or updated resources to help provide Australian entities with the most relevant, detailed and current information.

Table 1: Australian State and Territory climate projections.

State	New South Wales	Queensland	South Australia	Victoria	Tasmania	Western Australia
Name of tool	NARClIM 2.0 on AdaptNSW	Queensland Future Climate	South Australian Climate Projections Viewer	Victoria's Future Climate Tool	Climate Futures for Tasmania	WA Climate Projections
URL	https://www.climatechange.environment.nsw.gov.au/narclim	https://longpaddock.qld.gov.au/qld-future-climate/	https://www.environment.sa.gov.au/climate-viewer/details/	https://vicfutureclimate.tool.indraweb.io/c mip6/project	https://climatefutures.org.au/climate-futures-for-tasmania/	https://www.wa.gov.au/service/science/earth-sciences/wa-climate-projections
Interactive projections map	✓	✓	✓	✓	✗	✗
Downloadable datasets	✓	✓	✓	✓	✗	✗

Additional resources	AdaptNSW includes many useful additional resources, including case studies on how different sectors are using NARCIIM projections.	Queensland Future Climate provides a variety of visualisation tools as well as fact sheets and regional summaries.	Includes a guide to the climate projections and their use in risk assessment and planning.	Victoria's Future Climate Tool allows users to build custom scenarios or select from preset snapshots	The Tasmania and Western Australian Governments do not provide interactive visualisation tools and downloadable datasets but offer a variety of reports and factsheets covering projections for different hazard types and regions.
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Key takeaways

- › If you are just starting the process of understanding your exposure to climate-related physical risks, you may find it useful to begin with some foundational resources such as Australia's biennial State of the Climate report.
- › More detailed information is provided in the National Climate Risk Assessment and National Adaptation Plan.
- › Several state governments provide interactive tools for exploring possible climate futures.