Natural Hazards Affect Us

72 HOURS

IS YOUR FAMILY PREPARED?

Learn more:

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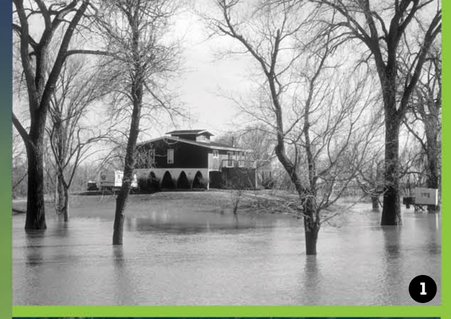
Government of Canada / Gouvernement du Canada

Canada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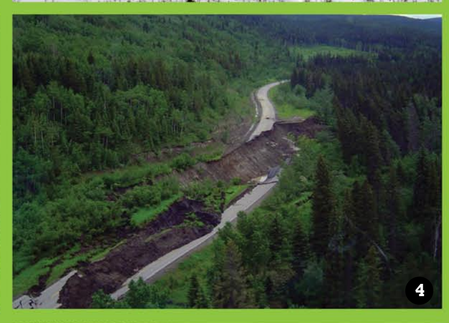
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Canada is a vast country with extreme weather conditions and dramatic geological features. With its size, weather patterns and varied regions come several natural hazards. Learn about the natural hazards of your country and your region. More importantly, learn how to prepare for them – a natural hazard need not be a natural disaster. ***Being prepared can make a world of difference.***

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This map shows where 99% of Canadians live.

Sources:
2006 Census of Population, Statistics Canada
Atlas of Canada, Natural Resources Canada

Avalanches (Photo # 2)

- Avalanches occur when a layer of snow collapses and slides downhill. They are caused by four factors: a steep slope, snow cover, a weak layer in the snow cover and a trigger.
- Hundreds of thousands of avalanches occur in Canada each year. They happen in all regions of Canada, but are more frequent in the mountains of British Columbia, Yukon and Alberta.

Photo credit: Clair Israelson (Avalanche on Bow Peak, AB, threatening the Banff-Jasper Highway)

Earthquakes (Photo # 7)

- The Earth's tectonic plates are in constant slow movement which causes small tremors and earthquakes. Approximately 3,500 mostly small earthquakes are recorded in Canada each year.
- British Columbia is the region most at risk from a major earthquake. Other areas prone to earthquakes are the St. Lawrence and Ottawa River valleys, as well as parts of the three northern territories.

Photo credit: Natural Resources Canada (Interior of Courtenay School following the June 23, 1946, magnitude 7.3 earthquake on Vancouver Island, BC)

Floods (Photos # 1, 6 and 9)

- Floods in Canada can occur at any time of the year and are most often caused by heavy rainfall, rapid melting of a thick snow pack, ice jams, or more rarely, the failure of a natural or man-made dam.
- All Canadian rivers experience flooding at one time or another. The potential for flood damage is high where there is development on low-lying, flood-prone lands.

Photo credits: G. Brooks, Natural Resources Canada (# 1, house near St. Jean Baptiste, MB, surrounded by the Red River during flooding, April 1999; # 6, buildings partially flooded by Red River at St. Norbert, MB, May 1997; # 9, bridge washed-out along the Mars River, QC, following 1999 Saguenay River flood)

Hurricanes (Photos # 8 and 14)

- A hurricane is a tropical storm whose high winds revolve around a centre of low pressure. At the eye of a hurricane there is a calm area of blue sky. Around the eye winds travel a minimum speed of 120 kilometres per hour and are accompanied by torrential rains.
- Hurricanes occasionally hit eastern Canada usually between June and November — September is the peak month.

Photo Credits: # 8, V. Thorne (Francois, NL, house destroyed when Hurricane Florence struck in September 2006); # 14, R. Taylor, Natural Resources Canada (Boats lifted ashore by storm surge associated with Hurricane Juan, Bedford, NS)

Landslides (Photos # 3, 4 and 10)

- A landslide is the downward movement of rock and/or loose sediment, triggered by natural processes or human actions.
- Thousands of landslides occur every year in Canada, but most are small. They occur in all regions but are most damaging in the mountainous regions of British Columbia and Alberta and in the St. Lawrence Lowlands of Quebec and Ontario.

