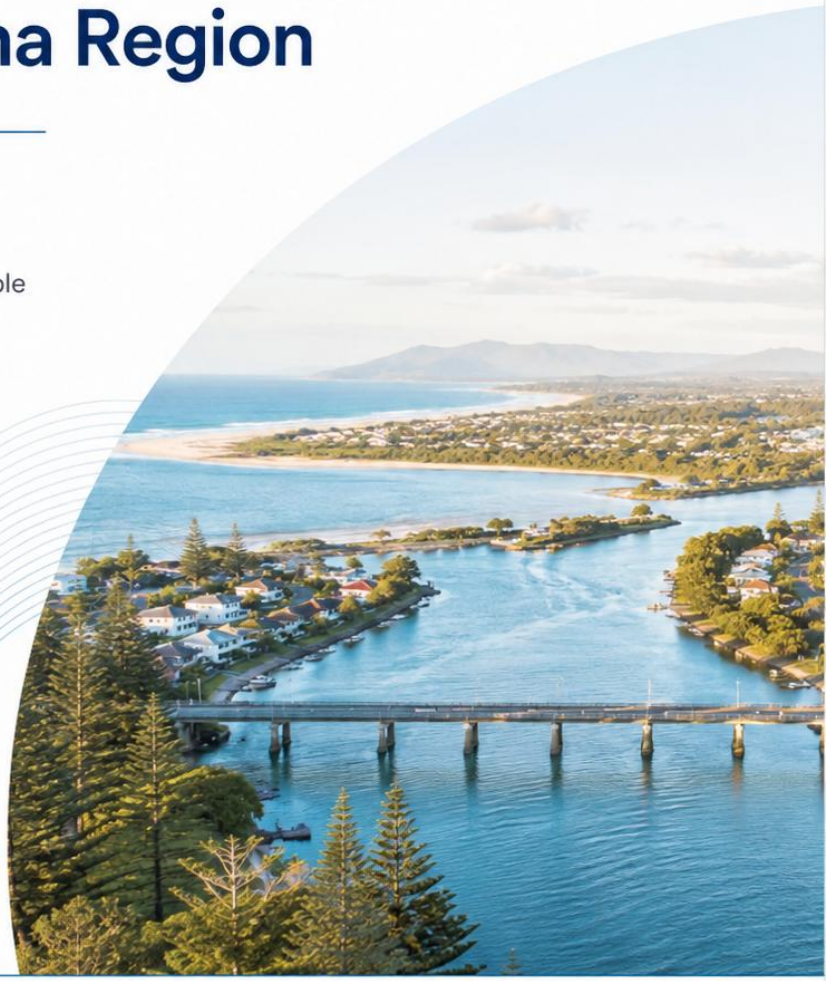
Climate Change Adaptation Strategy for Ballina Region

Building a resilient, adaptable and sustainable Ballina Region



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Acknowledgement of country:

We acknowledge the Bundjalung People of the Ballina region as the Traditional Custodians of the land, waters, and coastline on which this report is based. We pay our respects to Elders past, present, and emerging, and recognize their continuing connection to Country, culture, and community. We honour and value the knowledge, traditions, and stewardship of the Bundjalung People in caring for the environment across generations.



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Executive Summary

Ballina Shire, NSW, is a coastal, floodplain area that links to the Richmond River, wetlands, beaches, farming land and Aboriginal cultural heritage of the Bundjalung Nation. Due to climate change, these natural, social and economic components of the area may be under greater pressure in the future. Sea-level rise, coastal erosion, flooding, changes in rainfall, extreme heat, storms and bushfires are the primary climate risks that are likely to intensify in Ballina.

Ballina's farms, tourism, infrastructure and ecosystems are closely linked to low-lying coastal and river areas, so strong adaptation planning is needed. Flooding and heavy rainfall can affect water quality, farming, emergency access and homes. The following main sectors are addressed in this report: Agriculture and Water Resources, Human Health and Emergency Services, Natural Ecosystems and Cultural Heritage, and Infrastructure and Tourism.

Actions have been prioritized across three timeframes (immediate, short term 2-5 years and long term 5-10 years) to assist Ballina Shire Council and other stakeholders to deliver realistic and sustainable outcomes.

The recommendations are based on Ballina's key climate risks, including coastal flooding, Richmond River water quality, health impacts, ecosystem damage, cultural heritage protection, exposed infrastructure and coastal tourism. The strategy also highlights the need for cooperation between government agencies, emergency services, health providers, Indigenous groups, farmers, tourism operators, environmental groups and the community.

Introduction

One of the prominent coastal towns, Ballina, is facing ongoing consequences of climate change, including rising temperatures, intensified rainfall, sea-level rise, and increased bushfire risk. The coastal town is recognised for its beautiful beaches, rich biodiversity, and its status as an attractive tourist hotspot. Different climate change events have significantly affected the communities residing in low-lying coastal areas, including Shawls Bay, Ballina Island, South Ballina, North Creek, Lennox Head, and the Richmond River floodplain.

