

Southern Gulf of St Lawrence Coalition on Sustainability

Traditional Ecological Knowledge Working Group



Climate change adaptation strategies for medicine gatherers in two  
Migmag communities of New Brunswick



Executive Summary

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## **Introduction**

The Traditional Ecological Knowledge (TEK) working group of the Southern Gulf of St-Lawrence Coalition on Sustainability (SGSLC) with funding from the Canadian Climate Change Impacts and Adaptation Program of Natural Resources Canada executed a project from July 2007 to March 2008 which considered two Mi'gmaq medicine gathering approaches from the perspective of climate change adaptation strategies. The two communities involved were Elsipogtog (Big Cove) and Uppiganjig (Eel River Bar) in eastern New Brunswick.

The project's objective was to further the objectives of the two Mi'kmaq First Nation communities through an exploration of the benefits and detriments of two approaches to medicine gathering and the implications of the two approaches for climate change adaptation. The project considers the Aboriginal Heritage Garden and protection of habitat as adaptation strategies that would increase the adaptive capacity of medicine, medicine gatherers and their greater communities.

## **Methodology**

This project was lead by one primary investigator based in Halifax, and two secondary investigators based in each participating community. Each community established a group of 6 to 10 participants who have knowledge of medicine or the traditional ways. These individuals participated in two interviews lead by the secondary investigators. The first interviews were on climate change impacts and the second on adaptation. The groups organised two gatherings, one in each community, to share and build relationships. The information from the interviews and the gatherings were gathered and analysed in a report by the investigators. Finally, a workshop will be held on February 29 2008 with local decision makers to share the results of the project and discuss possible implementation options.

## **Climate Change Impacts and Adaptation**

Observations and concerns by the participants in regards to climate change impacts are mostly linked to changes in the winters (less snow and warmer), dryness in formerly humid areas, reduced beach sizes and erosion of salt marshes. Concerns over water quality, whether linked to climate changes or land use practices, have been noted in both communities. The participants observed that the fish, animals and plants are being displaced. Some species, robins and salmon for example, seem to be confused as to when to migrate. They seem to be coming too early or too late in relation to their needs (food, spring flow, habitat, and so on.)

It was observed that medicine is adapted for severe weather. The concern is therefore more with the adaptation of medicine to the subtle changes from climate impacts rather than the severe storms. The extreme events on the other hand are more of a concern with man-made infrastructures (ie. wharves, buildings, etc).

The participants identified some key elements that affect adaptive capacity building for medicine gatherers in their communities. These involve:

- The sharing and the loss of knowledge,
- The reduction of habitat,
- The medicine gatherers' access to private lots,
- The lifestyles and practices of people in the communities,
- The infrastructure in neighbouring communities,
- The place of the youth in continuing the knowledge,
- The challenges of old age and change,

- The land-use practices and decision processes around them,
- The over-picking of certain medicine,
- Permits and certain technologies like GPS (they control the access to the knowledge, and require technical training to understand),
- The restrictions on taking certain species (due to the Species at Risk Act (SARA)) puts at risk their way of life and goes against First Nations rights, and
- The pollution levels and its monitoring.

Strong points medicine and medicine gatherers have as means to adapt to climate changes despite these factors are:

- The medicine can find ways to adapt and be present for future generations.
- The medicine gatherers hold the knowledge of many ancestors and are still in numbers sufficient to hold that knowledge for a few more decades.
- The medicine gatherers are always observing the environment around them. They therefore notice the changes earlier than most and try to vary their activities in harmony with those changes.
- The resiliency and perseverance of the Migmag people is a determining factor in their ability to withstand potentially devastating changes.
- Thinking seven generations ahead is likely to create resilient communities.

Here are some key actions that require immediate attention which are needed to build the adaptive capacity.

- Continuing to improve the social situation within Aboriginal communities (fighting drug and alcohol addictions, dealing with abuse and supporting social and individual healing) will help move the communities to embrace proactive steps to adaptation.
- Contingency plans for emergency response needs to be developed and must be adapted to each community's realities of response time and attitude of the population.
- Realisation and understanding of the need for empowerment of the population within the communities are necessary if significant positive changes are going to occur.
- The knowledge-of-old needs to be taught in the communities to show how the Migmag can adapt to changes in the climate (as they have done before).
- Climate change awareness programs that are led and executed by First Nations.
- Sharing between communities and generations the knowledge on the traditions, medicine and climate change.
- Leadership from community leaders on environmental issues and on supporting the place of medicine in their communities, and role of traditional knowledge holders in policy making.
- Protecting what currently exist such as the Aboriginal Heritage Garden and places of significance to medicine.

## **Adaptation Strategies and Next Steps**

Looking at the two adaptation strategies which would cover the two communities' approaches to medicine gathering, we have identified the following benefits and limitations.

### **Aboriginal Heritage Garden**

- Benefits:
- Increases community empowerment, cooperation and wellbeing,
  - Sharing of knowledge across generations and cultures,
  - Repository for medicine, and
  - Direct and indirect employment for the community and region.

- Limitations: Costs,
- Management priorities may not favour the place of medicine and its knowledge, and
  - Certain medicines may not be adaptable to a human controlled environment.

### **Protection of habitat**

- Benefits: Ensures hands-on knowledge is passed on,
- Protects biodiversity,
  - Increases adaptive capacity by lowering vulnerability of physical areas to climate impacts,
  - Protects medicine and its knowledge from being misappropriated, and
  - Answers other sustainability needs (such as water protection, green belts).

- Limitations: Requires cooperation from all government jurisdictions,
- Those with knowledge are not often included in decision making processes,
  - Enforcing regulations can be difficult, and
  - Getting the general public and political decision makers to understand and respect the importance of maintaining protected areas.

The Aboriginal Heritage Garden and protecting habitat are individually good adaptation strategies for medicine and medicine gatherers. Under an overall approach to sustainability of medicine and the knowledge of the medicine gatherers, the implementation of both strategies are sure to increase the adaptive capacity in the region. Slight modifications to the mandate and management of the Aboriginal Heritage Garden and a more holistic and integrated land use management in the region are both needed to ensure the medicine and its knowledge is present for seven generations.

The section on Next Steps and Solutions identifies some easy to implement small scale local actions that could help increase the adaptive capacity of each community. They range from putting in place communal green houses to enforcing environmental regulations, calculating the community's ecological foot print and including stronger environmental mandates in decision making processes within the communities.

### **Conclusion**

The Aboriginal Heritage Garden - if led by the adaptive approach of the Ugpiganjig community - could provide sustainable wellbeing and economic prosperity in the region, as well as a place for medicine to be kept safe and shared. Protecting habitat where medicine is found is crucial to ensuring long-term health, availability, diversity in- and access to medicine. Since medicine depends on the health of the surrounding environment, it is crucial that the concepts of biodiversity, sustainable development and conservation be embraced by decision makers. Medicine does not exist in isolation, but with other living beings that learn to benefit from its healing properties. In the same way, humans can learn to benefit from the properties a healthy environment brings to our societies.