Notice of the Final Oral Examination
for the Degree of Master of Arts

of

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BA (University of Victoria, 2013)

“Exploring Perceptions of Disaster Risk and Earthquake Hazard on
Southern Vancouver Island, British Columbia, Canada”

Department of Geography

September 9, 2017
9:00 A.M.
David Turpin Building
Room B215

Supervisory Committee:
Dr. Denise Cloutier, Department of Geography, University of Victoria (Co-Supervisor)
Dr. Mark Seemann, Department of Geography, UVic (Co-Supervisor)

External Examiner:
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Dr. Feng Xu, Department of Political Science, UVic
Abstract

Southern Vancouver Island, situated on Canada’s West Coast, is exposed to many natural and human-made threats due to its physical geography and demography. Perceptions of these disaster risks and of seismic hazard, in particular, were surveyed through locally-administered questionnaires conducted with 105 members of the general public and 13 emergency managers living and working on southern Vancouver Island, specifically in the Cowichan Valley Regional District (CVRD) and the Capital Regional District (CRD).

Perhaps the greatest risk to the region, and that, which is perceived by both the general public and practitioners as the greatest risk, is low frequency, high consequence earthquake events. The region is exposed to earthquakes from many sources, but has not experienced a damaging quake in several decades, begging questions as to whether residents consider earthquake a prominent threat and whether they have an accurate appreciation for the earthquake hazard (likelihood) in the region.

While researchers have scientifically quantified the earthquake hazard in the region for over 50 years, only in the past 10 years has this hazard information been presented in a format that is comprehensible by the general public. In order for individuals and communities to make informed decisions, this information must ultimately reach the public and be interpretable and actionable. This research describes and analyzes disaster risk and seismic hazard perception on Southern Vancouver Island, and identifies whether there are gaps in communication between the scientists who create the knowledge, the emergency managers who disseminate the information, and the general public who ultimately needs to act on the information to increase their resilience.

Results reveal that earthquakes are perceived as the highest disaster risk among both the general public and emergency managers on southern Vancouver Island, and that a large majority of participants know that their community is at risk from an earthquake. In addition, while emergency managers consider mostly natural threats to be significant risks, the general public more commonly identify human-made intentional threats as significant risks. The study also found that gender and location influence how individuals prefer to receive hazard information. In addition, household income and time spent living on Vancouver Island are key variables for how likely members of the general public are to be prepared.

Findings suggest that while both emergency managers and the general public overestimate the earthquake hazard on southern Vancouver Island, on average emergency managers perceive the earthquake hazard to be greater than the general public does. Interestingly, general public respondents in the CVRD perceive seismic hazard to be higher than respondents in the CRD, while the calculated hazard is actually higher in the CRD. Moreover, emergency managers underestimate residents’ perceptions of earthquake hazard. In other words, they feel that the public underestimates the hazard when actually both emergency managers and the general public overestimate it. These misperceptions have implications for future seismic hazard and disaster risk communication.

Prior to this study, disaster risk perception has not been explored in detail in this region, and while limitations to this research are outlined, the study provides a useful descriptive analysis and baseline information for emergency managers and academic researchers to build upon. The findings of this research have specific relevance for emergency managers to inform their public education and outreach efforts around preparation, response and resilience to disasters on southern Vancouver Island.