Temperature

The coastal town's temperature data suggests a gradual rise over the past few decades. For both the maximum and minimum values, temperature has risen, indicating fewer cooling periods and higher nighttime temperatures. Under (SSP 1-2.6), climate projections indicate that the temperature will increase by +0.69°C in (2020–2039), and by +1.13°C in (2080–2099).

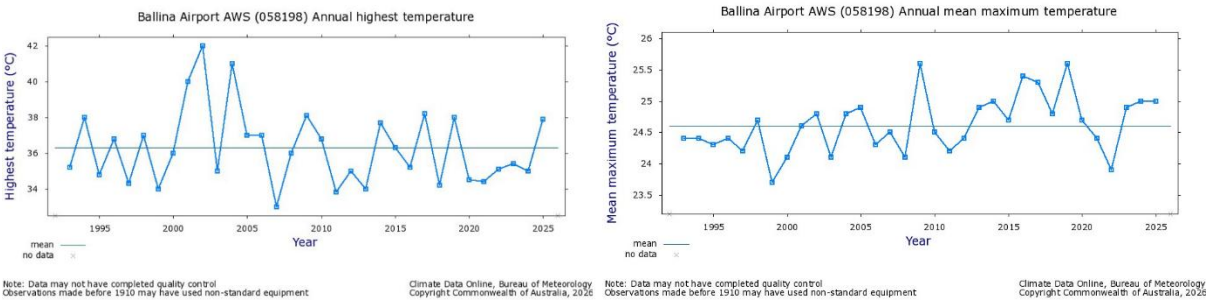


Figure 1: Temperature projection of Ballina (Source: AdaptNSW).

Rainfall

With both wet and dry years, considerable variability was found in Ballina. Average rainfall is supposed to decrease slightly. Extreme rainfall (above 2500–2900 mm) is observed in some years, and a drop in rainfall events (around 1000–1500 mm) in others. The coastal weather system, along with El Niño and La Niña events, is responsible for this variability in rainfall.

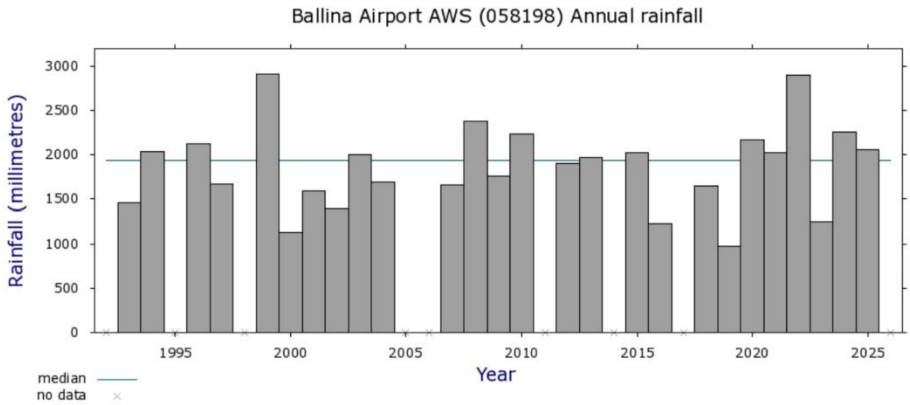


Figure 1: Rainfall record of Ballina (Source: Adapt NSW).

Risk of extreme fire weather

According to the projection, fire risk will increase in severity with the emission risk scenarios; under short-term minimal alteration, it is −0.06 days, and under long-term, it is +0.13 days.

This has raised the possibility of bushfire risk in nearby areas, with intensified fire spreading. On dry days, the overall risk is elevated even with a minor escalation in fire weather.

