

NSW Coastal Erosion and Inundation Assessment

This document answers frequently asked questions about the 2025 NSW Coastal Erosion and Inundation Assessment

About the Assessment

What is the NSW Coastal Erosion and Inundation Assessment?

The Assessment is an NSW Government project that provides projections of 3 coastal hazards – coastal erosion, coastal overwash, and estuarine inundation – for present-day and future scenarios. It helps planners understand how these hazards may evolve due to sea-level rise and climate change.

What information is available from the Assessment?

Information from the Assessment, including a detailed technical report and snapshots for each coastal hazard, is available on the [AdaptNSW website](#).

The Assessment provides GIS maps (spatial layers) for each of the 3 hazards via the [Future Climate & Adaptation Hub](#) on the NSW SEED Portal:

- Coastal erosion – GIS maps/layers showing erosion extents under different sea-level rise scenarios.
- Coastal overwash – Transects data showing where total water levels may exceed the back-beach elevation.
- Estuarine inundation – Maps showing areas likely subject to estuarine inundation (excluding river flooding).

Each hazard includes projections for different Shared Socioeconomic Pathways (SSPs), multiple percentiles to reflect risk levels, for ten-year intervals from 2020 to 2150.

Who can use the Assessment?

This information supports councils, agencies, and planners in identifying vulnerable assets, assessing future exposure, and designing targeted responses. It also enables transparent communication with communities about the risks they face and the steps being taken to manage them. All data and information produced by the Assessment is free to access via the [AdaptNSW website](#) and [NSW SEED Portal](#).

How can the Assessment be used?

The dataset provides a foundation for strategic planning and risk management, offering insights that may guide investment decisions, infrastructure development and meaningful community engagement.

The Assessment supports existing local studies by providing regional context and filling data gaps. It helps councils and agencies understand risks and design tailored coastal management responses, aligning planning across local, regional, and national levels.

Why are these assessments important?

Sea levels are rising and will continue to rise for centuries, irrespective of the future climate scenario. Sea-level rise will increase the frequency and extent of coastal erosion, estuarine inundation, and coastal overwash. As these risks grow, proactive planning is essential – despite uncertainties about future conditions.

Why was the Assessment completed?

The Assessment was undertaken to gain an understanding of current and potential future coastal hazards and associated exposure of assets to coastal erosion and estuarine inundation.

The Assessment was delivered under the Disaster Risk Reduction Fund and NSW Climate Change Adaptation Strategy. These were funded by the Commonwealth and NSW Governments, respectively.

Has the Assessment considered environmental, cultural, economic and social impacts of the findings?

The Assessment provides the foundation for much of that work to be done.

The Assessment provides the projected hazards that may impact built assets and Aboriginal Cultural Heritage Sites.

The data will be used by various state agencies, local governments and researchers to assess the impacts on their portfolios.

Planning considerations

What does the data mean for coastal communities?

The NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) work closely with local councils in relation to the coastal management framework. The Assessment provides local councils with information about regional-scale risks and can help inform local studies and coastal management programs, as well as discussions with local communities about locally appropriate responses to the impacts of climate change. This Assessment will be used in the NSW Reconstruction Authority's future work in developing Disaster Adaptation Plans.

What does the Assessment mean for regional and local strategic planning?

The information being published provides a first-pass state-based assessment of current and future coastal erosion and inundation extent. It will provide information that can be considered in regional and local strategic planning, particularly assisting in the identification of areas for further investigation and assessment.

The data provides another component that works with the NSW Government's coastal management framework, which has been in place since 2018. The framework was created to improve the way we identify and adapt to hazards, and plan for and assess coastal development. Its components help protect our way of life and our coastal and marine environments.

What does the data mean for planning proposals?

It is not intended that the Assessment be immediately applied within a planning context. The information published is intended to be used as one of the inputs into the frameworks already in place for responding to coastal hazards and the impacts of climate change more broadly. Planning proposals should be consistent with Local Planning Direction 4.2 – Coastal Management, which aims to protect and manage coastal areas of NSW. This data is also important information to help ensure landholders start to understand future risks.

