Climate Change and Security

Planning for the Future

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Introduction

Climate change–induced events and conditions will pummel Canada with a myriad of significant, unprecedented security challenges in the coming decades. Yet the words 'security' and 'climate change' rarely appear in the same sentence in Canada, and an enormous gap separates Canada and its closest international partners when it comes to taking climate change–security linkages seriously.

Climate change will affect all Canadian government, private sector and non-governmental entities with national security, public safety, and international security mandates and accountabilities. Yet the topic is barely on the margins of the contemporary public dialogue in Canada around current and future security threats and priorities. Perhaps officials are discussing this issue behind closed doors in Ottawa, but it has been nearly invisible in recent policy documents from federal lead departments, such as Public Safety Canada and the Department of National Defence (Government of Canada, Privy Council Office, 2004; Government of Canada, Department of National Defence, 2008).

For their part, Canadian academics, researchers, journalists, and authors with an interest in climate change rarely focus on the associated security consequences. Thomas Homer-Dixon is a notable exception. He sounded the alarm about the links between environmental change and acute conflict in 1991 and has returned to this and related topics many times since (Homer-Dixon, 1991). The handful of Canadian academics

and journalists focusing on the Arctic is a second exception.[1] Here the consequences of climate change are highly visible and controversial, as glaciers and ice fields melt away, generating questions about Canadian sovereignty and security.

Many other countries are far more transparent and active in response to the growing international consensus that climate change warrants serious security attention. For example, ministers and senior public servants in the United Kingdom have delivered major public speeches on this matter in recent years,[2] and a leading United Kingdom think tank has published influential papers and hosted several conferences.[3] The national security strategy issued earlier this year by the Gordon Brown government did not mince words about climate change–security linkages, 'Climate change is potentially the greatest challenge to global stability and security, and therefore to national security' (Government of the United Kingdom, Cabinet Office, 2008).

In the United States, the National Intelligence Council has assessed the national security impacts of climate change out to 2030, and presented an unclassified version of its findings and judgments (Government of the United States, National Intelligence Council, 2008). American think tanks, including the Council on Foreign Relations and the Center for Strategic and International Studies, have also assembled

1 For example, Michael Byers of the University of British Columbia and Rob Huebert of the University of Calgary have written extensively about the impact of climate change on Arctic security and sovereignty. See, for example, Byers (2005) and Huebert (2008).

2 The foreign secretary and the chief of the defence staff are among the United Kingdom officials who have delivered major speeches on climate change and security (Beckett, 2007; Stirrup, 2007).

3 The two most recent publications by the Royal United Services Institute for Defence and Security Studies on climate change and security are Feakin (2007) and Mabey (2008).

experts to tackle the topic and bring it to the attention of United States policy-makers and decision-makers.[4]

The climate change–security issue has also garnered prominent attention in Australia, Europe, and Asia, as well as in multilateral organisations, including the United Nations, the European Commission, and the North Atlantic Treaty Organization.[5]

Meanwhile in Canada, the climate-change dialogue is focused firmly on science, economics, and politics and on the near-term costs of dealing with causes. Canadian security organisations have not examined reliable scientific projections through a Canadian security lens. They have not produced a Canada-centric, security-centric, risk assessment of expected trends and conditions; nor have they examined the mandates, priorities, and capabilities of Canadian entities with security responsibilities and asked the following kinds of questions:

- Are Canadian organisations with public safety, national security, and international security responsibilities monitoring climate change?
- Are these Canadian organisations taking climate change seriously as a potential security risk?
- Have these Canadian organisations assessed their own readiness? Have they developed adaptation strategies?
- Are these Canadian organisations working collaboratively or in silos?

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4 Examples of recent work of United States think tanks and research institutes on climate change and security are Campbell (2008), Campbell et al (2007), CNA Corporation, Military Advisory Board (2007), and Busby (2007).

5 Examples of recent work undertaken in Australia, Europe, Asia, and multilateral institutions are Dupont and Pearman (2006), Council of the European Union (2008), Schubert et al (2008), Government of Germany, Federal Ministry for Economic Cooperation and Development (2008), Elliot (2008), and United Nations (2007).

- Are these Canadian organisations adjusting their policies, strategies, and capabilities? If not, why not?