Photo credits: # 3, Alberta Community Development, Frank Slide Interpretive Centre (Frank Slide on Turtle Mountain, Frank, AB); # 4, Heather Narynski, BC Ministry of Transportation (Landslide on Highway 29, south of Chetwynd, BC, June 13, 2005);# 10, Greg Ross, BC Ministry of Transportation (Landslide blocked Highway 16 between Hazelton and Terrace, BC, May 28, 2007)

Severe Storms (Photos # 5 and 15)

- Thunderstorms, hail, blizzards, ice storms, high winds and heavy rain can develop quickly and threaten life and property.
- Severe storms occur in all regions of Canada and in all seasons.

Photo credits: # 5, Jamie Pye, Forteau, NL (The Trans-Labrador Highway being cleared by a full-sized highway snow blower, March 6, 2004); # 15, Anne Barker, courtesy The Packet, www.thepacket.ca (Ice riming in Bonavista, NL)

Storm Surges (Photos # 11 and 14)

- A storm surge involves an abnormal rise in water levels and can often accompany hurricanes, high winds or very intense winter storms.
- Storm surge can occur along all coastal areas of Canada at any time of the year. It can also occur along large lakes, such as the Great Lakes.

Photo credits: # 11, Ian Harte (Storm surge at Louisbourg, NS, February 1, 2006); # 14, R. Taylor, Natural Resources Canada (Boats lifted ashore by storm surge associated with Hurricane Juan, Bedford, NS)

Tornadoes (Photo # 16)

- Tornadoes are rotating columns of high winds. Sometimes they move quickly (up to 70 km/hour) and leave a long, wide path of destruction. At other times the tornado is small, touching down here and there.
- Tornadoes are relatively common in Canada, but only in specific regions: southern Alberta; Manitoba and Saskatchewan; southern Ontario; southern Quebec; the interior of British Columbia; and western New Brunswick.

Photo credit: Justin Hobson (An F5 tornado, June 22, 2007, in Elie, MB)

Tsunamis (Photo # 17)

- Tsunamis are a series of large waves that strike coastal areas. They are caused by events such as submarine earthquakes, landslides, volcanic eruptions and, less commonly, meteoric impacts.
- They can occur with little warning in the ocean and in lakes, resulting in flooding and damage.

Photo credit: Natural Resources Canada (Tsunami damage in Port Alberni, BC after the March 28, 1964, magnitude 9.2 Alaskan earthquake)

Wildfires (Photos # 12 and 13)

- Approximately 8,000 wildfires occur each year in Canada. The average area burned in Canada is 2.5 million ha/year.
- Wildfires are a natural hazard in any forested and grassland region in Canada. The regions with the highest wildfire occurrence are British Columbia, and the Boreal forest zones of Ontario, Quebec, the Prairie provinces, and the Yukon and Northwest Territories.

Photo credits: Natural Resources Canada

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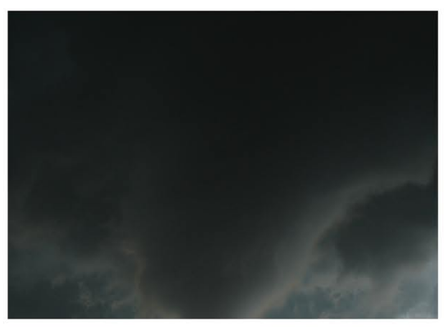
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The GetPrepared website contains educational resources on natural hazards, including links to the Atlas of Canada and Canadian Disaster Database. The site also has practical information on how to take care of yourself and your family before, during and after an emergency.

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EARTHQUAKES FLOODS HURRICANES LANDSLIDES SEVERE STORMS TORNADOES TSUNAMIS WILDFIRES STORM SURGES