Does the data need to be included on planning certificates?

Under section 10.7(5) of the Environmental Planning & Assessment Act 1979, the contents of planning certificates may include advice on such other relevant matters affecting the land of which the council may be aware, including the means for a council to disclose information about natural hazards typically supported by council's adoption of a completed investigation or study and a policy or planning instrument to manage that hazard.

For further information, please refer to [Planning Circular – PS 21-033 Planning certificates: coastal hazards](#).

What does the data mean for Development Applications, Exempt and Complying Development?

Development applications must consider the likely impacts of the proposed development on the natural and built environments, as well as social and economic impacts in the locality.

Although the publication of the Assessment data does not identify Coastal Vulnerability Areas, applicants and consent authorities should consider natural hazards, including coastal hazards, when determining a development application.

Under Chapter 2 of *State Environmental Planning Policy (Resilience and Hazards) 2021*, consent must not be granted to development that is likely to cause increased risk of coastal hazards on land in the coastal zone.

Exempt development is not affected by the release of the Assessment data.

Complying development is not affected by release of the Assessment data. It is noted that under section 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, complying development must not be carried out on land in a foreshore area or land that is identified by an environmental planning instrument, a development control plan or a policy adopted by the council as being or affected by—

- (i) a coastline hazard, or
- (ii) a coastal hazard, or
- (iii) a coastal erosion hazard.

Local council applications

How can NSW local councils use this Assessment?

The Assessment is a powerful tool designed to help councils plan for and manage the increasing risks of coastal erosion, estuarine inundation, and coastal overwash under rising sea levels. It provides statewide, probabilistic projections of hazard extents out to 2150, across 5 Shared Socioeconomic Pathways (SSPs), enabling councils to make informed decisions despite future uncertainties.

Councils can use the dataset as a first-pass screening tool to identify priority areas for more detailed local studies. The dataset can be combined with higher-resolution local data and models where available, especially for site-specific adaptation planning.

Councils can use the Assessment to consider multiple future scenarios and percentiles to reflect different levels of risk tolerance and planning horizons.

What does this Assessment mean for councils that have just released or are working on Coastal Management Programs?

Councils can use the statewide Assessment as a first-pass screening tool to identify areas most at risk from current and future coastal hazards across their Local Government Area, and to guide where more detailed assessments should be prioritised.

Additional studies may include information such as localised coastal/catchment processes, sediment transport investigations, and more detailed coastal hazard assessments that consider local factors and conditions.

Councils that are completing or have recently completed coastal hazard studies as part of a Coastal Management Program should continue to use that work. The statewide Assessment is intended to complement and does not replace or invalidate these studies.

Does this Assessment mean that local councils no longer need to do their own coastal hazard studies?

The Assessment provides a consistent statewide approach to evaluating coastal hazard exposure. Councils may still need to undertake their own studies where locally specific and detailed hazard information is necessary to inform decision-making. The dataset was designed to support comparative risk assessment across NSW using simplified models and broad-scale inputs.

Because the statewide modelling does not fully account for local characteristics, such as existing protective infrastructure, localised coastal process and other small-scale features, there may be variations between the statewide projections and local conditions. Councils should use the dataset as a first-pass screening tool to identify priority areas for further investigation. Local hazard studies remain essential to deliver a more detailed understanding of current and future hazard risks, support strategic planning processes and inform the development of coastal management strategies and actions.

The statewide dataset is a starting point, not a substitute. Councils are encouraged to build on it with higher-resolution data and tailored modelling to ensure decisions reflect the specific risks and needs of their communities.

Can councils use the data to define the Coastal Vulnerability Area (CVA) map?

Councils are best placed to identify locally based data to define the Coastal Vulnerability Area (CVA).

Councils can work with DCCEEW to determine whether the data is fit for purpose and appropriately captures the hazard extents and timeframes that would form the basis of such a map.