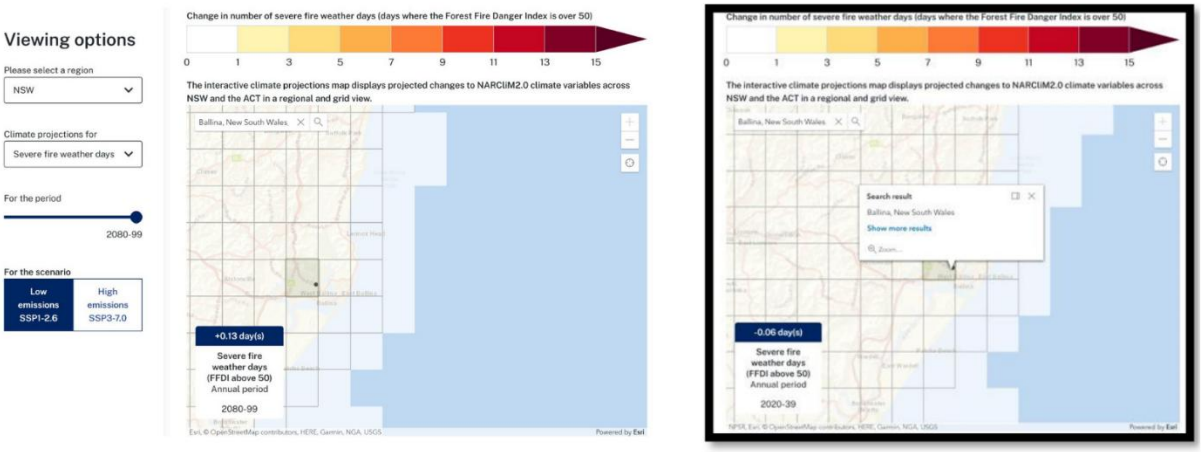
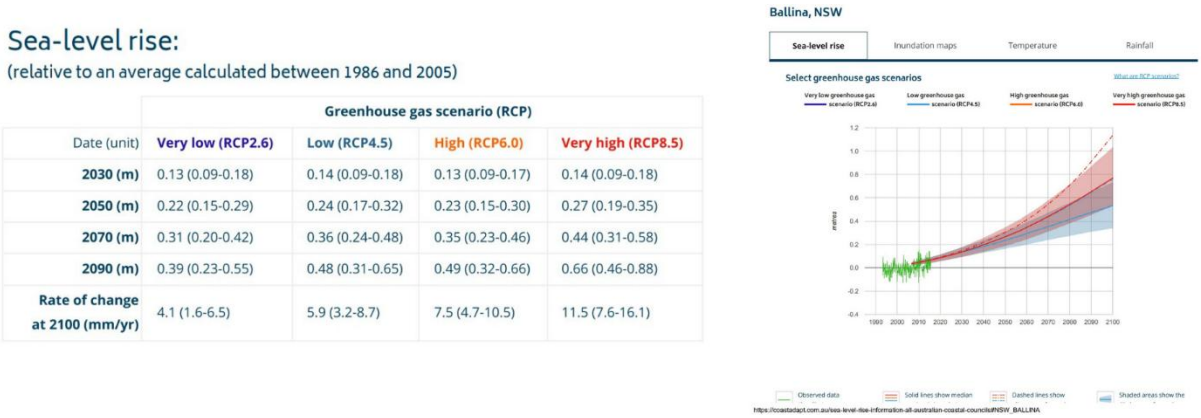


Figure 2: Projection of fire weather (Source: NARCLIM).

Sea level rise



Sea-level rise:
(relative to an average calculated between 1986 and 2005)

	Greenhouse gas scenario (RCP)			
Date (unit)	Very low (RCP2.6)	Low (RCP4.5)	High (RCP6.0)	Very high (RCP8.5)
2030 (m)	0.13 (0.09-0.18)	0.14 (0.09-0.18)	0.13 (0.09-0.17)	0.14 (0.09-0.18)
2050 (m)	0.22 (0.15-0.29)	0.24 (0.17-0.32)	0.23 (0.15-0.30)	0.27 (0.19-0.35)
2070 (m)	0.31 (0.20-0.42)	0.36 (0.24-0.48)	0.35 (0.23-0.46)	0.44 (0.31-0.58)
2090 (m)	0.39 (0.23-0.55)	0.48 (0.31-0.65)	0.49 (0.32-0.66)	0.66 (0.46-0.88)
Rate of change at 2100 (mm/yr)	4.1 (1.6-6.5)	5.9 (3.2-8.7)	7.5 (4.7-10.5)	11.5 (7.6-16.1)

Figure 3: Projection of sea level rise (Source: NARCLIM).

Ballina's vulnerable sectors:

Infrastructure & Tourism

In the North Coast region of NSW, sea level rise is projected to increase by 31-65 cm under low-emission scenarios and 55-97 cm under high-emission scenarios by 2100 in Ballina (North Coast, 2025). Potential impacts of SLR in this region may include:

- Damage to car parks and public facilities: Vulnerable locations, including Lennox Head access points, Ross Street carpark, Sharpes Beach car park, Shelly Beach SLSC, and Lighthouse Beach car park, will be greatly impacted. This will result in temporary disclosure to surf lifesaving facilities and beach access points (Nsw.gov.au, 2026).
- Damage to coastal ecosystems: Sea-level rise will adversely impact salt marshes, mangroves, estuarine vegetation, rocky shore habitats, and freshwater ecosystems (Nsw.gov.au, 2026).

- Economic risk: The Destination Management Plan report states that visitors contributed $245.3 million to Ballina's local economy by 2018-19 (Ballina, 2025). Projected sea level rise could affect beach quality and local businesses.