Maintaining sustained security attention on climate change will be neither straightforward nor easy in Canada, with many obstacles standing in the way of progress.

Canada: A snapshot profile

Before considering whether and how climate change could generate security concerns for Canada, it is first necessary to examine relevant and distinct aspects of the country's physical, social, governance, economic, and international profile – as well as its security orientation and capacity.

In terms of geography, Canada is the second largest country in the world (behind Russia) in terms of total area. The country is bounded by three oceans – the Atlantic, the Pacific, and the Arctic. It has the longest coastline in the world and more lakes than any other country.

Canada's population is roughly 34 million. Its density – 3.5 people per square kilometre – is among the lowest in the world. More than 80% of Canadians live in urban areas, and three-quarters of them live within 150 kilometres of the United States border. Canadians define themselves as bilingual and multicultural, and the country has the highest per capita immigration rate in world.

Canada is a federated state with 10 provinces and three territories. Municipalities are considered 'creatures' of the provinces, so do not have a place at the federation table. The Canadian governance model is thus disconnected to the urban level – where most people live and where many of the impacts of climate change will be felt.

Economically, Canada is one of world's wealthiest countries, measured by per capita income. Its diversified economy relies heavily on natural resources and trade. Canada is a net exporter of energy – natural gas, oil, and hydroelectricity. The tar sands in Alberta rank second only to Saudi Arabia in terms of proven oil reserves, and rank first among suppliers of foreign oil to the United States.

On the international stage, Canada typically is among the first to respond to official requests to help other nations deal with natural disasters and other complex emergencies. It usually does so in two ways – by providing money through national and international agencies and by deploying Canadian forces personnel. Canada traditionally has provided a safe place for refugees, with approximately 30,000 refugees granted permanent residence status each year.

Until the events of September 11 (2001), security, intelligence, defence, and public safety were not top-of-mind issues for Canadians or their elected governments. Security was defined almost entirely in an external context. September 11 triggered an unprecedented flurry of security-related activity – new money, new legislation, new machinery, the first-ever national security policy, a new post of national security advisor to the prime minister, a new public safety department.

The Canadian military is experiencing a renaissance, with unprecedented public support and government funding flowing its way. That said, the 62,000 regular personnel and 25,000 reserves are stretched thinly – both in terms of meeting a major Afghanistan commitment and in terms of physical presence in Canada. There is no significant military establishment in most major Canadian cities.

Canada has no 'national guard', and the Canadian forces have a significant record of responding to climate-related events at home. For example, almost 16,000 military personnel were deployed following a destructive ice storm in eastern Canada in 1998. Provincial and municipal governments carry much of the burden for responding to natural disasters and other emergencies; their readiness atrophied in the 1990s and has not yet fully recovered.

Canada: Responding to a changing climate

Canada was one of the first countries to sign the Kyoto Protocol in 1998, and parliament ratified it in 2002. A poll showed that 74% of Canadians supported the environmental accord at the time of Canadian ratification ('Three-quarters of Canadians support Kyoto: poll', 2002). Yet Canada

has one of the worst records of any major country that signed the Kyoto Protocol – and worse than the United States, a prominent non-signatory. Canadian emissions rose about 27% between 1990 and 2006 (Simpson et al, 2008, p 263), and the current government is not even trying to meet the Kyoto targets. Canadians are among the greatest consumers of energy per capita in the world. With less than 0.5% of the world's population, Canada is the world's eighth largest emitter of carbon dioxide (David Suzuki Foundation, 2008).

In a recent book aptly entitled *Hot Air*, one of Canada's most respected journalists and two co-authors chronicled the climate-change work of successive federal governments – Liberal and Conservative. They described a lack of genuine commitment and political honesty about realistic targets, a failure to communicate clearly to Canadians, and policy confusion and incoherence in Ottawa. 'The mixture of rhetorical good intentions and inadequate or inappropriate policies produced the vacuum that was, and is, Canada's approach to climate change' (Simpson et al, 2008, p 79).

