Kugluktuk, formerly Coppermine until 1996, is a hamlet located at the mouth of the Coppermine River in the Kitikmeot Region of Nunavut, on Coronation Gulf, southwest of Victoria Island. It is the westernmost community in Nunavut, near the border with the Northwest Territories. Photo: Wikipedia, Andrew Johnson

Competing Images of the Arctic

Elizabeth May

In defining his own branding, Stephen Harper has attempted to re-brand the Arctic. The effort has left Canadians with a narrative about our North that obscures the real picture. The real story in the Arctic now is that its warming is having a disproportionate effect on global warming generally, and the same man whose energy and environment policies are doing nothing to offset the problem claims to love the region.

There are two strikingly different images of the Arctic that dominate the Canadian imagination. Both are iconic.

Stephen Harper's branding of the Arctic has been a key part of his remaking of the Canadian identity. In his award-winning book, *The Longer I'm Prime Minister*, Paul Wells describes how Stephen Harper set out to remake Canada's identity by spinning traditional symbols into Conservative emblems: The insertion of "royal"

into the military titles; the revisionist history that inspired spending $28 million on the bicentennial of the War of 1812; and any other homage to war dead while ignoring the plight of those living with the wounds of war. Most indelibly: the re-branding of the Arctic.

The prime minister has made it an annual summer ritual to travel to our North. His core messages are about protecting Canadian sovereignty, although the enduring visual may be his jumping on an all-terrain vehicle while declaring he "make(s) the rules."

The prime minister's Arctic is muscular. No "fragile North" for him. Harper declared "use it or lose it." "Use it" is not a call to greater eco-tourism. The prime minister's vision is linked to opening up resources in oil, gas and minerals.

Yet, his promises for deep sea ports, ice breakers and new research stations are now more notable as absent than fulfilled.

For example, the icebreakers were promised in 2005 and again in 2008, and have been delayed once again. China, with no Arctic coastline at all, now has icebreakers in Canada's waters while our Coast Guard's Amundsen is in dry dock.

The construction of the deep water naval port in Nanisivik promised in 2007 has yet to begin, despite promises it would start two years ago. Also two years ago, the prime minister announced a major new satellite project, the Radarstat Constellation Mission. That now appears to be mired in budgetary delays.

Meanwhile, there is a very different picture of the Arctic. It is of a canary in a coal mine: a global warning sign of dangerous levels of climate change. Ironically, those very policies with which Stephen Harper is most identified—rapid exploitation of fossil fuels—speed the rate of change in Canada's Arctic.

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My sense is that globally, it is the image of a stranded polar bear on an ice floe that says "Arctic" to the world. A politician on an ATV riding through a sensitive eco-system is not an image that comes to mind.

Canadians need a crash course in climate science. And understanding what is happening to the Arctic is a key place to begin.

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The melting of Arctic ice had been an anticipated climate change impact for decades, but the *pace* at which the ice is melting exceeds earlier projections.

When I first learned about the threat of climate change, it was 1986 and I was senior policy adviser to the federal minister of the environment, Tom McMillan. I was fortunate to be serving an environment minister who was committed to progressive environmental policies; McMillan was fortunate to be serving under a prime minister who still operated a cabinet government. McMillan could take his concerns to Brian Mulroney, and the prime minister actually listened. Public policy was based on sound science, ground through the lens of a highly competent, non-partisan civil service. So when Tom McMillan learned about the climate crisis, Mulroney agreed to position Canada in the lead.

What the Environment Canada scientists told us back in the 1980s was based on modelling the impact of trapping more greenhouse gases near the earth's surface. There was no debate about the science. The industry-funded campaigns to create doubt had not yet begun. The doubt that existed was about the regional impacts. There was no uncertainty about the basics—dumping millions of metric tons of greenhouse gases into the atmosphere would destabilize the climate system and could wreak havoc.

Globally, we were told that unless our economies started using less fossil fuels we would experience more frequent and more severe weather events, that the sea ice could melt, and glaciers could retreat.

I remember clearly that Environment Canada scientists thought the glaciers would begin to retreat by 2030. That the melt started decades sooner has to do with two things. Firstly, we have not, in Canada or globally, reduced our use of fossil fuels. On the contrary, the emissions of greenhouse gases have climbed due to the increased use of dirty energy. Secondly, the impacts have been accelerating through positive feedback loops.

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rapidly reverse course. Positive feedback loops create more serious impacts and a potential runaway global warming process that we could be helpless to address.

Here's the core notion of a feedback loop: Human action in burning fossil fuels releases greenhouse gases that put in motion a change that itself serves to increase global warming.

There are two very pronounced feedback loops occurring in the Arctic: loss of ice and loss of permafrost.

As the Arctic warms, permafrost melts. Permafrost is, as the name suggests, ground that has been—or was—permanently frozen. As it melts, whole communities can be destabilized.

As the permafrost melts, it releases vast quantities of methane. The released methane warms the atmosphere, driving more permafrost melt.

As sea ice melts it also triggers a dangerous feedback loop. The loss of ice compromises the *albedo* effect, a cooling effect. The white ice bounces the sun's heat back to space, whereas the dark ocean water absorbs it, speeding the warming. Less ice equals warmer waters, melting more ice.

The warming Arctic has devastating impacts on the entire planet. Research at Rutgers University identified a plausible mechanism by which the melting Arctic has impacted areas far to the south, causing increasingly serious extreme weather events. It turns out the difference between Arctic cold and equatorial heat has kept the jet stream moving fast and relatively horizontal over mid-latitudes. With the warming Arctic, the difference in temperature is lessened. As a result, the jet stream has gone wobbly.

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Fires, floods and droughts have increased globally as the jet stream slows down due to a warming Arctic. Moving more slowly, it lies in lazy loops, leaving high pressure and low pressure zones in place for unusually long periods. It is too early to diagnose the causes of the ferocity of Hurricane Sandy, but clearly the melting of the Arctic is implicated.

There is not much harm in letting Stephen Harper play nature boy every summer, using the Arctic as his stage. However, there is serious and long-term damage in ignoring what is really going on in our North. Arctic sovereignty, if it means nothing else, means that if we can no longer arrest the decline in summer ice, we need to at least keep the winter ice intact. It requires that we arrest the galloping increase in greenhouse gases and meet the commitment Harper pretends to have embraced—stopping the global average temperature increase from rising above 2 degrees C. This must become our central focus. P

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