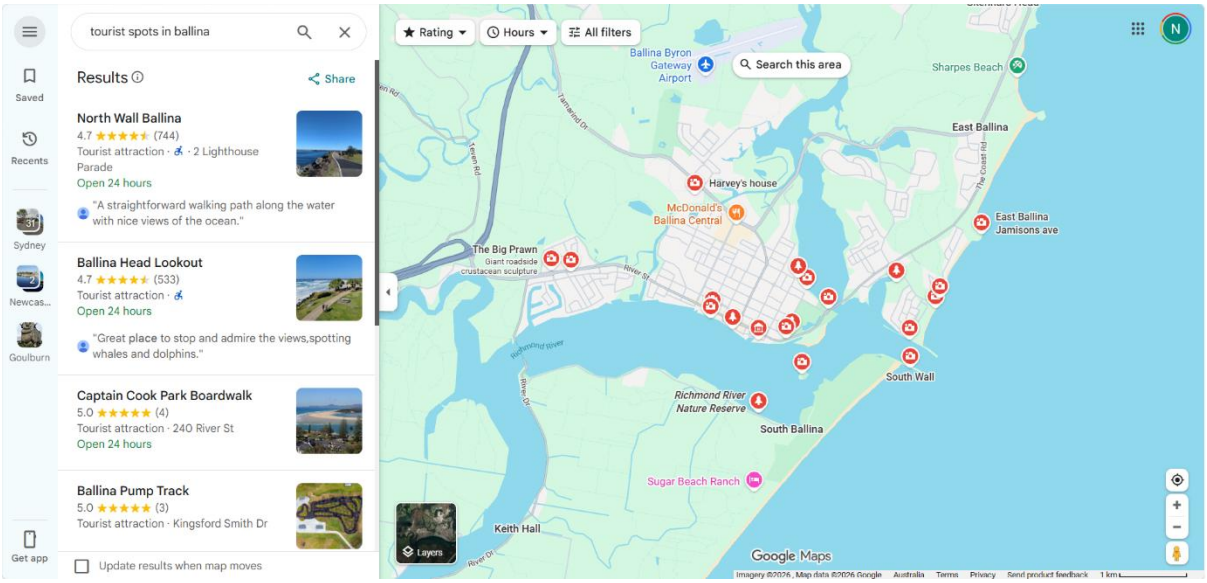


Figure 4: Possible tourist hotspot in Ballina region (Google Maps, 2025)

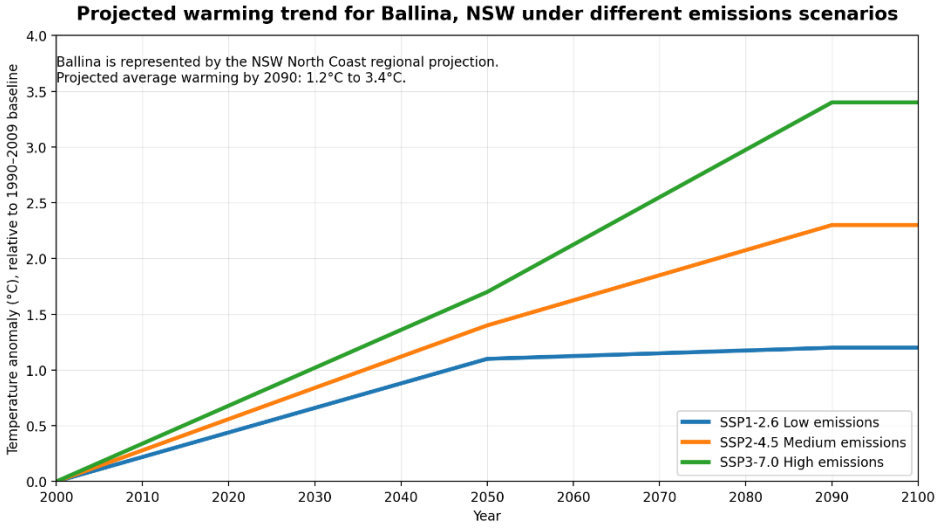


Figure 5: Warming trends in Ballina under different emission scenarios (AdaptNSW, 2025)

Changes in mean temperature and destructive storm surges may contribute to damage to the following:

- Due to intense and frequent cyclones, Ballina will face coastal recession, erosion, and inundation. It will impact the beach-side infrastructure and public assets.

- With intense flooding, the low-lying areas, including West Ballina, Ballina Island, North Creek and roads near the Richmond River floodplain will face road transport disruption.
- The combination of sea level rise and intensified rainfall may overload the drainage system, leading to disruptions in the sewage network, saltwater intrusion, and delays in underground services.
- Byron Gateway Airport in Ballina is crucial for regional transportation. Intense flooding, extreme heat, and storm surges will disrupt the regional connectivity (Canosa, Graham and Wilson, 2019).

To protect the infrastructure in Ballina, the following initiatives can be implemented:

- Strengthening natural dune barriers, including dune fencing and rehabilitation, will help reduce erosion damage across different beaches (Nsw.gov.au, 2026).
- Upgrades to drainage, including larger culverts, detention basins, backflow prevention, and water-sensitive urban design, will notably improve drainage by slowing flows and preventing blockages in low-lying areas (Nsw.gov.au, 2026).
- Practical strategies implemented in Shaws Bay, including dredging, beach nourishment, salt marsh basin creation, and picnic shelters, can serve as a model for protecting other accessible infrastructure along different beaches (Nsw.gov.au, 2026).

The coastal zone management plan (CZMP) of Ballina is suggested as follows:



Figure 6: The CZMP plan of Ballina Shire Council (Nsw.gov.au, 2026)

Agriculture and Water Resources

Ballina Shire is in the Northern Rivers catchment area of NSW and is well connected to coastal floodplains, estuaries and the surrounding rural landscape. Agriculture and water resources play an important role in supporting local food production, ecosystem health, fisheries, recreation and community wellbeing. The farming industry and valuable river systems across the wider North Coast region will be increasingly subjected to climate change pressures such as warmer temperatures, changing rainfall patterns, increased flooding, drought risk and sea-level rise (NSW Government, 2024).

