

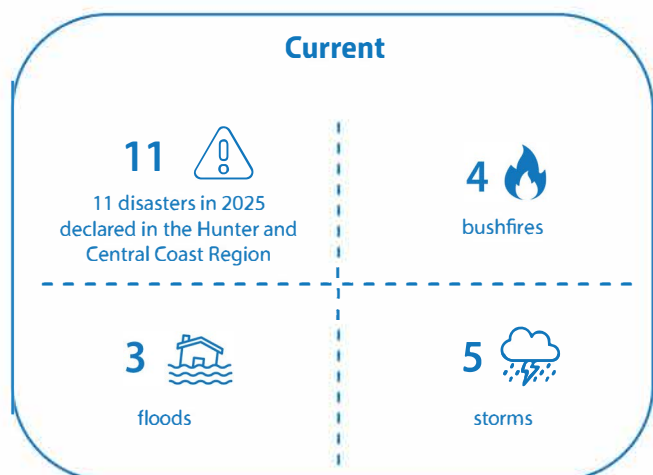


# Embedding Climate Risk in Council Enterprise Risk Management

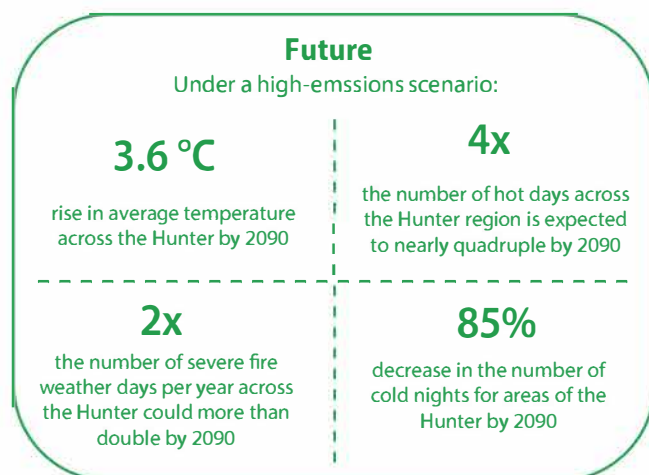
In this Project, the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), HunterJO, the Hunter Region’s councils, and several NSW Government agencies will work together to create practical, best practice methods and tools for embedding climate risks into enterprise risk management using the latest climate projections for NSW. The project is funded by the NSW Government under the NSW Climate Change Adaptation Strategy.

## Context

Human-driven greenhouse gas emissions have unequivocally warmed the climate system, driving higher temperatures, sea-level rise and shifts in weather extremes (IPCC, 2023). The NSW and Australian Regional Climate Modelling (NARClIM2.0) projections show continued warming, more hot days - days 35 and above - and severe fire weather, fewer cold nights, and greater rainfall variability. These trends highlight increased risks to ecosystems, infrastructure, water resources and communities, underscoring the need for regionally tailored climate risk assessment and adaptation planning (NSW Government, 2025). The Hunter Region is already experiencing these impacts, with conditions projected to intensify into the future.



Source: NSW Government



Source: NARClIM2.0

Disaster costs in NSW are projected to reach \$9.1 billion annually by 2060 as events become more frequent and severe, affecting homes, businesses and public infrastructure (Leck, 2025). Investing in reducing climate-related disaster risk is critical, with every dollar spent on disaster risk reduction estimated to save up to eight dollars in recovery costs (DFAT, 2026).

In response, the Hunter Councils Risk Management Team identified climate risk as a 2025 priority. While many councils have undertaken climate change risk assessments, most predate updated projections from NARClIM2.0 and the NSW Coastal Erosion and Inundation Assessment, and are not well aligned with enterprise risk management frameworks, limiting their integration into council’s core organisational risk processes NSW local government networks.

Councils are required to maintain an enterprise risk management framework that is consistent with the Australian Standard for risk management (AS ISO 31000:2018). Under the Local Government Act 1993 and the Local Government (General) Regulation 2021, all NSW councils must establish an Audit, Risk and Improvement Committee, implement a robust risk management framework, and maintain an effective internal audit function. Further requirements and guidance are set out in the Office of Local Government's (2023) Risk Management and Internal Audit for Local Government in NSW.

