

in areas of higher relief in Newfoundland and Cape Breton Island, pose problems for highway engineering, and tend to be the most hazardous. Typically, a thin cover of till or colluvium overlies a steeply sloping bedrock substrate. Failure is generally triggered by rainfall events. Rotational slumps of glaciomarine clays are particularly evident along the major river valleys of Labrador. Slumping along the lower Churchill River, NF will be an important consideration for hydroelectric development. Numerous sackungs have been identified, notably in the ultramafic rocks of western Newfoundland. Rockfalls generally involve single block topples. Several fatalities have occurred in Newfoundland, and damage to property is frequent. There have been 72 documented fatalities from avalanches in Newfoundland and Nova Scotia, many of these were people in their own homes.

Ongoing climate change may have an impact on mass movement activity. The pattern of increasing summer thunderstorms and hurricane events, increased winter precipitation in some locations, and more erratic freeze-thaw events during late winter and spring, may result in an increase in debris torrents triggered by precipitation, and rockfalls triggered by freeze-thaw. Increasing human use of coastal areas for recreation and residential construction is also increasing both the frequency and hazard of slope failures in Nova Scotia and Newfoundland.

Mass wasting in Newfoundland and Nova Scotia – a review

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Although slope failures are not recognized as a major hazard in Atlantic Canada, they are significant. Slope failures are common and have significant impact on transportation, forestry, coastal and urban development, and other human activities. There may be as many as 68 fatalities in Newfoundland alone from landslides. In the Ferryland disaster of ca. 1823, 42 fishermen were killed when a cave roof collapsed onto them. Mass movements include debris torrents and channelized debris flows; rotational slumps; sackungs; and rockfalls, as well as gelifluction creep. Debris torrents and flows are widespread