Water Security

Water security in Ballina involves ensuring the quality of water during floods and heavy rainfall. The Richmond River estuary is significant, due to its role in farm production, biodiversity, fisheries, recreation and tourism. Creek, river and estuary health have decreased over time due to previous land-use practices (Ballina Shire Council, 2024).

Flooding and intense rainfall are key threats to Ballina's agriculture and water resources. In flood situations, sediment, nutrients, pesticides, fertilizers and organics can be carried off from farming areas into the Richmond River and water ways. The NSW Marine Estate Management Authority (2023) identified poor water quality due to diffuse agricultural runoff as the highest priority threat to environmental assets in the Richmond River system based on the Richmond River Floodplain Prioritization Study. Farm runoff reduction, better drainage and the restoration of vegetation buffers along waterways and increased water quality monitoring are important adaptation actions.

Food Security and Agricultural Resilience

The impacts of climate change are a threat to Ballina's agricultural industry as farming practices are dependent on consistent rainfall, fertile soils, good drainage and the right climate for cultivating crops. Altered precipitation and droughts can create additional strain on water resources, elevated temperatures can result in greater evaporation, more irrigation demands and heat stress on plants, animals and farm workers. Rous County Council's Future Water Project 2060 aims to enhance the long-term water security for the region by exploring future water supply options (Rous County Council, 2024).

Low-lying floodplain and freshwater wetlands and agricultural soils also may be affected by sea-level rise and saltwater intrusion. Another important consideration is acid sulfate soil, which could result in reduced water quality if the soil is poorly drained or disturbed by flood. The Richmond River Floodplain Prioritisation Study dataset contains details of floodplain drainage systems, soil characteristics, hydraulic conductivity and sea level rise vulnerability, highlighting the importance of good land management practices and protection of floodplains and soils in coastal agricultural areas (NSW Government, 2023).

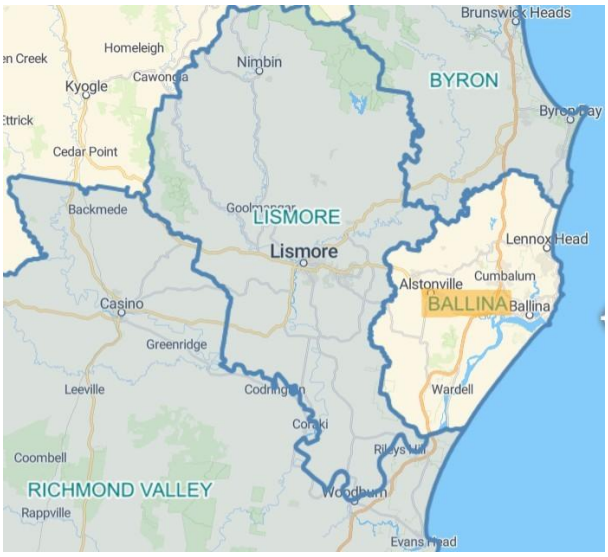


Figure 7: Ballina Shire and surrounding Northern Rivers catchment area. (Source: Ballina Shire Council Online Mapping)

This map shows Ballina Shire's location within the Northern Rivers region and its connection to nearby local government areas, including Byron, Richmond Valley and Lismore.

Human Health and Emergency Services

The human health and emergency services sector in Ballina is very vulnerable to the impacts of climate change, due to the region's coastal position, aging population and flood prone areas. Higher heat, flooding, sea level rise and extreme weather events are likely to exert significant stress on local health care systems and emergency services (NSW Government, 2024).

The heatwaves and rising temperatures pose major health concerns for vulnerable groups such the elderly, children, chronic diseases infected, outdoor workers and the socially isolated. High humidity increases the danger of heat stress and respiratory sickness, cardiovascular problems, dehydration and heat weariness (CSIRO & Bureau of Meteorology [BoM], 2022). During heat waves, assisted living homes and ambulance services is predicted to increase, resulting in no access to emergency services and medical care during catastrophes (NSW State Emergency Service [SES], 2023). Floodwaters worsen waterborne infections by contamination of drinking water sources and sewage overflow, which strain the local healthcare system. "Sea level rise and coastal erosion threaten Ballina's residential areas, key infrastructure and evacuation routes. (NSW Government 2024) Coastal flooding in low-lying coastal areas can result in financial hardship and irreversible migration. Vulnerable groups such as the elderly and emergency workers can experience psychological distress, trauma and long-term mental health problems from repeated exposure to floods, storms and bushfires (Department of Health, 2021).
Bushfires are likely to be more frequent as the weather gets hotter and drier. The frequency and severity of bushfires is expected to increase in Ballina's suburbs, resulting in poorer air quality and greater risk of respiratory and cardiovascular diseases for residents (CSIRO & BoM, 2022).



Figure 8: Flood impacts across residential areas in Ballina during extreme flooding events associated with the Richmond River catchment. Source: Ballina Flood Study Update 2023 (Ballina Shire Council, 2023).

