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Climate Change Threatens Canada's Water: Report

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Vancouver, October 4, 2011 - Coordinated national and regional water conservation guidelines are required to address the detrimental impact climate change is having on Canada's water system, according to Simon Fraser University's Adaptation to Climate Change Team (ACT).

"The days when Canadians take an endless abundance of fresh water for granted are numbered," warns Bob Sandford, lead author of ACT's new report Climate Change Adaptation and Water Governance.

"If Canada doesn't become a water conservation society, water security in many parts of this country will be compromised."

The report calls for a dramatic reform of water governance structures in Canada by all levels of government to meet the new challenges posed by a changing climate, and sets out 12 broad-based recommendations to help protect Canada's fragile water supply.

Climate change is causing increased weather instability, leading to more frequent, deeper and persistent droughts, as well as more intense rainfall and flooding across Canada. This results in greater property damage, higher insurance costs and a greater infrastructure maintenance and replacement deficit nationally.

Today, half of every dollar paid out by insurance companies is for water damage related to extreme weather events, which will continue to increase unless government and planners undertake the deep reforms necessary to manage water differently.

The growing economic impacts of climate change on Canada were confirmed by a national study released last week by the National Round Table on the Environment and the Economy (NRTEE).

According to NRTEE, the costs of climate change could range from \$5 billion per year in 2020 to between \$21 billion and \$43 billion per year in 2050, depending on global greenhouse gas

"Increasing average temperatures, climate change impacts on weather patterns and extensive changes in land use are seriously affecting the way water moves through the hydrological cycle in many parts of Canada, which is seriously impacting water quantity and quality."

emissions and domestic economic and population growth.

"Canada is coping with climate change, not adapting," says Sandford. "Our primary response to climate change has been focussed on reducing emissions. While such action is critical, it is inadequate by itself.

Current and projected atmospheric concentrations of greenhouse gases will result in continued climate change regardless of our success in reducing emissions. As well as cutting emissions, Canadians need to adapt to the current and anticipated effects of climate change, which requires more effective management of our precious water resources."

Water policy in many parts of Canada has not kept pace with changing political, economic and climatic conditions. The last federal water policy was tabled in Parliament over two decades ago and has never been fully implemented. And today, less than 20 percent of Canada's groundwater sources have been mapped.



One of the key challenges limiting effective water resource management in Canada is jurisdictional fragmentation, as legislative power over freshwater is divided between the federal government and the provinces, producing a complex regulatory web that spans First Nations, municipal, regional, provincial and federal orders of government.

This has resulted in serious policy and information gaps contributing to a lack of legally enforceable water quality standards and contributing to the decline of surface and groundwater monitoring, as well as water research in Canada.

The complexity, fragmentation and lack of coordination of water policies in Canada creates policies that are often inconsistent with respect to drinking water quality standards, ecosystem protection, allocation rights and climate change adaptation, concludes the Climate Change Adaptation and Water Governance report.

"The reform of water governance structures in Canada is essential if we want to successfully manage and protect our water supplies and minimize climate-related impacts on our environment, our economy and our society," says Sandford.

Climate Change Adaptation and Water Governance Recommendations

- The federal, provincial and municipal governments establish national and regional water conservation guidelines that values water appropriately and promotes its wise use and conservation
- Governments at all levels formally allocate water to meet nature's needs and ensure its use

is consistent with sustaining resilient and functioning ecological systems

- Strengthen and harmonize flood protection strategies nationally
- Government at all levels should formally support the design and sustainability of water supply and waste disposal infrastructure based on ecological principles and adaptation to a changing climate, with special attention to First Nations communities
- National and regional water monitoring needs to be improved to provide reliable, accessible, up-to-date information needed to effectively manage water in a changing climate
- The role of education in public understanding of the importance of water to our way of life in Canada should be recognized and formally supported
- Water must be recognized as a human right integral to security and health
- A collaborative water governance model should be supported to holistically managing watersheds
- Governments at all levels must recognize the importance of groundwater, understand and value its role in creating a sustainable future for Canada
- Develop coordinated long-term national strategies for sustainably managing water in the face of climate change
- Canada, in association with provincial, territorial and Aboriginal governments, should fully articulate and actively promote a new Canadian water ethic
- Create a non-statutory national water commission to advance policy reform and to champion the new Canadian water ethic

For the full report, please go to www.sfu.ca/act



At **GLOBE 2012**, taking place March 14-16, 2012, Industry experts from various sectors will discuss how they successfully manage their operations through the sustainable use and reuse of water.

Experts from government and the private sector will also address the challenges and opportunities the surround the issue of access to water, which the United Nations believes is a basic human right. (***The Right to Water***).

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