



University
of Victoria

Graduate Studies

Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

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MSc (University of British Columbia, 2012)
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**“Adaptive capacity, coastal communities, and marine conservation
planning in the face of climate change”**

School of Environmental Studies

Tuesday, November 26, 2019

11:00 A.M.

Clearihue Building

Room B017

Supervisory Committee:

Dr. Natalie Ban, School of Environmental Studies, University of Victoria (Supervisor)

Dr. Trevor Lantz, School of Environmental Studies, UVic (Member)

Dr. Anne Salomon, School of Resource and Environmental Management, Simon Fraser University
(Outside Member)

Dr. William Cheung, Institute for the Oceans and Fisheries, University of British Columbia (Outside
Member)

External Examiner:

Dr. Anne Beaudreau, College of Fisheries and Ocean Sciences, University of Alaska Fairbanks

Chair of Oral Examination:

Dr. Richard Rollins, Department of Geography, UVic

Abstract

With the growing threats of climate impacts on social-ecological systems, conservation planning must be adaptive in order to maintain the wealth of ecological, economic, and social services derived from functioning ocean systems. Despite the growing application of tools to manage risk and disturbance to social-ecological systems, little work has integrated the temporally dynamic effects of climate change, such as shifting species distributions, with either management tools (e.g. spatial planning) nor the perspectives of the human communities that are affected (e.g. communities, planners). I conducted a multi-scale research project looking at adaptive capacity to climate change using the case study of temperate marine system, the coast of British Columbia, Canada. I approached this overarching topic using: 1) a workshop and review of existing frameworks used to study adaptive capacity for coastal communities to climate change impacts (Whitney et al. 2017); 2) an applied and collaborative evaluation of climate change impacts and adaptation responses within a coastal region (Whitney & Conger 2018; Whitney et al. in review); 3) a comparison of methods to apply projections of marine species range shifts with marine spatial planning tools (Whitney et al. in prep); 4) an evaluation of the perceived climate change risks and adaptive strategies across the same region, from the perspective of regional planners and managers (Whitney et al. 2019); and 5) a study of the perceptions of adaptation actions for climate change impacts from the perspective of coastal Indigenous peoples (Whitney et al. in prep). This work can serve as a guide for other research in this field – such as adaptive capacity assessments, or marine planning processes that aim to integrate climate change projections in management. Overall, I highlight the importance of appreciating the complex historical context in social-ecological research, and the need to raise up Indigenous voices, leadership, and decision-making authority in addressing climate change in (post-) colonial systems. By integrating these component parts I contribute to our understanding of how climate change adaptation actions can be realized from the perspectives of adaptive capacity theory (academia), coastal planning and management in practice (policy), and Indigenous communities (people). When combined, I hope that this body of work serves as a contribution to foster adaptive capacity to climate change in coastal communities.