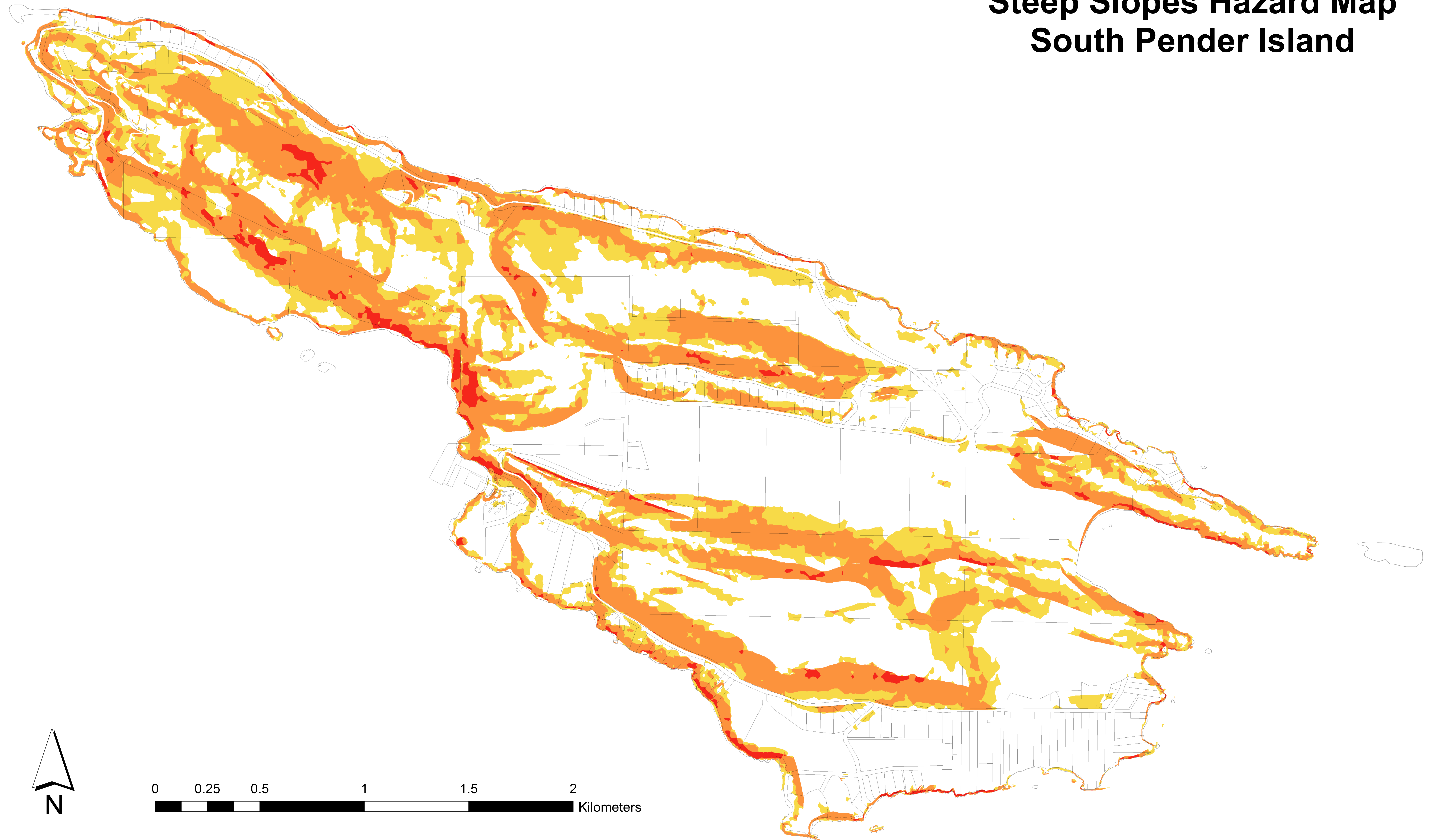






# Steep Slopes Hazard Map South Pender Island

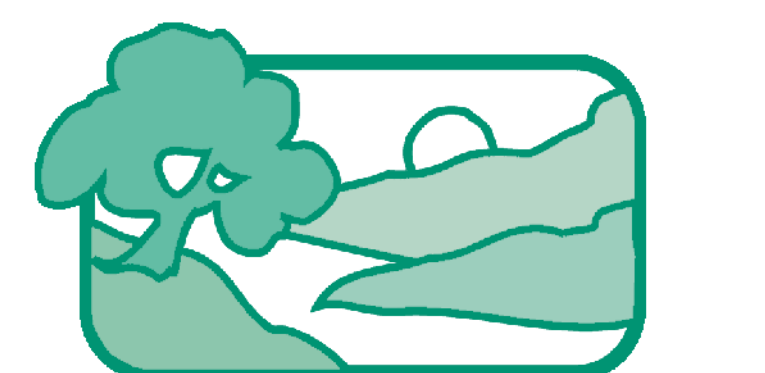


## Supporting Data and Limitations

This South Pender Island Steep Slopes Hazard Map has been created using a slope gradient generated from a digital elevation model (DEM). A DEM is a digital representation of ground surface topography, or topographic relief, but it is generated using techniques and aerial photography. There are a number of limitations in using aerial photography to develop Digital Elevation Models (DEMs), which should be noted when considering the spatial resolution of the mapped hazard areas. The quality of the DEM may vary according to many conditions: terrain roughness, sampling density, grid resolution (or pixel size), interpolation algorithm, vertical resolution and terrain analysis algorithm. The quality of the air photos and the scale used may have affected the DEM resolution, as the air photos may not have captured all topographic elements, such as ravines, localized bluffs, or small scale features. The South Pender DEM was derived from the air photos taken at a scale of 1:15,000, with 0.5 m vertical accuracy on open ground surfaces and 30 cm horizontal resolution. For those areas with extensive forest canopy, the elevation accuracy could vary by as much as half of the tree height. In addition, the elevation data (DEM) does not include mean sea level for South Pender Island due to mean sea level not being identified at the time of the aerial photography. Accordingly, the minimum mapped elevation along the shoreline is 2m. Classified Steep Slopes Hazard areas extend to 36 square metres have been filtered out of this map, the resolution of these areas having been deemed insignificant to the practical geological hazard.

The rationale and support for the classification of Steep Slopes Hazard categories is contained in the recommendations of a report prepared for the Islands Trust by Shane Moore, P. Geo., C. N. Ryzuk and Associates. Copies of the report (C.N. Ryzuk and Associates, Geological Hazard Mapping Project, South Pender Island, December 2009) can be obtained by contacting the office of the Islands Trust.

-  Property Boundaries
-  Low Hazard (15 - 22.5 degrees)
-  Moderate Hazard (22.5 - 45 degrees)
-  High Hazard (> 45 degrees)



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