

## **Considering Climate Change in Rural Planning and Policy**

Policy Brief to The Canadian Rural Revitalization Foundation and The Rural Policy Learning Commons

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### **Executive Summary**

This panel discussed the many dimensions of how climate change and related policies affect rural communities, ecosystems, and livelihoods. The independent contributions of the panelists to this discussion were then used to formulate the following policy recommendations.

- Establish a grievance process for affected peoples and communities to raise concerns about harms associated with CDM projects; and REDD+.
  - Climate change policy tribunals.
- More research is needed on impacts to OECD countries with respect to climate policy implications for human rights.
- Suggest a multilevel governance approach which incorporates principles of social justice into the development of climate policy. ex.
  - Creation of regional climate change adaptation coordinators.
  - Long term funding for municipal climate initiatives.
  - Strengthening of existing public services which may see increased demand due to climate impacts.
- Renewable energy projects offer one potential strategy for reducing climate change impacts in the long term while assisting rural regions to develop their economies and environmental sustainability. The example of Newfoundland and Labrador (NL) can be used to demonstrate that despite the potential benefits of transitioning to renewable sources of energy, significant barriers exist to renewable energy development.

### **Background**

Climate change policies such as mitigation projects have often resulted in inequitable outcomes at the community level. Our research has shown so far that human rights violations related to climate mitigation projects often go undocumented due to the complexities of international implementation of these projects, allowing for governments to bypass democratic checks and balances on state power.

Newfoundland and Labrador (NL) can serve as a focal point for research into climate change mitigation and adaptation relevant to municipalities globally. While NL has a climate change adaptation plan, and is developing a new climate change strategy, municipalities on the frontline of adaptation often face key obstacles in terms of their capacity to adapt to climate change such as funding or personnel constraints (including lack of appropriate expertise). Social justice,

specifically in terms of climate change in NL, represents something of a gap in existing literature, though preliminary research suggests it is an important area for policy development. Climate change is predicted to and is having a number of impacts in the province from the emergence of Lyme disease to coastal erosion, sea ice degradation, and an increased risk of geo-hazards. These in turn can have important social implications for NL. Degraded sea ice for instance is already affecting the transport routes of communities in Labrador. Changes in the marine ecosystem could have consequences for existing industries such as fisheries provincially, and climate change's impacts are by no means limited to salt water eco-systems. These changes affect livelihoods for rural and northern communities and may disproportionately affect particular groups within these communities.

Fresh water ecological impacts are also a concern to rural communities: Atlantic Salmon and the effects of climate change on this species is an important research area for example, particularly given a general global decline in freshwater fish species due to human impacts. Many rural communities are dependent upon natural resources and ecological well-being, and these and other factors have ramifications for communities' ability to adapt to changing conditions. Fish stocks are key resources for many communities in this respect. Climate change can, and has, affected fish stocks; for instance in haddock, as species are forced to adapt to new conditions. Creating new tools to assess the vulnerability of fish species in the NL context is paramount. Existing practices, such as aquaculture, can already pose a threat to wild Atlantic salmon in NL, as farmed salmon escape and interbreed. Changing biophysical conditions are additionally leading to a growth in invasive species which threaten Atlantic salmon, and are affecting the salmon's life cycles – something which can lead to less productivity in stock. Understanding temperature and precipitation changes will be key to understanding the vulnerability of Atlantic salmon to these cumulative changes.

Despite these significant challenges caused by climate change, solutions to both the mitigation and adaptation aspects of climate change do exist in NL. Demand for energy and electricity is increasing, and renewable energy and wind power are key to meeting this demand while protecting our environment. Renewable energy has additional health, employment, and economic benefits and lacks many of the externalities associated with fossil fuel dependency. Much of NL's population is rural and many still rely on fossil fuels for energy, but renewable energy has been undertaken in Ramea, for instance, which has a state of the art wind, hydrogen, and diesel project. Given NL's existing dependency on fossil fuels, from an economic perspective, renewables also have significant potential to help diversify the NL economy.

NL has significant potential for wind energy particularly, but has the least installed capacity in Canada. Central barriers to wind energy in NL are political and economic, with those most pertinent for rural communities being a lack of government policy and political will, a lack of financial incentives through tools like net-metering, an inherent preference for the energy status quo (large scale projects such as Muskrat Falls, and oil production), a lack of export opportunities, and existing fossil fuel subsidies. Renewables are, however, cost competitive in NL – particularly in rural communities, and one of the biggest obstacles was, in fact, a lack of accurate information on renewables amongst members of government combined with a continuing mega-project

mentality. Revenue and taxes, along with job creation, are some of the key benefits, to rural communities, of wind energy and smaller scale renewable energy development. While there is no silver bullet to transitioning to renewables in NL, comprehensive policy will be vital to its implementation.

### **Financial considerations**

These threats and opportunities for rural communities relating to climate change come at a time when rural funding in NL, at least, is in jeopardy. However, more generally the implementation of a new carbon tax in Canada is an opportunity to fund the initiatives mentioned above such as:

- Community capacity building and adaptation to climate impacts.
- Monitoring at risk species which are key to community resilience.
- Development of rural renewable energy on a local level.

### **Interdepartmental/intergovernmental considerations**

The policies recommended above include, and stress the importance of, comprehensive approaches to climate change mitigation and adaptation in rural settings. Therefore, it is reasonable to expect that in NL, and beyond, intergovernmental cooperation at the national and international level, interdepartmental cooperation on the provincial level, and collaboration between these actors and those at the local level will be key to policy design and implementation.

### **Conclusion**

Climate change, and political action to mitigate and adapt to climate change, pose significant obstacles and opportunities for rural communities – ranging from ecological and biophysical impacts, to impacts on sovereignty, human rights, and democratic freedoms. An allocation of resources aimed at monitoring and adapting to these impacts is desperately needed. However, solutions in the form of wind energy, and other renewables, exist and may aid both in climate mitigation and economic diversification for rural communities. The NL context has much to provide in these respects as a research area, and as an active site of environmental, economic, and policy change.

### **Additional resources**

2016 Conference Presentations (General): <http://guelph2016.crrf.ca/conference-presentations/>

EPI – Student Profiles: <http://grenfell-epi.com/masters-in-environmental-policy/graduate-students/>

Nicholas Mercer, Thesis, Barriers to Renewable Energy Development in Newfoundland and Labrador: a Case Study of Wind Energy Applying the ‘AKTESP’ Framework for Analysis: <http://research.library.mun.ca/12406/1/thesis.pdf>