Four years before he became prime minister in 2006, Stephen Harper described the Kyoto Protocol as 'job killing' and 'economy destroying', capable of crippling Canada's oil and gas industries. Furthermore, he argued that the protocol was 'based on tentative and contradictory scientific evidence' ('Harper's letter dismisses Kyoto as "socialist scheme"', 2007). In recent months, Prime Minister Harper has acknowledged the severity of climate change, but his government has failed to articulate a comprehensive policy and continues to obstruct progress at the international level. At home, the Harper team appears to have taken extraordinary actions in the past year to delay and keep under wraps two major government reports on the likely impacts of climate change.[6] Within the electorate, scepticism persists. Some 52% of respondents to an April 2008 poll thought there was still a legitimate

6 Media reports on the publishing delay included White (2008) and 'Climate Change Reports: Give them their due' (2008).

scientific debate over whether human activity is making the planet warmer (Hoggan, 2008).

The prime minister's roots – and those of his Conservative Party -- are in Alberta, a province where oil and gas industries are powerful politically and as emitters. One Canadian author has described the Alberta tar sands project as 'one of the most polluting enterprises ever developed by humanity' (Flannery, 2008). Alberta is among those provinces lobbying hard against aggressive national emissions targets on the grounds that they are bad for the economy.

Security-related dimensions

Canada has some of the best climate scientists in the world. Many of them were involved in the preparation of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2007a–d). And two federal departments – Natural Resources Canada and Health Canada – engaged hundreds of Canadian climate scientists in the production of comprehensive reports about how climate change is likely to affect each region of Canada, as well as the health of Canadians (Government of Canada, Natural Resources Canada, 2008; Government of Canada, Health Canada, 2008).

Given Canada's geographic footprint, the climate-change possibilities are far more complex than in Europe and smaller countries. Canada embraces seven climate zones – from temperate to arctic – and spans more than 40 degrees latitude. The impacts of a changing climate are already evident in every region.

The detailed scenarios and projections issued by the IPCC and Canadian scientists over the past two years translate directly into serious implications for Canadian entities with public safety, national security and international security responsibilities and accountabilities.

Public safety

With respect to potential public safety scenarios, the scientific projections point to challenges in the areas of disaster mitigation;

emergency planning, response and recovery; critical infrastructure protection; natural disaster preparedness, public health, and law enforcement and military assistance to civilian authorities. The following are public safety–relevant examples drawn from the regional assessments compiled by Canadian scientists in 2007.[7]

- In Northern and Arctic Canada, increased navigability of Arctic waters, expansion of land-based transportation networks, and access to new oil and gas sources may generate tensions on many fronts.
- Atlantic Canada can expect more intense storm events, a rising sea level, higher storm surges, coastal erosion, and flooding.
- Quebec will see increased shoreline erosion in the area where most of the region's social and economic activity is concentrated.
- Ontario may experience disruptions to critical infrastructure – including water treatment and distribution, energy generation and transmission, and transportation – as well as extreme weather, heat waves, smog episodes, and ecological changes supporting the spread of vector-borne diseases (diseases transmitted to human by insects, such as mosquitoes).
- On the Prairies, water scarcity will be the most serious climate risk.
- In British Columbia, forests are vulnerable to pest infestations and fire, and many areas will experience more frequent and sustained drought.

National security

Turning to national security, several climate-change scenarios have potential implications for Canada's intelligence, police, border security, and military institutions.

- Will new marine and land access in the Arctic generate more criminal activity, as well as international disputes over the legal

7 Detailed regional assessments are in Government of Canada, Natural Resources Canada (2008).

status of the Northwest Passage, independence and sovereignty, oil, and mineral access rights?

- Will dissatisfaction with Canada's actions to slow climate change, fuel civil disobedience, radical protest movements, direct action, even eco-terrorism?
- Will terrorist groups with a presence in Canada exploit the disproportionate impacts of climate change to further their causes?
- Will a flow of 'climate migrants' or 'environmental refugees' to Canada add to social and economic tensions?

In many parts of the world, climate change will exacerbate existing tense or desperate situations. For example, poor and fragile countries are going to feel the brunt of climate change, and they will be the least able to cope. In these circumstances, Canadian military, police, and international development agencies will be called on to participate in international security responses – including stabilisation and peace-building missions – in regions of the world experiencing new or worsened conflict situations, major population displacements, humanitarian crises, and natural disasters.

