



**University
of Victoria**

Graduate Studies

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

of

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**“Wildlife Ecosystem Resilience in the Context of Climate Change: A Kootenay
Case Study on Stakeholder Perspectives on Conservation Interventions”**

School of Environmental Studies

Wednesday, December 9, 2015
9:00AM
David Turpin Building
Room B247

Supervisory Committee:

Dr. Eric Higgs, School of Environmental Studies, University of Victoria (Supervisor)
Dr. Peter Keller, Department of Geography, UVic (Co-Supervisor)
Dr. Karena Shaw, School of Environmental Studies, UVic (Member)
Dr. Brian Starzomski, School of Environmental Studies, UVic (Member)

External Examiner:

Dr. Maureen Reed, School of Environment and Sustainability, University of Saskatchewan

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Dr. Trevor Hancock, School of Public Health and Social Policy, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

The Kootenay Region of British Columbia is an important landscape connection for wildlife diversity in the Yellowstone to Yukon ecoregional corridor. Significant conservation efforts have provided substantial areas designated to protect wildlife ecosystems in this area. Yet climate change and on-going human development threaten the future resilience of these ecosystems. In light of this complex problem, the goal of this dissertation is to evaluate the effectiveness of current wildlife conservation policy mechanisms, their potential vulnerability in the face of climate change, and the motivation of stakeholders to support policy adaptations. In particular, the research undertakes to understand how community support for adaptation strategies that mitigate climate change impacts on wildlife ecosystems may evolve through direct engagement in conservation assessment and design processes. The thesis therefore addresses the overarching question: “How does stakeholder engagement in an assessment of climate change impacts on wildlife ecosystems influence support for appropriate wildlife habitat and species intervention policies?”

The dissertation reviews conservation policies applicable to British Columbia, reviews the efficacy of how those policies are implemented in the Kootenay Region, assesses the potential scope of ecosystem vulnerability to climate change in the region, and evaluates how stakeholder values, beliefs and attitudes motivate support for wildlife conservation and how this is influenced by engaging in a workshop that explores scenarios and impacts of climate change. The efficacy of current conservation policies was evaluated against ecosystem representation, objectives from the Kootenay-Boundary Land Use Plan, the recent ecoregional assessment for the Canadian Rocky Mountains prepared by the Nature Conservancy of Canada, the Mountain Caribou Recovery Plan, conservation of habitat for Grizzly bears, fisher, lynx, wolverine and wolves, and recent conservation proposals. The potential for climate change impacts was assessed by modelling future ecosystem and wildlife habitat change scenarios. Finally, stakeholder motivation was evaluated by engaging a group of selected participants in a process involving a preliminary survey, attending a one-day workshop, and one-on-one interviews.

Broadly, the research found that 1) that although the Kootenay Region has conservation policies in place that provide substantive protection for ecosystems and wildlife habitat, such policies were not designed to accommodate climate change impacts, and 2) value-based conflicts and institutional shortcomings are barriers to policy reform needed to address socio-economic resilience in the context of climate change. Perspectives on a conservation design process explicitly addressing the tensions inherent in socio-ecological systems are offered as a framework for considering policy reforms required to contend with climate change impacts on wildlife conservation.