



**News Digest of the Canadian Association of Geographers
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McGill U graduate student Dylan Clark is studying the impact of health and society in the Arctic:

Over the past century, Arctic land temperatures have risen by around five degrees Celsius, providing an unfortunate initial case study for the impacts of climate change and drawing much scientific attention — including my own. After graduating from Iowa State University in 2014, I traded my antimalarial pills for extra-thick gloves, a bulky coat and an awkward amount of wool socks, moving to Montreal to begin a master's program with James Ford and the Climate Change Adaptation Research Group in the Department of Geography at McGill University to do work in climate change and health. Over the past year, I have been researching how Inuit hunters and land users are currently vulnerable to injury on the land and how they may be impacted by future effects of climate change. The most obvious example of this is a hunter falling through thin ice on a snowmobile, however, as I have found during interviews and observation, the impacts of climate change on hunter safety is far more complex. The impacts that climate change will have on individuals, communities and countries are not simple to predict. As I have learned from interviews and observing hunters, many Inuit land users are increasingly taking GPS devices and satellite distress beacons with them on the land. The community of Arviat has after-school programs that helps youth develop land knowledge. And, the community actively collaborates with researchers like myself to better understand what the future holds. However, within each community, region or country, there are more vulnerable populations that lack the capacity to adequately adapt due to policies, economic status or other means of marginalization. [Ames Tribune](#)

U Toronto's Matti Siemiatycki offers five solutions for infrastructure cost overruns: Over the next few months, the federal government will embark on the largest program of sustained infrastructure spending in a generation. However, as project spending ramps up, Ottawa and its provincial and municipal partners in these efforts must take measures to avoid a chronic problem that plagues infrastructure projects the world over: cost overruns. Many projects blow through their budgets by tens or even hundreds of millions of dollars (think the Spadina subway extension in Toronto, extension of the Montreal Métro to Laval, the BC Place Stadium roof replacement in Vancouver). This problem is not unique to Canada. Cost overruns are problematic because they hit tight government budgets and draw money from other priority projects. They also undermine public confidence in the ability of government to manage taxpayer dollars, putting at risk support for further investment in much-needed infrastructure. What are the causes and cures for such construction cost overruns? Technical reasons include frequent scope changes and change orders, difficulties co-ordinating work between multiple contractors, unexpected site conditions, and rising material and labour costs. Here are five solutions for infrastructure cost overruns. [The Globe and Mail](#)

McGill U graduate student Melanie Flynn on why monitoring and evaluation of climate change adaptation projects is important: Thawing permafrost has been observed across the Arctic, causing infrastructure woes for residents and planners alike, and Arviat, a hamlet on the western coast of Hudson Bay, is no exception. Adaptation to these changes is needed in order to reduce infrastructure costs for the future, but monitoring and evaluation are important steps in ensuring such adaptation projects follow through on their promises. While implementation of projects such as the [Arviat Climate Change Adaptation Action Plan](#) is key to fight thawing permafrost in the Arctic, it must be followed by monitoring and evaluation, according to Melanie Flynn, a Master's student with the Climate Change Adaptation Research Group (CCARG), housed within the Department of Geography at McGill University. There are currently few established ways to evaluate climate change adaptation, especially at a community level. Evaluation tools exist for higher level policy documents, such as national adaptation plans, but there is little available for formally reflecting on the successes and failures of a community level project. Flynn has decided to tackle this issue for her Master's thesis, and is working to develop a general framework that can be applied to adaptation projects in the Arctic. Her work is being carried out in conjunction with ongoing research done by CCARG to evaluate climate change adaptation across Nunavut. Using Arviat as a trial case study, Flynn has developed an evaluation framework that is hopefully general enough to work for any adaptation project. Her method is a four-step cycle. [Northern Public Affairs](#)