Canada's readiness

In response to projections of climate change–generated burdens, some Canadian security and defence officials respond, 'So what?'. They point to Canada's track record of dealing capably with floods, forest fires, hurricanes, and the like at home. They mention repeated deployments of Canadian personnel to conflict zones and to countries experiencing natural disasters, and ask, 'We are doing this already, and doing okay. What will be so different about the impacts of climate change?'. These questions reveal a failure to recognise the unprecedented nature and complexity of what lies ahead for Canada. Events that now occur rarely will occur more frequently. The severity and magnitude of these events will grow, and they will last longer. They will be more pervasive, occurring regionally, nationally, and internationally at the same time.

And climate change can be expected to act as a threat multiplier, exacerbating current crises, tensions, and instabilities.

A review of the track record over the past 25 years reveals that Canadian governments and businesses – like their counterparts in many other nations – tend to treat security issues seriously only after they are visible and tangible. Early observations about the attitude of Canadian security officials to expected future impacts of climate change are not encouraging. There is no evidence of a consensus – or even a dialogue – about whether climate change qualifies as a genuine, as opposed to an abstract, security concern. The topic seems to be far down the list of security concerns and priorities, and nearly invisible in major policy documents, public statements, and testimony from federal ministers and senior security officials (Judd, 2008).

Some projects are reportedly under way (for example, in the Canadian army), but most current efforts appear to be isolated and unconnected, with no public profile. Importantly, Canadian scientific and security experts seem far from forming what could be a powerful alliance for assessing the security-related risks associated with a changing climate. Canadian intelligence agencies are unlikely to embrace this issue eagerly. It does not originate with hostile states or traditional bad actors, and assessing it would involve more mining of open sources and leveraging of outside expertise than reliance on classified information from clandestine sources.

Overall, there is no sense of urgency – and no national leadership. No federal department or agency or official has taken ownership of this file. Neither the national security advisor nor Public Safety Canada has stepped up to the issue in any visible way. Federal security officials seem content to play around the edges and leave the heavy lifting and worrying about climate change to colleagues in the environment or natural resources ministries. They point to a security agenda that is already crowded, preoccupied with here-and-now problems at home and abroad.

In terms of Canada’s response capacity and readiness, many climate-change scenarios would overwhelm provincial and municipal

capacities, and be bumped up quickly to the federal level. Robust leadership, coordination, and bench strength will be required. Yet, like its United States homeland security counterpart, the new public safety department is struggling to stabilise and meet a vast array of expectations. The Canadian forces continue to equip themselves for heavy conflict abroad, not for disaster response at home. And the relatively small reserve force is highly dispersed across the country – and heavily engaged in backstopping foreign missions.

Emergency preparedness, disaster mitigation, and critical infrastructure protection garnered unprecedented attention after the events of September 11 (2001), but there is no evidence that lead agencies at the federal level are giving priority to national risk assessments, mitigation strategies, or integrated action plans based on reliable climate-change scenarios.

Conclusion

Over the next 30 years, climate change will emerge as a security concern of unprecedented scope and seriousness around the globe. Canada is not paying enough attention to the security implications of climate change, and is lagging behind many other nations in this regard. Without a dramatic realignment of priorities soon, climate change–induced impacts and conditions will stress and overwhelm many elements of Canada's public safety, national security, and international security machinery and arrangements.

References

Abbott, C (2008) *An Uncertain Future: Law enforcement, national security and climate change*, briefing paper. London: Oxford Research Group.

Barnett, J (2003) 'Security and climate change', *Global Environmental Change* 13(1): 7-17.

Busby, JW (2007) *Climate Change and National Security: An agenda for action.* Washington: Council on Foreign Relations.

Busby, JW (2008) 'Who cares about the weather? Climate change and US national security', *Security Studies* 17(3): 468–504.

Byers, M (2005) 'On thinning ice', *London Review of Books*, 6 January.

Campbell, KM (ed) (2008) *Climatic Cataclysm: The foreign policy and national security implications of climate change.* Washington: Brookings Institution Press.

Campbell, KM, J Gulledge, JR McNeill, J Podesta, P Ogden, et al (2007) *The Age of Consequences: The foreign policy and national security implications of global climate change.* Washington: Center for Strategic and International Studies and Center for a New American Security.

CNA Corporation (2007) *National Security and the Threat of Climate Change.* Alexandria, Virginia: CNA Corporation. http://www.securityandclimate.cna.org.

Council of the European Union (2008) *Climate Change and International Security: Paper from the High Representative and the European Commission to the European Council.* Brussels: Council of the European Union. http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf.