## The Project

### Purpose

This project will develop and pilot a practical toolkit to help councils embed climate risk into enterprise risk management. Drawing on NARClIM2.0 and the NSW Coastal Erosion and Inundation Assessment, it will provide credible, location-specific information to support stronger, future-ready decisions. The pilot will be delivered in the Hunter Region, with potential to scale across NSW.

### Why this project matters

Climate change is already affecting councils' core responsibilities from assets and services to financial sustainability and community wellbeing, with impacts expected to intensify into the future. With further climate changes locked in, councils must both reduce emissions and adapt to unavoidable risks.

Mainstreaming climate considerations into governance and enterprise risk management enables councils to use credible data to identify material risks, inform decisions, strengthen compliance, and improve resilience. While some councils have undertaken risk assessments, many rely on outdated data and are not integrated into enterprise risk frameworks.

Embedding climate risk into enterprise risk management supports a proactive approach by:

- Assessing climate impacts on assets, services, staff and communities
- Integrating climate risk into enterprise risk management, not just sustainability planning
- Supporting better decisions on maintenance, upgrades and capital works based on future conditions
- Strengthening compliance, funding applications and business continuity
- Reducing costs and improving organisational and community resilience

### Council Participation & Who Should Be Involved

The toolkit is designed for council staff, primarily enterprise risk officers and senior decision-makers, but will also have relevance for sustainability and climate adaptation staff.

Prototypes will be developed iteratively, tested and refined, **with councils invited to participate voluntarily and flexibly according to their capacity, priorities, and resources**. Lessons and outputs will be shared across NSW local government networks.

### Outcomes & Benefits

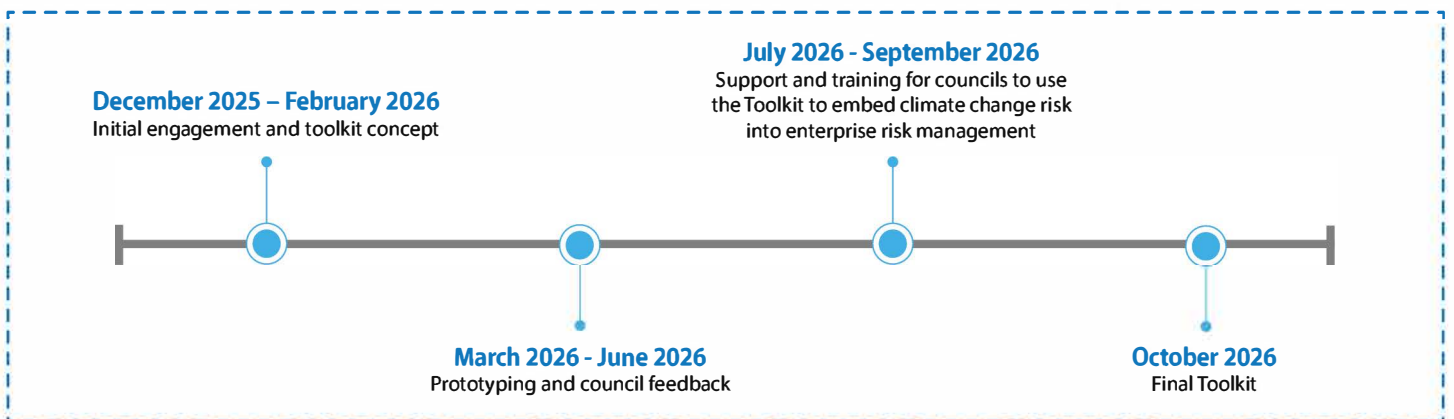
The project will deliver a practical, co-designed toolkit that strengthens councils' ability to assess and manage climate risk within enterprise risk management. It will support a consistent, scalable approach across NSW, providing practical tools, stronger governance integration, reduced duplication, and improved compliance and organisational resilience.

