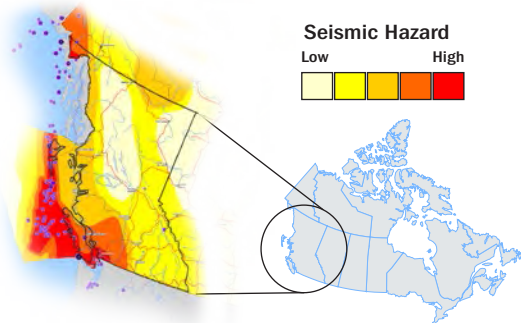




EARTHQUAKE HAZARDS and RISKS

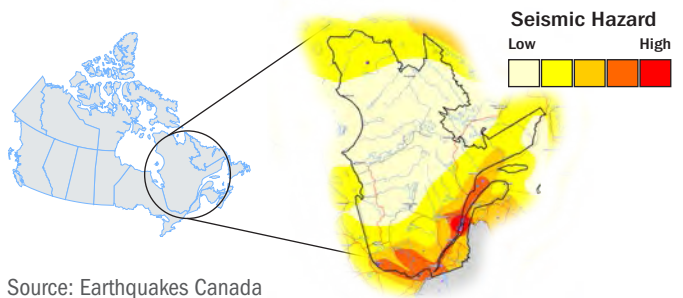
Risk assessments are important. They help to save lives and money by identifying which regions, buildings, infrastructure and people are vulnerable or more likely to experience strong shaking. Risk assessment helps to make informed decisions on where and how to use resources.

90% of earthquakes occur along active plate boundaries. 60% of Canada's earthquakes occur along BC's coast.



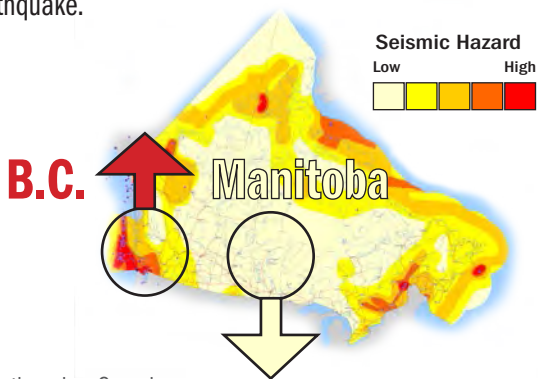
Source: Earthquakes Canada

The most active region in eastern Canada is the **Charlevoix Seismic Zone**. Over the **past 350 years**, at least 5 earthquakes greater than magnitude 6.0 have occurred in this region. Smaller earthquakes in eastern Canada have caused some damage over the years.



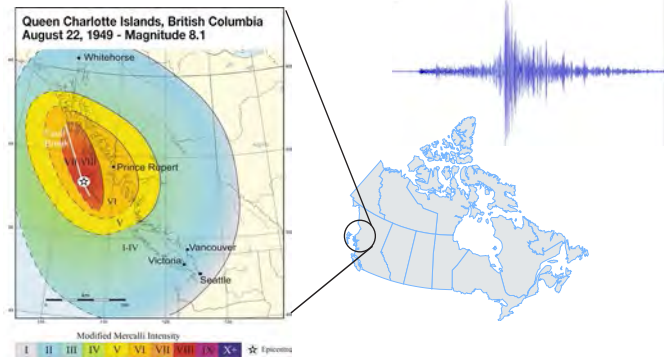
Source: Earthquakes Canada

BC is the province **most likely** to experience an earthquake, and **Manitoba** is the province **least likely** to experience an earthquake.



Source: Earthquakes Canada

The **largest** instrumentally recorded earthquake in Canada was **magnitude 8.1** near Haida Gwaii in 1949.



Source: Earthquakes Canada

Risk assessments save:

LIVES by identifying which **regions, buildings, infrastructure** and **people are vulnerable**

MONEY by ensuring that **funds are spent where needed most**, damages are avoided and disruptions are minimized

TIME by helping **emergency services target areas that require more attention** during response to an event.

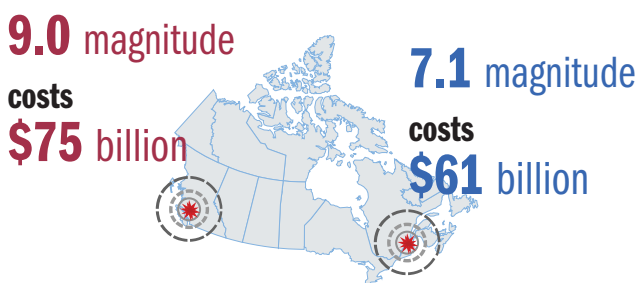
For **every dollar spent** on **mitigation** and **risk reduction**, an average of **four dollars** is saved.

\$1 SPENT = **\$4 SAVED**



Source: Goldschalk et al., 2009

Overall estimated costs of a **magnitude 9.0 earthquake in British Columbia** would be almost **\$75 billion**, and the costs of a **7.1 magnitude earthquake in the Charlevoix region near Quebec City** would be approximately **\$61 billion**



Source: Insurance Bureau of Canada

Natural Resources Canada's Geological Survey of Canada locates, on average, **5000 earthquakes each year**. That is **14 per day on average!** About **50** of these **are felt annually**.

5000 each year



14 per day



Source: Earthquakes Canada