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Climate Change in Clayoquot

Ahousaht, Hesquiaht, and Tla-o-qui-aht Community-based
Climate Change Adaptation
Phase I



A project led by

Hesquiaht First Nation

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EXECUTIVE SUMMARY

Climate change may be the defining issue of our generation. Since the Industrial Revolution, the mean surface temperature of Earth has increased an average 0.6^o C (Celsius) due to the accumulation of greenhouse gasses (GHGs) in the atmosphere.¹ Historically, the Earth is accustomed to experiencing wide-spread severe environmental change and has always been able to adapt to these changes accordingly. Yet, the difference now is the *speed* and *scale* of the warming that is currently occurring. Most of this change has occurred within the past 30 to 40 years, and the rate of increase is accelerating. These rising temperatures will have significant impacts at a global scale and at local and regional levels. As a result, climate change will increasingly impact natural and human systems to alter the productivity, diversity and functions of many ecosystems and livelihoods globally.

For resource-dependent communities, like many First Nations in BC, climate change may increasingly compound existing vulnerabilities as the availability and quality of natural resources that they heavily depend upon decline. Limited resources and capacities for responding to stresses, such as sea level rise, storm surges, heavy rains and resulting floods, and droughts and resulting wildfires will increasingly constrain their ability to meet basic needs and become self-governing. There is, therefore, an urgent need to begin reducing current vulnerabilities and enhancing adaptive capacity of the communities so that people of these communities can face the longer-term impacts of climate change with resilience.

The Ahousaht, Hesquiaht and Tla-o-qui-aht (AHT) are three of five Nuu-chah-nulth First Nation communities in the Clayoquot Biosphere region, occupying one of the few intact ecosystems on the west coast of Vancouver Island. While the communities are relatively dynamic and thriving, they are still healing from the effects of colonization and the residential school system and they are increasingly experiencing stress over natural resource declines which are affecting diet and health as well as culture and livelihoods. In general, community members indicated that there are fewer fish and shellfish, fewer basking sharks and whales, fewer deer and birds but more sea lice, clams, sea otters and algae blooms. Medicine plants have moved, there are more mudslides on Cat Face Mountain and there is increasing destruction of the natural habitat. Most of these changes have been observed over the last 30 years and are thought to be caused by poor resource management and human greed but also by climate changes.

According to ClimateBC projections, the Clayoquot region can expect the mean annual temperature (MAT) to increase as much as 4°C by the 2080's. Throughout the seasons temperatures will increase slightly more in the spring and summer than in the winter and autumn. The mean annual precipitation (MAP) is projected to increase as much as 764 mm by the 2080's. However, throughout the seasons the bulk of this precipitation will occur in the winter months. Depending of the carbon emission scenario, it will either become slightly drier in the spring and summer but wetter for in the autumn (i.e. A1F1 scenario) or slightly drier in the Summer and autumn but wetter in the Spring (B2 scenario) These climate scenarios are illustrated via an interactive map already developed for the community <http://livingatlas.org/>.

¹ World Bank (2010)

The recent environmental degradation and the projected climate changes have left the Clayoquot communities somewhat anxious for their future but also determined to face it on their own terms, with a new vision for sustainable development. This vision is based on the concept of “Hishuk’ish’ tsawalk” which means that everything is interconnected, that everything is one. And in following with this vision they look to a form of development that re-establishes a healthy integration of economy and environment in which there is a balance of creation and consumption and a continual investment in biological and economic diversity. They wish to manage their Home, their Ha’wiih’s Ha-houlthee, in a sustainable manner consistent with Nuuchah-nulth knowledge and values, ensuring that land and ocean provide for sustenance, ceremonial and societal needs, and an economic base for healthy communities.

The combination of changes in temperature and precipitation will likely affect ocean temperatures, the growth of plants and in turn marine and terrestrial wild life. These impacts and the vulnerabilities of the three Clayoquot communities to these impacts will be closely examined in Phase II. Combined with the communities’ visions an adaptation plan will be developed to provide an action plan for enhancing community resilience.