U Calgary's Scott Jasechko participates in study that finds one-third of the water in global rivers made up of rain and snowmelt: Nearly one-third of the water flowing in rivers — including the Bow River — is made up of rain and snowmelt that has flowed into them within a few months, according to a new study. The research was conducted by scientists at the University of Calgary, the University of Saskatchewan and other universities around the world in a study of 250 global rivers. “We found out that a substantial amount, about one-third of the water in global rivers, is made up of rain and snowmelt that made it to the river relatively quickly, within a few months,” said [Scott Jasechko](#), assistant professor of geography at the U of C. The finding has implications for river pollution and ecosystem health by providing valuable information for water managers who monitor rivers for spills or other pollution. “When a pollutant is spilled on the landscape, the next question a water manager may have is how long or if that pollutant will reach a river and potentially impact the health of aquatic ecosystems or the security of drinking water supplies,” said Jasechko. The researchers used water fingerprints known as oxygen isotopes that are found in water molecules to track the water as it moved. It showed that most of the water is “young” or less than three months old. By showing most rivers have this “young” water, he said there's potential some of the pollutants spilled on the landscape could flow quite quickly into the river. “That leaves us with little time for the pollutant to be cleaned up and for us to detect the pollutant before it arrives at an aquatic ecosystem or a drinking water intake downstream,” said Jasechko. In addition, the research shows that the young water in rivers is only a microscopic amount of the total groundwater on the planet. “The reason this matters is that this young groundwater, if you will, is expected to be close to the land surface and that's where we're putting a lot of pesticides and pollutants, and it's also where we're urbanizing our landscape,” said Jasechko. “It means impacts of land-use changes are likely to be felt disproportionately on the quality of water downstream.” [Calgary Herald](#)

Carleton U PhD student Ann Crawford “on thick ice”: Department of Geography and Environmental Studies Graduate Student Anna Crawford has written a blog titled “On Thick Ice” that details with real world imagery and descriptive prose her experiences as a graduate student. Anna completed her Masters of Science under the supervision of Professor Derek Mueller and has continued on in pursuit of her PhD. In Anna's own words, “I have had the incredible opportunity to visit both the Eastern and Western Canadian Arctic regions to research ice My personal work investigates the role of surface melt (ablation) on overall ice island decay, while my colleagues study other aspects of ice island deterioration and drift”. Read all about her adventures in her [personal blog](#). [Carleton Geography](#)

U Waterloo PhD student Samantha Berdej leads paper highlighting key social drivers for effective oceans conservation: Around the world, coastal and marine communities and ecosystems are the first to face the threat of climate change. A new study by researchers in the Faculty of Environment looks specifically at the role played by bridging organizations in connecting people and knowledge in ways that to lead to more effective marine conservation and saving coastal regions from irreversible damage. “Conservation settings are inherently messy,” said Samantha Berdej, a PhD student in the Department of Geography and Environmental Management and lead author. “People often hold different values, needs and wants for a particular marine space, which can increase pressure on resources and lead to conflicts. Governance in these settings also tends to be fragmented and divided by sector. Our work demonstrates the value of bridging organizations here to build much-needed connections between actors to allow for the sharing of knowledge and expertise, and to provide platforms where they can collaborate and learn from one another.” [U Waterloo Environment](#)

CFI 2015 Grant to Establish Laboratory for Atmospheric Research in UBC Department of Geography: UBC Geography through a CFI Infrastructure Fund from The Canada Foundation for Innovation and BCKDF, will establish the Laboratory for Atmospheric Research on Greenhouse Gas Exchange. The laboratory will allow state-of-the-art climate research on greenhouse gas emissions and sequestration in Canada’s forested, tundra, and urban landscapes. The laboratory will share analytical technology, sensors, collaborative field platforms, and data management systems to study how much, when and where atmospheric greenhouse gases are emitted and sequestered across Canada’s major ecozones including major urban areas. The laboratory will be hosted in the Physical Geography Labs of the Department of Geography; two of the principal investigators in the new laboratory are from the Department of Geography. Andreas Christen’s Micrometeorology Group “develops methods to measure emissions of greenhouse gases over urban and disturbed landscapes”, and Greg Henry’s Arctic Biogeography Group “works on the responses of Arctic tundra to environmental changes, especially climate variability and change and associated greenhouse gas feedbacks”. [UBC Geography](#)

