Climate Change Adaptation: Briefing Notes for New Brunswick ENGOs

Prepared by the New Brunswick Environmental Network
January 2013

Why Get Involved Now?

√ A great opportunity to move conservation issues ahead as a ***solution*** to a major problem.

√ Solutions are needed – and they could be based on ecological principles and not just based on engineering, ***if*** ENGOs push for them.

√ Local, provincial, and federal players are already interested – it won't be like talking to brick walls any more!

√ Governments are putting resources into climate change adaptation – and your group can benefit.

How to Get Involved!

Visit the NBEN's website at www.nben.ca or contact us at 855-4144 or nben@nben.ca to find out more about ENGO climate change adaptation initiatives.

Imagine…	**Instead of**…
More sustainable forestry practices that take into consideration how the forests will respond to climate change in the short- and long-term, and planning for that	More spraying in our forests to combat new invasive species; continued economic reliance on species that will not survive
Improvements to land use planning, recognizing that some areas should be protected because they will be bad places to build anyway	Stilted houses built in sensitive coastal zones; higher insurance premiums on buildings in flood areas
Protection of wetlands and riparian zones as buffers for flooding problems	Turning streambeds and shorelines into concrete barriers to try to keep out the rising water levels
….A more stable long-term adaptation approach WHILE protecting habitat and biodiversity.	….Expensive, narrowly focused, short-term solutions.



Engineered Solution for Shoreline Projection in Southeastern NB. Photo Credit: Sabine Dietz

Funding for Climate Change Adaptation: Possible Sources for ENGOs and Their Partners

- **EcoAction (Environment Canada)**
- **Environmental Trust Fund**
- **Gas Tax Fund**
- **Natural Resources Canada**



What's Already Being Done?

Lots of what is happening so far in New Brunswick is in the initial phases:

evaluation~assessment~modelling~planning

No time like the present to get in on the ground floor!

In the **Acadian Peninsula**, three communities – **Bas-Caraquet, Le Goulet, and Shippagan** – are developing planning and decision-support tools to help them deal with coastal flooding and erosion more effectively.

In the **Greater Moncton Area**, a flood risk assessment has been undertaken, which identifies vulnerable infrastruction and recommends adaptation measures.

In **Port Elgin**, LiDAR data has been collected and a digital elevation model and flood scenarios for the area of Port Elgin and Baie Verte have been developed to identify property and infrastructure at risk.



House on stilts in Grand-Barachois. Photo Credit:: Unknown

With a 1-metre sea level rise scenario, the flooding levels reached at the height of the January 21, 2000 record storm-surge event could statistically occur every 3 to 5 years!



Who are the Major Players?

New Brunswick Climate Change Secretariat – Mandate: to develop, implement, and report, in cooperation with other departments, on actions that address greenhouse gas emission reductions and adaptation. It is also responsible to manage continued engagement of stakeholders on climate change matters.

RAC (Regional Adaptation Collaborative) – A three year, ***$30 million***, cost-shared federal program to help Canadians reduce the risks and maximize the opportunities posed by climate change. http://www.nrcan.gc.ca/earth-sciences/climate-change/community-adaptation/regional-collaborative/48

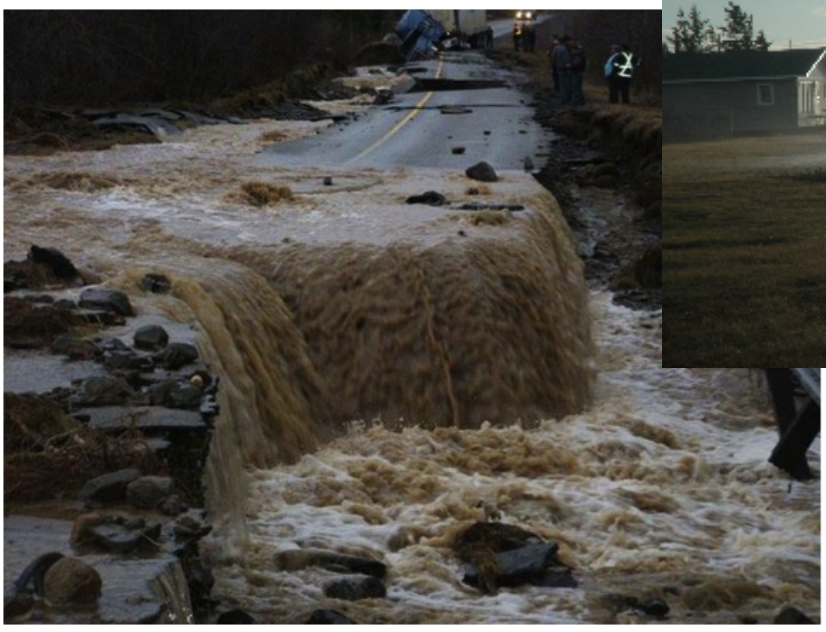
Atlantic Climate Adaptation Solutions Association – administers the RAC program in Atlantic Canada. http://atlanticadaptation.ca/