Dupont, A (2008) 'The strategic implications of climate change', *Survival* 50(3): 29–54.

Dupont, A, and G Pearman (2006) *Heating up the Planet: Climate change and security.* Sydney: Lowy Institute for International Policy.

Dyer, G (2008) *Climate Wars.* Carlton North: Scribe Publishing.

Elliot, L (2008) *Climate Change and Non-traditional Security: Beyond climate wars? Summary of presentation*, newsletter 11. Singapore: Consortium of Non-traditional Security Studies in Asia.

Feakin, T (2007) *Climate Change and the Threat to Global Security.* London: Royal United Services Institute for Defence and Security Studies.

Fingar, T (2008) *National Intelligence Assessment on the National Security Implications of Global Change to 2030*, statement for the record. Home Permanent Select Committee in Intelligence, Home Select Committee on Energy Independence and Global Warming, 25 June.

Government of Canada, Health Canada (2008) *Human Health in a Changing Climate: A Canadian assessment of vulnerabilities and adaptive capacity.* Ottawa: Health Canada.

Government of Canada, Natural Resources Canada (2008) *From Impacts to Adaptation: Canada in a changing climate 2007*. Ottawa: Natural Resources Canada.

Government of Germany, Federal Ministry for Economic Cooperation and Development, German Technical Cooperation (2008) *Climate Change and Security: Challenges for German development cooperation*. Eschborn: German Technical Cooperation.

Government of the United Kingdom, Cabinet Office (2008) *The National Security Strategy of the United Kingdom: Security in an interdependent world.* London: Stationery Office.

Government of the United States, National Intelligence Council (2008) 'National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030', statement by Thomas Fingar for the Record, House Permanent Select Committee on Intelligence and House Select Committee on Energy Independence and Global Warming, June.

'Harper's letter dismisses Kyoto as "socialist scheme"' (2007) *CBC News*, 20 January. http://www.cbc.ca/canada/story/2007/01/30/harper-kyoto.html.

Hoggan, J (2008) 'Climate confusion is bad for business', *Vancouver Sun* 7 April.

Homer-Dixon, T (2007) *The Upside of Down: Catastrophe, creativity, and the renewal of civilization.* Washington DC: Island Press.

Huebert, R (2008) 'As the ice melts, control ebbs in the Arctic', *Globe and Mail*, 18 August.

IPCC (2007d) *Climate Change 2007: Synthesis report.* Geneva: Intergovernmental Panel on Climate Change. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

Judd, J (2008) 'Remarks by Jim Judd, Director of CSIS, at the Global Futures Forum Conference in Vancouver', 15 April, Canadian Security Intelligence Service. http://www.csis-scrs.gc.ca/nwsrm/spchs/spch15042008-eng.asp.

Kearns, I, and K Gude (2008) *The New Front Line: Security in a changing world*, working paper 1. London: Institute for Public Policy Research.

Mabey, N (2008) *Delivering Climate Security: International security responses to a climate changed world.* London: Royal United Services Institute for Defence and Security Studies.

Rudd, K (2008) *The First National Security Statement to the Australian Parliament*, address by the Australian Prime Minister the Hon Kevin Rudd MP, 4 December 2008. http://www.pm.gov.au/media/speech/2008/speech_0659.cfm, http://www.pm.gov.au/docs/20081204_national_security_statement.pdf.

Simpson, J, M Jaccard, and N Rivers (2008) Hot Air: Meeting Canada's climate *change challenges.* Toronto: McClelland & Stewart.

Sinclair, E (2008) *The Changing Climate of New Zealand's Security: Risk and resilience in a climate affected security environment*, WP/08/11. Wellington: Institute of Policy Studies, Victoria University of Wellington. http://ips.ac.nz/publications/files/e0e2bb059aa.pdf.

'Three-quarters of Canadians support Kyoto: Poll' (2002) *CTV News*, 8 October. http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1034014051181_29423251/?hub=Canada

United Nations (2007) 'Security Council holds first-ever debate on impact of climate change on peace, security, hearing over 50 speakers', news release. New York: United Nations.

White, M (2008) Bloggers post 'Health Canada climate change report to web: Tories criticized for quiet release of 500-page study', Canwest News Service, 21 August.