# ABOUT

## About: RiskProfiler.ca

RiskProfiler, a website developed by Natural Resources Canada, allows access, visualization, and exploration of information about the potential risks from earthquakes. The information is crucial for planning and preparing for future earthquake events and is intended to support communities and governments to build resilience to earthquake hazards.

## About: The Project

Information on RiskProfiler is the outcome of a national earthquake risk assessment by Natural Resources Canada completed in partnership with the Global Earthquake Model Foundation. The assessment’s goal is a national understanding of neighbourhood-scale earthquake risk to support strategic risk reduction across Canada. The risk to Canadian buildings and their occupants is assessed by combining seismic hazard, building, and building fragility information.

Learn more about the national earthquake risk assessment here.

## About: Earthquake Scenarios

An earthquake scenario describes a potential earthquake and its consequences. Scenarios are defined by a magnitude, location, fault type, and are developed for specific faults that can produce large earthquakes. Learn more about earthquake scenarios here.

## About: Probabilistic Earthquake Risk

When multiple earthquake scenarios are combined, the result is called probabilistic earthquake risk. Probabilistic earthquake risk represents the potential consequences of all earthquakes that may occur over a defined time period from known earthquake sources. For example, probabilistic earthquake risk analysis can estimate the average annual economic losses from earthquakes or the economic loss expected to occur about once every 500 years. Learn more about probabilistic earthquake risk here.

## About: Earthquake Risk Information and Users

For both scenarios and probabilistic analysis, RiskProfiler provides details about the potential earthquake effects including the area that may experience shaking, and the potential level of building damage, economic loss, and casualties at the neighbourhood scale.

Indigenous Nations, Governments, planners, emergency managers, insurance providers, and the public can use this information to understand future earthquake risk and inform evidence-based risk reduction plans. The information can help answer important questions such as:

* What are the consequences of an earthquake?
* What areas and individuals are at highest risk from an earthquake?
* Are the earthquake risks tolerable to our community?
* How should we plan to respond in the event of an earthquake?

## Uncertainties and Intended Use

RiskProfiler provides estimates about the potential impacts from earthquakes. The results are likely an underestimation as they only account for direct damage to buildings and inhabitants. Potential indirect damages such as business interruptions and damages to critical infrastructure, utilities, vehicles or high consequence facilities such as dams are not included. Impacts from secondary hazards such as earthquake aftershocks, liquefaction, landslides, or fire following are also not included.

The information is based on national-scale models of hazard, exposure, and vulnerability, and are intended to represent typical conditions in any given area, but may not precisely represent local conditions. Results should not be used for site-specific applications.