Adaptation Strategies

Ballina's emergency management systems must improve disaster preparedness, strengthen healthcare resilience and support vulnerable populations to address these challenges. Key adaptation strategies include:

• Heatwave response plans development, such as public cooling centres, community alerts and targeted support programs for vulnerable residents during extreme heat events.

• Improving early warning and emergency communication systems for floods, storms, bushfires and heatwaves.

• Upgrading evacuation routes, emergency shelters and healthcare infrastructure to improve resilience during flooding and severe weather events.

• Increasing emergency service training, staffing and resources to ensure local disaster response capability is strengthened.

• Incorporating climate resilience into urban planning, focusing on flood resilience, heat reduction and emergency accessibility in new developments

Natural Ecosystems and Cultural Heritage

Ballina is part of the Northern Rivers district of New South Wales and is home to highly significant coastal ecosystems, estuarine wetlands, floodplain habitats and Aboriginal cultural heritage landscapes of the Bundjalung Nation. Pressure on these natural systems is likely to grow significantly though under the influence of climate change, as sea-level rises, temperatures, coastal erosion, flooding and bushfires and changing rainfall variability all increase (NSW Government, 2024).

The Ballina region contains ecologically significant habitats like the Richmond River estuary, coastal wetlands, mangrove forest, littoral rainforest, dune and coastal heath vegetation. These habitats are home to many threatened and migratory birds, fish nurseries, amphibians and marine life. Coastal wetlands and mangroves are also significant blue carbon ecosystems, that play a role in long-term carbon storage and climate regulation (Department of Climate Change, Energy, the Environment and Water [DCCEEW] 2023).

Climate change poses multiple threats to the natural ecosystems and cultural heritage of Ballina in several ways:

Sea-level rise and coastal erosion threaten Ballina's dunes, wetlands, beaches, mangroves and low-lying Aboriginal cultural heritage sites through inundation, shoreline retreat and habitat loss (NSW Government, 2024). It also poses a risk for the inundation of Aboriginal cultural heritage sites including shell middens, burial grounds, ceremonial sites and culturally significant coastal landscapes, and shoreline retreat and permanent loss of land (NSW Government, 2024). Many of these are situated in low-lying coastal areas, making them highly vulnerable to coastal erosion and flooding.

Increasing temperatures could lead to the spread of some species, loss of biodiversity, higher heat stress for plants and animals, and degradation of ecosystems in coastal and hinterland areas (CSIRO & BoM, 2022). Historically significant vegetation and natural landscapes with cultural values may also be affected by heat stress (CSIRO & BoM 2022).

- Changes in rainfall patterns and flooding can lead to degradation of riparian ecosystems, water quality issues, sediment and nutrient run-off into estuaries and disturbance of aquatic habitat in the Richmond River catchment (NSW Government, 2024).
- More frequent and intense extreme weather events, including East Coast Lows, storms and flooding, may destroy vegetation communities, damage wetlands, accelerate erosion and threaten ecological stability (DCCEEW, 2023).
- Saltwater intrusion into freshwater wetlands/estuarine systems can affect ecosystem composition and decrease the ability of sensitive plant and animal species to survive (Doody, 2013).
- Bushfire risk is expected to increase under hotter and drier conditions, threatening surrounding forests, biodiversity, and culturally significant landscapes (CSIRO & BoM, 2022).
- Damage to Aboriginal cultural heritage including shell middens, ceremonial grounds, scarred trees and culturally significant coastal landscapes may occur due to flooding, erosion and sea-level rise (NSW Heritage Office, 2023).

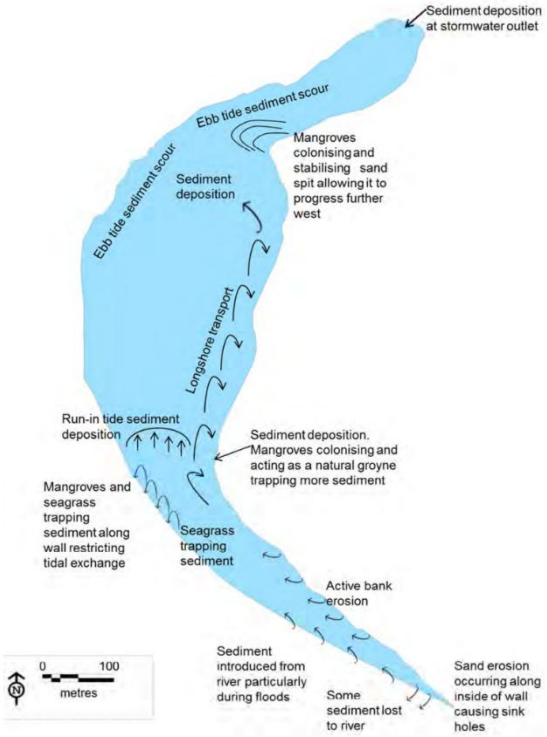


Figure 9: Sedimentation and erosion processes affecting Shaws Bay ecosystems and foreshore stability (Hydrosphere Consulting, 2015).

