

EP51C-1346 Participatory Science for Landslide Community Awareness: Development of a Protocol for Southeast Alaska



Friday, 13 December 2024



08:30 - 12:20



Hall B-C (Poster Hall) (Convention Center)

Abstract

The mountainous terrain of Southeast Alaska is periodically inundated with heavy rainstorms known as atmospheric river events that induce landslides and affect human safety, community infrastructure, and cultural and subsistence resources. Despite the long history of road building, timber harvest, recent exacerbation of mass-wasting events, and associated public safety concerns, there is a distinct lack of studies on Prince of Wales Island, the third largest island in the United States (2577 m², 6674 km²). This project used a collaborative approach to bring together scientists, community members, youth organizations, educators, and local conservation organizations to support Prince of Wales Island community resilience. Along with community discussions, the Alaska Youth Stewards program was engaged to help monitor rainfall and ground saturation. Study results include four key themes: (1) interconnected island communities including Tribal and non-Tribal organizations and governments are interested in unified approaches for enhancing community emergency management plans for road maintenance and response; (2) observations of climate and weather, including notable microclimates and wind, are consistent with on-going rainfall and piezometer measurements along an elevation gradient; (3) recognition and concern for interconnections among landslides, land use, infrastructure, bridges and culverts used for stream crossings, and salmon populations; and (4) widespread support for education and workforce development. Study results highlight interconnectedness of geophysical and human systems along with relevance of youth engagement in local research to facilitate community engagements that support transfer of knowledge to better assess climate change vulnerabilities and possible mitigation strategies.

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