

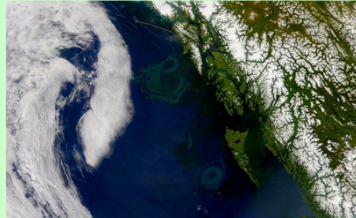
Assessing Community Capacity to Respond to Climate Change in the Northwest Skeena

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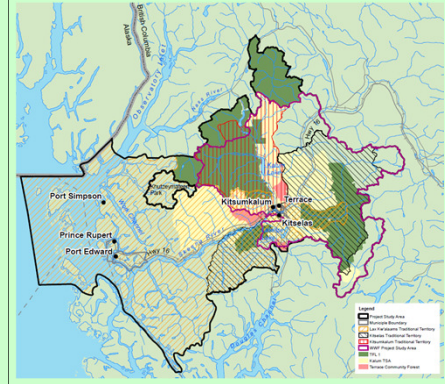
Introduction

Interior BC communities were surprised and devastated by the mountain pine beetle impacts on their forest ecosystems and forest-dependent communities. For First Nations and municipalities in the Northwest Skeena region, avoiding similar regional climate shocks will challenge community resources and resourcefulness. The Future Forest Ecosystems Scientific Council (FFESC) project, "Climate Change Adaptation Planning for Northwest Skeena Communities" seeks to build regional adaptive capacity in the Northwest Skeena region to address the impacts of climate change. This project combines biophysical modeling, social science, and community engagement in a participatory approach to build regional capacity to prepare and respond to climate change.

The methodology adopted in the social science component of the "Climate Change Adaptation Planning for Northwest Skeena Communities" study focuses on assessing current community, governance, and resource management capacity to cope with climate change. The social, economic and governance analysis in this study incorporates multiple and complementary levels of inquiry: (1) individual; (2) organizational; and (3) institutional analysis - all grounded in a focus on, (4) community capacity to accurately assess the impacts of climate change on local and regional forest and aquatic ecosystems, and on their capacity to respond effectively to the challenges climate change will bring.



Study Area



Methodology

STEP 1: Synthesis of previous work on values and climate change in the region

In the first year the social science team will synthesize existing sets of values from previous community climate change adaptation work in the region.

This information will be provided to the biophysical science team to assist with a summary of regional climate change impacts in a form that is relevant and appropriate for initial community consultation and introduction of the project.

This preliminary information and interactions will then be used to develop the initial interview schedule and process, including identification of potential interview subjects.

Input into

Input into

STEP 2: Community interviews

We have selected four of the six communities in the project area as a focus for our study. Two are First Nation communities (Lax Kw'Alaams; and Kitsumkalum or Kitselas) and two are municipalities (Prince Rupert and Terrace).

In this stage, our goal is to: (1) identify the cultural models of environment existing in the community; (2) obtain data on the extent to which local residents understand the dynamics of climate change; (3) receive information on the formal and informal organizational structure and processes of the community with particular emphasis on governance and resource management; and, (4) assess local responses to existing scientific information of the impact of climate change on local terrestrial and riparian resources on which the community depends. Semi-structured interviews will be conducted in each of the study communities with a target of 20-30 interviews per community. We will use a purposive sampling strategy to identify and interview those persons in positions most related to either governance or resource management. These are persons whose positions make them most likely to be called upon to respond to climate change impacts.

Our goal is to obtain systematic information on the cultural understandings of environment and environmental change and on the how key community informants assess the way their community functions. We are especially interested in understanding how institutional structures and processes shape the capacity of local organizations and those acting within them to manage and cope with environmental risks and change.

STEP 3: Community workshops

In each community we will establish a community advisory board - primarily of persons whose responses indicate that they have information, skills, roles and the willingness that would benefit and assist subsequent stages of the research.

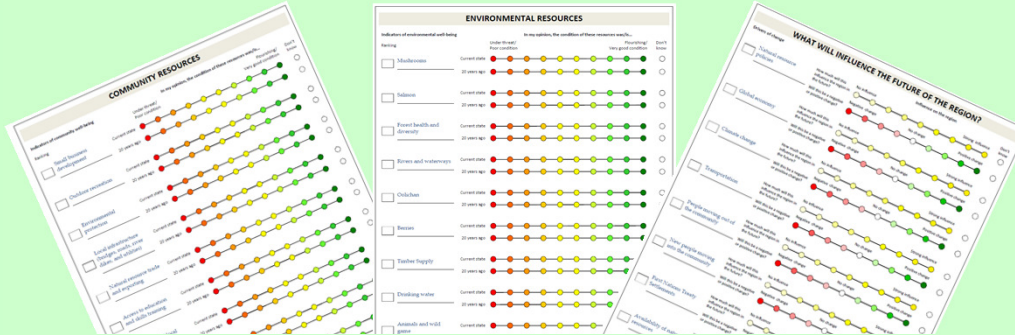
We will ask these individuals to participate and take leadership roles in community workshops and in the development of scenarios and indicators that will be used to (a) identify and model critical attributes of community sustainability (social, economic, ecological), (b) identify climate and other threats to those attributes, and (c) identify and explore potential adaptation actions.

Community climate change adaptation planning

Biophysical modeling

2010

2012



Integrating Natural and Social Science

Social Data

- Community values
- Cultural understandings of the environment
- Traditional ecological knowledge
- Climate change awareness
- Formal and informal organizational structures and processes for dealing with environmental change



Biophysical Data

- Climate change impacts (temperature, precipitation, tree species distribution)
- Vegetation modeling
- Projections of future changes in forest and range ecosystems
- Fisheries Sensitive Watershed monitoring



The Challenge: How do we integrate social and biophysical data in a way that is meaningful and useful for community climate change adaptation planning?

Acknowledgements

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