Adaptation strategies for Ballina should focus on ecosystem-based adaptation strategies, to build nature's resilience, safeguard biodiversity and cultural heritage. Natural solutions like wetland restoration, dune rehabilitation, mangrove protection and riparian revegetation can help to mitigate climate risk and support healthier ecosystems and greater carbon sequestration

potential (DCCEEW, 2023). Incorporating the knowledge and perspectives of the Indigenous people is also crucial to the sustainable and culturally competent management of the environment, as well as to better partnerships with Bundjalung people.

Adaptation Strategies

- Protect and restore coastal wetlands, mangroves and salt marshes to enhance shoreline protection, biodiversity conservation and blue carbon storage (DCCEEW, 2023).
- Use nature-based coastal protection and defence strategies (living shorelines, ecological engineering to restore oyster reefs, among other alternatives) rather than hard infrastructure.
- Connect coastal and hinterland ecosystems and build biodiversity corridors to facilitate migration of species with a changing climate.
- Rehabilitation of riparian areas along water courses and estuaries to help improve water quality, sediment control and aquatic ecosystem health.
- Provide greater protection for Aboriginal cultural heritage sites by mapping, vulnerability assessment, monitoring and working collaboratively with Bundjalung Traditional Custodians (NSW Heritage Office, 2023).
- Incorporate Indigenous ecological knowledge into environmental management, such as cultural burning programs, ecosystem restoration and land management.
- Create a long-term coastal retreat planning and land use approach that lessens the impact of sea-level rise and flooding on vulnerable ecosystems.
- Enhance the management and surveillance of invasive species, weeds and pests potentially entering new areas of the region due to climate change.

Recommendations:

Table 1: Recommendations for Ballina's Infrastructure & Tourism

Recommendation	Description	KPI	Timeline	Climate/Economic Risks Addressed
Transport connectivity improvement	Maintenance and upgradation of transport routes for better accessibility to beaches, Hinterland, and Richmond River	Travel time reduction, increased usage of public transport for visitors	Short to medium term (1-5 years)	Disruption of extreme weather, limited access to different spots

Development of flood-resilient public spaces	Riverfront parks, foreshore walkways, and public event areas need to be redesigned with flood adaptive measures, including raised platforms, permeable surfaces	Flood damage repair costs decreased, Number of redesigned public spaces	Medium Term (3-7 years)	Sea level rise, storm surges, and flooding events
Promotion to sustainable tourism experiences	Support eco-tourism, encourage green certification for businesses	Tourism revenue earned from sustainable tours	Short term (1-4 years)	Shift of tourist demand
Planning of climate adaptation for key tourism assets	Promotion to ecosystem-based adaptation, protection of public and private assets with sustainable design practices	Adaptation measures implemented, reduced asset loss risk	Long Term (5-10 years)	Coastal erosion, extreme storms

Table 2: Recommendations for Ballina's Agriculture and Water Resources

Recommendations	Descriptions	KPIS	Timeline	Climate Change Risks
Reduce farm runoff into waterways	Use buffers, erosion control and better fertiliser practices to reduce runoff into the Richmond River.	Lower nutrient/sediment levels; farms adopting runoff controls.	Immediate	Flooding, poor water quality
Expand water quality monitoring	Test rivers and flood plain drain after heavy rain and floods.	Annual reports; more testing sites.	Immediate and ongoing	Flooding, rainfall variability
Strengthen farm flood planning	Prepare plans for livestock, machinery, chemical storage and recovery.	Farms with flood plans; reduced flood damage.	Immediate	Flooding
Encourage regenerative agriculture	Promote cover crops, reduced tillage and soil improvement.	Workshops held; farmland under improved soil management.	Short-term, 2–5 years	Drought, heat, flooding
Restore riparian and wetland areas	Replant riverbanks and wetlands to filter runoff and reduce erosion from rivers and streams.	Riverbank and wetland areas replanted/restored	Short-term, 2–5 years	Flooding, sea level rise

Improve water efficiency on farms	Support efficient irrigation, water recycling and rainwater harvesting.	Farms using water-saving systems; reduced water use.	Short-term, 2–5 years	Drought, heat
Manage salinity and acid sulfate soil risks	Map and manage low-lying salinity and acid sulfate soil risk areas.	Risk mapping completed; sites managed.	Long-term, 5–10 years	Sea-level rise, flooding
Supporting climate-resilient crops	Trial crop varieties suited to heat, drought and flooding.	Farms trialing resilient crops; reduced crop losses.	Long-term, 5–10 years	Heat, drought, flooding