Councils should note that this data does not include all coastal hazards as defined under the *Coastal Management Act 2016*, and additional assessments are required to complete a CVA map including all hazards.

Any intent to adopt this data for CVA mapping must ensure consistency with Local Planning Direction 4.2 – Coastal Management.

Addressing coastal risks and accessing support

What is being done to address coastal hazards in NSW?

The NSW Government's current Coastal Management Framework has been in place since 2018. The Framework was created to improve how we identify and adapt to hazards, and to support planning and use of land and activities along the coast.

Under the Framework, local councils, in partnership with the NSW Government, prepare and implement Coastal Management Programs (CMPs), which set the long-term strategy for the coordinated management of the coast.

The development and implementation of CMPs is supported by the NSW Government, through technical guidance, specialist expertise and funding.

Who is responsible for planning and actions in relation to coastal hazards?

Generally, local government leads planning and responses to management of coastal hazards, through both general planning frameworks and the development and implementation of Coastal Management Programs (CMPs).

Public authorities may also be identified in certified CMPs as being responsible for delivering actions to manage coastal hazards.

Other NSW Government agencies also have certain responsibilities and considerations of coastal hazards, consistent with their legislative functions, regulatory roles, and asset management obligations (e.g. land-use planning, emergency management, environmental protection).

Whose responsibility is it to communicate coastal risk to communities?

Under the Local Government Act, councils are responsible for making risk assessment information for various hazards available to their communities.

The NSW Government is committed to making climate change information available to NSW Government agencies and the wider public.

What opportunities are there for councils to access funding support for adaptation measures to safeguard their communities?

Funding is available to support local councils to develop and implement Coastal Management Programs (CMPs) through the [NSW Coast and Estuaries Grants Program](#).

Implementation grants can be provided to support adaptation measures where these are identified in a certified Coastal Management Program.

Councils can apply for implementation grants each year as part of a competitive grant round. Funding is awarded based on the determinations of an independent state assessment panel.

What guidance material or support is available?

A user guide will be published in 2026 on the [Future Climate & Adaptation Hub](#), providing further information on the dataset, why the dataset is important, how the dataset was generated, limitations and key considerations for using the dataset.

Councils seeking additional information and guidance on managing the NSW coast or developing coastal management programs can explore the coastal management toolkit.

Assessment methods

What is the most significant change between this and the last assessment?

This assessment used data from the Intergovernmental Panel on Climate Change Sixth Assessment Report. The overall study approach aligns with statewide, national and global best practices in sea-level rise impact assessments. This assessment innovatively leveraged the state's long-standing wave and water level measurements and more recent investments in coastal mapping and wave modelling, to deliver state-of-the-art outcomes to support coastal hazard risk management in NSW.

The findings and datasets from the Assessment are now supporting the implementation of the Disaster Risk Reduction Fund and the NSW Climate Change Adaptation Strategy. They are informing the development of the updated State Disaster Mitigation Plan, Disaster Adaptation Plans, the Climate Change Risk and Opportunity Assessment, and the revised NSW Climate Change Adaptation Action Plan.

What methods were used in these studies of coastal hazards and sea-level rise?

Coastal erosion was modelled applying a regional probabilistic approach and sediment volume-based response models that simulate storm-driven erosion, beach fluctuations, sediment budget imbalances and the effects of sea-level rise.

Estuarine inundation was assessed using tide gauge data to model water level surfaces, combined with projections of sea-level rise, across all 184 recognised estuaries statewide. The mapping is based on measured water level data and/or berm heights where data is available, and water level planes for different estuary types where no gauge data was available.

Coastal overwash was modelled along the NSW sandy coastline using high-resolution LiDAR-derived backbeach elevations to assess the likelihood of overwash driven by the combined effects of tide, storm surge, wave runup, and future sea-level rise.

The sea level rise assessment is a synthesis of current science compiled from a review of published literature.

For more detail on the methods used in the Assessment, please refer to the [technical report](#).