

# Physical Infrastructure

Climate change is already affecting critical infrastructure in New Brunswick. Preparing now for future risks can help keep our water and wastewater systems, transportation, public buildings, facilities, and energy and utility services safe and reliable.

This summary draws on findings from [New Brunswick's Climate Change Risk Assessment](#), which looks at how climate change is impacting the province today and what we are likely to face going forward. The assessment identifies key issues of concern and opportunities for action.

## What's the Risk?

***The actions we take today to prepare and build resilience can help reduce the harm of future climate-related hazards like flooding, erosion, heatwaves, and wildfires.***

Risks from the changing climate range from minimal disruptions to widespread and lasting disruptions. This can cause harm to health and safety, ecosystems, communities, economic sectors, or infrastructure.

By 2050, risks and the resulting impacts will increase significantly if greenhouse gas emissions are not reduced and if we don't prepare for the impacts of climate change through adaptation. The need to adapt, prepare, and future-proof critical infrastructure is essential.

Climate hazards can also amplify existing social and economic challenges in vulnerable communities. This means small and rural communities face greater challenges because they have fewer resources (financial and other) to maintain and upgrade their infrastructure.

## Physical Infrastructure Impacts

The top drivers of risks to infrastructure are inland flooding, wildfires, coastal flooding, and coastal erosion. These are expected to cause:

- structural damage to infrastructure (roads, wastewater, etc.)
- instability and failure of coastal infrastructure (bridges, rail lines, ports, etc.)
- increased need for repairs and replacements
- disruption of community services

Damage to infrastructure can lead to cascading impacts on public health and safety, communities, the environment, and the economy.

## How Can We Adapt?

***Climate change adaptation*** refers to actions that reduce the harm caused by climate change impacts.

## ADAPTATION IN ACTION: FLOOD HAZARD MAPPING

The 2018 Saint John River Flood was one of the worst in New Brunswick's history, causing around \$75 million in damages. High water levels caused by heavy rain and rapid snowmelt damaged homes, water systems, and transport networks, and closed 80 roads.

To help people and communities prepare and plan for future flooding, the province developed flood hazard maps. These maps show flood risk zones and help residents, planners, and engineers make informed decisions on the location and design of buildings, roads, and other critical infrastructure.



***In New Brunswick, new technologies are being adopted, and flood maps are publicly available.*** Climate change information is starting to get into infrastructure planning and design.

However, ***uptake remains inconsistent.*** Many communities struggle to get the resources they need to maintain and upgrade infrastructure. While coordination between different levels of government is improving, more work is needed to make climate change a regular part of decision-making. There is also a need to better include underserved communities in infrastructure planning and investment decisions.

### Next Steps

- You can prepare for climate change as an individual, homeowner, municipal staff member, or energy and utility provider. Consider climate risks in capital planning, infrastructure management, and policies. You can also learn more about flood risks and how to plan for flooding using [New Brunswick's Flood Risk Information Page](#).
- Learn how the [New Brunswick Climate Change Risk Assessment](#) is helping the province understand current climate risks and how to prepare for the future.
- Explore climate change adaptation resources. [CLIMAtlantic.ca](#) offers tools, information, and services to get you started.
- Connect and get involved with local organizations through the [New Brunswick Environmental Network](#).



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