ENGOs? – Becoming more involved every day — *CAN and SHOULD be major players!*

Why do we need to adapt?

We will definitely see…	Which could mean…
wetter spring & fall seasons	Outdoor events – rallies, baseball games, weddings, barbecues – planned for spring & fall months could be rained out more frequently. Mould could become more prevalent in buildings, reducing indoor air quality.
hotter & drier summers – more droughts	Spruce and other shallow-rooted species will have difficulty surviving, which could impact the forestry industry. Commercial crops could be lost. Backyard vegetable gardens could be harder to maintain. Streambeds could dry up and there could be fewer good recreational fishing spots. Well-water and municipal water supplies could diminish. Imagine turning on your tap and nothing comes out – right here in New Brunswick! Higher bacteria levels in lakes could mean less swimming and water sports.
milder winters – more thaws, freezing rain	Less pond hockey (and also skiing, sledding, snowshoeing, snowmobiling…) Pests that don't survive colder winters could become more prevalent. More road wash-outs in urban areas; more difficulty getting to the camp for the weekend! (Heavy rain washed out about 12 feet Wheeler Blvd in Moncton in July 2012.)
more extreme weather events	More damage to homes & businesses, which could means higher insurance premiums for everyone.
rising sea levels & coastal erosion	Storm surges could cause damage to coastal infrastructure (Remember La Dune de Bouctouche in December 2010?) Sea-water could infiltrate drinking water supplies (The Town of Richibucto has already had to re-drill its well once.)
more flooding	More damage to homes & businesses that are located in floodplains (Remember Perth-Andover in March 2012 and Fredericton in April 2008?)
acidification of oceans	Shellfish stocks could be diminished.
less predictable wildlife patterns	Hunters, fishers, and birdwatches will have to hunt, fish, and watch for different species. (Look what happened to the Miramichi recreational salmon fishery in the summer of 2012.)

Check it out! NB climate change indicators website — information to help New Brunswickers better understand how the climate is changing. http://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/climate_change/content/



Route 105, December 2010. Photo Credit: Unknown



Lameque, 2005. Photo Credit: Paul Jordan



Jemseg, 2008. Photo Credit: Paul Jordan

Eye-opening predictions!

The Pizza Delight and the Shoppers will both have up to 1m of water on their ground floors!

Will this spell the end of the community garden movement that has just been born?

In Fredericton – the number of days when the maximum daily temperature exceeds 30ºC will increase by approximately 10.6 by the 2020s.
In Bathurst – the average winter temperature will increase by approximately 5.5°C by the 2080s.
In Edmundston – the number of days when the maximum daily temperature exceeds 30ºC will increase by approximately 12.3 by the 2050s.
In Shippagan – sea-levels will increase by approximately 90cms by the year 2100.
In Miramichi – the number of days when the maximum daily temperature exceeds 30ºC will increase by approximately 24.2 by the 2080s.
In Campbellton – the number of days with snow will decrease by approximately 14.8 days ***each month*** by the 2080s.
In Moncton – the number of days with rain will decrease by approximately 11.4 days ***each month*** by the 2020s.

But what about the ice fishing!?!

What will happen to the salmon fishery?

References:
RJ Daigle Enviro, March 2011. *Sea-Level Rise Estimates for New Brunswick Municipalities* prepared for the Atlantic Climate Adaptation Solutions Association.
Environment and Sustainable Development Research Centre, March 2009. *Climate Change Scenarios New Brunswick Municipalities* submitted to New Brunswick Department of Environment.