Table 3: Recommendations for Ballina's Human Health and Emergency Services

Recommendations	**Description**	**KPIs**	**Timeline**	**Climate Change Risks**
Develop community heatwave response plans	Establish heatwave management plans including cooling centres, public alerts and targeted support for vulnerable residents	Completion of heatwave response plans and number of cooling centres established	Immediate	Temperature rise, heatwaves
Upgrade evacuation routes and emergency shelters	Improve evacuation infrastructure and accessibility during floods and severe storms	Number of evacuation routes upgraded and shelters assessed	Short-term (2–5 years)	Flooding, storms, sea-level rise
Improve early warning and emergency communication systems	Expand flood, storm, bushfire and heatwave monitoring and communication systems across Ballina	Increased warning coverage and faster emergency response times	Immediate and ongoing	All climate risks
Increase resilience of healthcare facilities	Upgrade hospitals, aged care centres and community health	Number of healthcare facilities upgraded	Medium-term (2–5 years)	Flooding, heatwaves, storms

	facilities to better withstand flooding, storms and heatwaves			
Expand mental health and disaster recovery services	Improve access to mental health support programs following floods, bushfires and severe weather events	Number of recovery programs delivered and participation rates	Immediate and ongoing	Flooding, storms, bushfires
Support vulnerable populations during emergencies	Develop targeted emergency support programs for elderly residents, Aboriginal communities, disabled people and socially isolated groups	Vulnerability mapping completed and support services implemented	Immediate and ongoing	All climate risks
Strengthen local emergency service capacity	Increase training, staffing, funding and resources for emergency response services and volunteers	Increased emergency response capability and training participation	Medium-term (2–5 years)	Flooding, bushfires, storms
Include climate resilience in future urban planning	Incorporate flood resilience, heat reduction and emergency accessibility into future development planning	Climate adaptation measures included in planning policies	Long-term (5–10 years)	Flooding, temperature rise
Community education and preparedness programs	Deliver education programs focused on climate risks, emergency preparedness and disaster response	Number of community workshops and awareness campaigns conducted annually	Immediate and ongoing	All climate risks
Improve backup power and communication systems	Strengthen emergency communication networks and backup energy systems during disasters	Reduced service disruptions during extreme weather events	Medium-term (2–5 years)	Flooding, storms, heatwaves

Table 4: Recommendations for Ballina's Natural Ecosystems and Cultural Heritage

Recommendations	Description	KPIs	Timeline	Climate Change Risks
Protection of Aboriginal cultural heritage sites in vulnerable coastal areas	Conduct mapping and vulnerability assessments for Indigenous cultural heritage sites exposed to coastal erosion, flooding and sea-level rise in partnership with Bundjalung communities	Completion of cultural heritage vulnerability mapping and consultation programs	Immediate	Sea-level rise, flooding
Coastal wetland and mangrove restoration	Restore degraded wetlands, mangroves, and saltmarshes to improve shoreline protection, biodiversity, and blue carbon storage	Area of wetlands restored annually; increased vegetation cover	Short-term (2–5 years)	Sea-level rise, flooding
Coastal dune rehabilitation	Stabilise dunes through revegetation, fencing, and controlled public access to reduce coastal erosion	Reduction in dune erosion rates; increased dune vegetation coverage	Short-term (2–5 years)	Coastal erosion, storms
Expansion of biodiversity corridors	Improve habitat connectivity between coastal and hinterland ecosystems to support species migration under climate change	Area of connected habitat corridors established	Long-term (5–10 years)	Temperature rise, habitat fragmentation
Riparian vegetation restoration	Restore native riparian vegetation along waterways to improve water quality and reduce sedimentation	Improved water quality indicators; increased riparian vegetation cover	Short-term (2–5 years)	Flooding, rainfall variability

Recommendations	Description	KPIs	Timeline	Climate Change Risks
Invasive species management	Increase monitoring and control of invasive weeds and pests threatening native ecosystems	Annual invasive species monitoring reports and reduction targets achieved	Immediate and ongoing	Temperature rise, ecosystem degradation
Community and Indigenous engagement programs	Partner with Bundjalung Traditional Custodians and local communities in environmental management and adaptation planning	Number of collaborative environmental management programs implemented	Immediate and ongoing	All climate risks
Nature-based coastal protection	Implement living shorelines, oyster reef restoration, and ecological engineering solutions instead of relying solely on hard infrastructure	Reduction in shoreline erosion and increased ecosystem resilience	Long-term (5–10 years)	Sea-level rise, storms
Environmental monitoring and GIS mapping	Develop long-term monitoring programs for wetlands, biodiversity, shoreline change, and ecosystem health	Annual environmental monitoring reports and updated GIS databases	Immediate and ongoing	All climate risks
Climate refugia conservation	Identify and protect climate refugia areas likely to remain ecologically stable under future climate conditions	Protected area expansion and conservation planning completed	Long-term (5–10 years)	Temperature rise, biodiversity loss

Conclusion

Climate change is expected to place increasing pressure on Ballina's human health and emergency services through rising temperatures, flooding, sea-level rise, storms, and bushfires. The risks may impact farms, water quality, health services, ecosystems, cultural heritage, infrastructure and tourism. Improving healthcare resilience, strengthening emergency preparedness and supporting vulnerable communities will be essential for reducing future climate risks. There is a need for robust adaptation planning to safeguard vulnerable individuals, restore natural habitats and enhance emergency preparedness. Cooperation between the Council and the Bundjalung Traditional Custodians, agencies, farmers, tourism operators and the community will be key. Long-term collaboration between councils, emergency services, healthcare providers, Indigenous organisations, and local communities will help improve Ballina's resilience and adaptive capacity under future climate conditions. Through regular monitoring and review, Ballina will become more resilient to future climate challenges.

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