# ABOUT

## About: RiskProfiler.ca

Riskprofiler, which is a product of Natural Resources Canada and Habitat7, allows users to access, visualize, and explore information about the potential risks from earthquakes in their region. This platform provides crucial information needed to plan and prepare for future earthquake events, and is intended to support communities and government build resilience to these hazards.

## About: The Project

Data available on RiskProfiler is the outcome of a national earthquake risk assessment completed by Natural Resources Canada in partnership with Global Earthquake Model Foundation. The goal is to develop a national understanding of earthquake risk at the neighborhood scale to form a basis for implementing strategic risk reduction strategies across Canada. This assessment reports the risk to Canadian buildings and their occupants, using the Canadian seismic hazard model, a national model of Canada’s building stock, and relationships that describe the fragility of Canadian buildings to earthquakes. The project was made possible through support from Public Safety Canada and the Defense Research and Development Canada.

Learn more about the national assessment of earthquake risks here.

## About: Earthquake Scenarios

An earthquake scenario represents a potential future earthquake. They are defined by an assumed magnitude, location, and fault type, and are developed for specific faults that have the potential to produce significant earthquakes. RiskProfiler provides details about the potential impact from future earthquake scenarios that could occur in Canada, including the likely extent of shaking, building damage, economic loss, and casualties.

These scenarios are likely to be of interest to those engaged in community planning and emergency response, such as governments and other entities conducting training exercises based on realistic earthquake situations. The catalogue of earthquake scenarios forms a credible basis for such work.

## About: Probabilistic Earthquake Risk

Probabilistic earthquake risk represents the potential consequences of all earthquakes that may occur over a defined time period, considering known earthquake sources. For example, insurers or community planners may be interested in the average annual economic losses from earthquakes, or the economic loss expected to occur about once every 500 years. RiskProfiler provides details about the risk from future earthquakes across Canada, including the expected building damage, economic loss, and casualties at the neighborhood scale.

When planning mitigation efforts for future earthquakes, governments and other entities can use this information to answer important questions such as: Are the risks from earthquakes tolerable? Where are the risks highest? How do the risks from earthquakes compare to other hazards?

## About Uncertainties

Information about the potential impacts from earthquakes on RiskProfiler are only estimates, and are likely underestimates. The data only accounts for direct damage to buildings and their inhabitants, and does not account for potential indirect damages, such as business interruptions, or damages to critical infrastructure, utilities, vehicles or high consequence facilities such as dams. Impacts from secondary hazards such as earthquake aftershocks, liquefaction, landslides, or fire following are also not included.

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