A1234 Summary: A Comparative Assessment of the Capacity of Canadian Rural Communities to Adapt to Uncertain Futures

Rural communities across Canada continue to be both substantial contributors to the national economy and important components of Canadian identity. The 2006 Census revealed that 20% of Canadians still reside in rural places. Many rural communities continue to be closely tied to resource activities such as forestry, agriculture and fishery, but they exhibit widespread variation in their social fabric as well as their economic activity. **Canadian Rural Communities (CRCs)** are neither homogeneous nor static, but rather are constantly being exposed to and are responding to multiple stressors including (but not limited to) changes in government policies and priorities at federal and provincial/territorial levels, macro-economic forces which often contribute to economic and demographic restructuring of CRCs, and extreme environmental events which impose considerable pressure on community safety nets. The economic and social vitality of individual CRCs in combination with these multiple stressors will ultimately determine a community's capacity to flourish or perish. Previous research into climatic change and rural communities has not typically taken this holistic perspective into account. Rather, it has been characterized by a focus on:

- Engineering aspects of climate change (e.g. implications of permafrost degradation or sea level rise on transportation infrastructure, for example, McCulloch, et al 2002,)
- On the resource itself (i.e., fish, crops, forests) but not on the coupled resource-human community system, (for example, Violin et al 2002, Montevecchi and Myers 1997)
- Single communities and/or a single region, (for example, Wall and Marzell 2006) and
- Scenarios that depict human-induced climate change but with weaker linkages to other drivers of rural community change, (for example, Parry 2002, Arnell et al 2004)

Research has usually been conducted as isolated case studies with little coordination and hence it is difficult to draw conclusions across different sets of CRCs and regions. In addition, previous research has most often focused on climatic change in isolation while considering CRCs as static. This has permitted assessments of the sensitivity of specific community attributes to climatic change but has failed to place CRCs in their broader historical and dynamic context. As a result there are limitations on our collective ability to assess the vulnerability of CRCs to major stressors including climate change as well as the capacity of CRCs to cope with and if necessary adapt to future changes. Some recent research highlighted the limited capacity of communities to cope with climate change (Davidson et al 2003) and a recent study presented a framework for assessing the adaptive capacity of an agricultural community (Wall and Marzell 2006). The project reported here further expands the examination of rural community capacity to adapt to uncertain futures through a series of comparative assessments in selected rural resource-based aboriginal and non-aboriginal communities across Canada. It provides a consistent

framework that allows for the similarities and differences of CRCs to be considered explicitly.

This research employs a vulnerability approach to assessing and addressing climate change (see Brklacich 2006; Wisner et al 2005). Rather than assuming climatic change will be a dominant driver in the future, it examines key environmental, social, economic, cultural and political factors that influence the capacity of CRCs to cope with and adapt to uncertain futures. This approach is in keeping with the contemporary realities of CRCs as multiple stressors are set within a local context.

Four communities were selected for the study. The diversity of the selected CRCs within this study allows for comparisons across regions and sectors. The selected communities include localities on the coasts of Newfoundland and Labrador and British Columbia that continue to rely on various fisheries, in Central Canada set within a rapidly changing agricultural region and in northern Saskatchewan where residents have commercial and subsistence interests in the forest. Changes in the ecosystems supporting these communities have already occurred and climatic change in conjunction with other socio-economic and political factors will continue to affect livelihoods in these CRCs. Our approach involves understanding the different histories and contexts of the selected CRCs, and to use a standardized research framework. This approach provides the basis for a comparative assessment of the ability of CRCs to cope with and adapt to uncertain futures that include a climatic change dimension.

The relationship each community has with its surrounding resource base differs considerably. Nevertheless in each case this relationship extends beyond an economic tie to a single resource sector and most often involves a long-term commitment to resource stewardship as well as social and/or spiritual attachments to local resources. In addition, each of these communities has been subjected to multiple stressors such as variation in demand for the resource, degradation of the resource base, external threats to their livelihoods and traditional life styles, and declining or increasing population. All of these stressors affect local communities and their prospects for future survival. It is in this dynamic, multiple-stressor context that climatic change and its potential impacts on long-term community viability will be assessed.