New in [The Canadian Geographer](#)



Thomas Karrow and Roger Suffling. 2016. [Pre-settlement vegetation maps generated using Ontario early survey: An online database providing enhanced map access for researchers](#). The Canadian Geographer / Le Géographe canadien. DOI: 10.1111/cag.12251

Tim R. Moore and Oliver T. Coomes. 2016. [Publishing journal articles in Canadian geography](#). The Canadian Geographer / Le Géographe canadien. DOI: 10.1111/cag.12252



UBC Geography’s Jamie Peck named highly cited researcher in 2015. Jamie who features in the latest Thomson Reuters “Highly Cited” listing for the social sciences, which measures the 1% most cited researchers in the world by subject field! Across Canada, there are thirteen social scientists on the 2015 list. [UBC Geography](#)

Hot Papers by Canadian Geographers

Kwadwo Afriyie, Kabila Abass and Micheal Boateng. 2016. [A journey to the south: socio-economic implications for young female head porters in the central business district of Kumasi, Ghana.](#) International Journal of Migration and Residential Mobility. DOI: 10.1504/IJMRM.2015.074176

Julia Bentz, Fernando Lopes, Helena Calado and Philip Dearden. 2016. [Enhancing satisfaction and sustainable management: Whale watching in the Azores.](#) Tourism Management 54:465-476.

Oliver T. Coomes and Benjamin C. Miltner. 2016. [Indigenous charcoal and biochar production: potential for soil improvement under shifting cultivation systems.](#) Land Degradation & Development. DOI:10.1002/ldr.2500

Jacqueline Goordia, Alfonso Davila, Denis Lacelle, Wayne Pollard, Margarita M Marinova, Charles W Greer, Jocelyn DiRuggiero, Christopher P McKay and Lyle G Whyte. 2016. [Nearing the cold-arid limits of microbial life in permafrost of an upper dry valley, Antarctica.](#) The ISME Journal. DOI:10.1038/ismej.2015.239

Marie-Hélène Graveline and Daniel Germain. 2016. [Ice-block fall and snow avalanche hazards in northern Gaspésie \(eastern Canada\): Triggering weather scenarios and process interactions.](#) Cold Regions Science and Technology 123:81–90.

Chris Huggins. 2015. [Land-grabbing, agricultural investment and land reform in the Democratic Republic of Congo.](#) L'Afrique des Grands Lacs: Annuaire 2014-2015:149-174.

Jennifer M. Sawyer, Michael T. Arts, George Arhonditsis and Miriam L. Diamond. 2016. [A general model of polyunsaturated fatty acid \(PUFA\) uptake, loss and transformation in freshwater fish.](#) Ecological Modelling 323:96-105.

Other “Geographical” News

Calgary Universities facing crisis in academic journal collections: A low Canadian dollar and vicious licensing fees are putting Calgary universities in a tough spot when it comes to their academic journal purchasing power. [Metro Calgary](#)

B.C. aboriginal scholar wins bid for rights hearing after she’s denied tenure in part over lack of research: By arguing that publishing peer-viewed research conflicted with her role as an indigenous scholar, a former law professor has won her bid for a human rights tribunal hearing after losing her job at UBC. Lorna June McCue was denied tenure and ultimately dismissed after 11 years at the university in part because of her failure to submit a single piece of peer-reviewed research during that time. McCue has alleged that peer-reviewed research is contrary to indigenous oral traditions and that UBC’s research standard effectively discriminated against her “race, colour, ancestry, place of origin ... and sex.” The root of the complaint is UBC’s informal requirement for professors to put their name to at least five academic papers before being considered for tenure. [The Province](#)

Some not so “Geographical” News



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