## Project Components

It is anticipated that the *Council Toolkit for Climate Change Risk Assessment* will include the following components (subject to changes through council prototyping and feedback):

-  **Project overview factsheet:** designed to support executive understanding, buy-in and sponsorship
-  **Enterprise Risk Management Framework system chart:** illustrates example pathways for incorporating climate change risks into existing enterprise risk management frameworks
-  **Climate Change Risk Maturity Assessment:** based on Climate Risk Ready NSW template adapted to local government and incorporating priorities from national and state risk assessments
-  **Climate Change Risk Assessment Template:** based on Climate Risk Ready NSW template, adapted to local government and showing alignment with national and state risk priorities
-  **Templates of example hazards / risks / scenarios:** high level templates and examples to support councils in translating NARClIM data into climate risks that reflect councils operations
-  **NARClIM2.0 data packages for each LGA (to be developed by DCCEEW team, informed by Hunter JO and council input):**
  - Foundational climate change data for each LGA
  - Climate change data information packages designed for key council end-user groups to ensure data is relevant, accessible and fit for purpose.
-  **Training and support:**
  - Council Toolkit training and information sessions (Hunter JO): guidance on how to use the Council Toolkit for Climate Change Risk Assessment
  - Technical training on NARClIM and the NSW Coastal Erosion and Inundation Assessment (DCCEEW): training on accessing and using data and resources, tailored to council end-user groups
  - Frequently Asked Questions (Hunter JO and DCCEEW): subject matter expert support to respond to councils' technical questions on NARClIM data and climate change risk assessment, collated and updated throughout the project.

## Timeline



For more information and to provide feedback

Please contact Anna Flack on 0460 038 199 or [annaf@hunterio.nsw.gov.au](mailto:annaf@hunterio.nsw.gov.au)

NARClIM

# Climate projections for our future



The NSW and Australian Regional Climate Modelling (NARClIM) project brings together globally recognised science and multidisciplinary expertise to deliver high-quality climate change projections.

## About NARClIM

To understand and plan for the likely impacts of climate change, we need trusted data and tools. For over a decade, NARClIM has been a trusted source of climate data in research, planning and decision-making used by NSW Government agencies, local councils, climate scientists, businesses, and communities to prepare and adapt to climate change.

## What's new?

Since 2014, 3 generations of NARClIM data have been released. NARClIM2.0 delivers the highest resolution climate projections currently available in Australia with 4km grid cells for all of NSW, ACT, Victoria, and parts of South Australia, Queensland, and the Northern Territory.

Climate projections at 4km resolution are better able to capture the influence of local topography on atmospheric processes that influence storms and extreme rainfall. Projections are also available at 20km resolution for Australasia.

Users can now explore a range of climate variables, such as rainfall and temperature, in unprecedented detail on the AdaptNSW website.



### Temperature

average, maximum, and minimum



### Rainfall

annual and seasonal change



### Climate change

hot days and cold nights



### Hazards

severe fire weather days

# NARcliM

Climate  
projections  
for our future

## Emissions scenarios

NARcliM projections broadly describe the range of plausible future climate conditions.

NARcliM2.0 provides projections for the Shared Socioeconomic Pathways (SSPs) used in the most recent Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (2021). These are the latest 'what if' scenarios used across the world to explore how the climate may change under different levels of global greenhouse gases in the atmosphere.

The scenarios consider the driving factors of development including population growth, technology, energy sources, and land use, and their resulting emissions.

NARcliM2.0 currently delivers projections for a low (SSP1-2.6), medium (SSP2-4.5) and a high (SSP3-7.0) emissions scenario.

Visit [AdaptNSW](#) for more information about **NARcliM emissions scenarios**.

## Using NARcliM for planning

Local governments, businesses, and households can use the resources and information on the [AdaptNSW](#) website to see how climate change will affect their area between now and 2100.

These include:

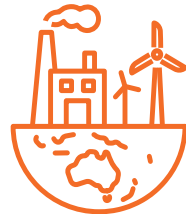
- Interactive climate change projections map
- Region-specific climate change snapshots
- NARcliM user case studies
- Climate Risk Ready NSW Guide
- Resources to help understand and adapt to climate change

NARcliM data is appropriate for use in climate change risk, impact, and adaptation assessments, research and reports.



### Low-emissions scenario SSP1-2.6

Reducing emissions  
Using renewables, biofuels  
Limited global warming



### Medium-emissions scenario SSP2-4.5

Current emissions until 2050  
Uneven global progress  
Moderate global warming



### High-emissions scenario SSP3-7.0

Increasing emissions  
Reliance on fossil fuels  
Continued global warming

## Find out more

Visit the [AdaptNSW](#) website for climate change data and information for your region, as well as data summaries, case studies, and guidance for using climate projections.

Expert users with specific data needs can access and download NARcliM data from the [NSW Climate Data Portal](#). For technical NARcliM enquiries, contact [narcliM@environment.nsw.gov.au](mailto:narcliM@environment.nsw.gov.au)