



CDA INSTITUTE ANALYSIS

L'ANALYSE DE L'INSTITUT DE LA CAD

OCTOBER / OCTOBRE 2015

THE CONFERENCE OF DEFENCE ASSOCIATIONS INSTITUTE

L'INSTITUT DE LA CONFÉRENCE DES ASSOCIATIONS DE LA DÉFENSE

WORKSHOP – CLIMATE CHANGE, SECURITY, AND DEFENCE: Welcome Remarks and Summary

The CDA Institute is a charitable and non-partisan organization whose mandate is to promote informed public debate on security and defence issues.

L'Institut de la CAD est un organisme caritatif et non partisan qui a pour mandat de promouvoir un débat public éclairé sur les enjeux de sécurité et de la défense.

The CDA Institute organized a special Workshop on “Climate Change, Security, and Defence” in Ottawa on 16 September 2015, which featured R. Andreas Kraemer, Founder and Director Emeritus of the Ecologic Institute in Berlin, Germany; The Honourable Lloyd Axworthy, former Minister of Foreign Affairs and International Trade; and Professor Michael Brklacich, Chancellor’s Professor (Geography) and Associate Dean, Carleton University. The moderator was Ferry de Kerckhove, former Ambassador and Executive Vice-President of the CDA Institute. Special thanks to Brinkman & Associates Replantation Ltd for sponsoring the workshop, to Telfer School of Management for the use of their facilities, and to the Ambassador and Embassy of France for hosting the luncheon.

*We are pleased to present the welcome remarks by **Ferry de Kerckhove** from the event, followed by a workshop summary written by CDA Institute Analyst **Ariel Shapiro**.*

Welcome Remarks

Ladies and gentleman, Mesdames Messieurs. Quel plaisir de lancer la discussion. This is not an easy topic and yes-sayers and nay-sayers on the impact of climate change have been battling to various degrees with many vantages points and with an innate ability to contradict one another with equal passion and solid data. A great friend of mine reminded me of the global warming in the Middle Ages and the role of nature in producing broad cycles of changes in world temperatures in ancient and modern times. No one disputes this but then, how about today?

Contrasting such legitimate claims about the past, the body of scientific evidence seems to have confirmed that climate change is a reality, based on global sources, with an average growth in

world average temperature of .70 in 50 years. I think what divides many people in this debate is the rhythm at which this trend will accelerate or not over the next 50 years.

Our task today, irrespective of the exact outcome 50 years down the road, is to assess the security risks or threats stemming from climate change. Uncertainties are no excuse for this kind of thinking, particularly on food, water and energy. Question number one as I see it is whether we are talking about a strategic issue or challenge, or not. Stemming from this is the next question: are the consequences of climate change strictly of a physical nature or do they mutate into political and social issues, namely an increase in conflicts – I think of Darfur – migrations and similar events. Are we at a stage where we can talk about a “defence strategy to mitigate the impacts of climate change?”

Can we at the present state of research argue that an increase in X degrees of temperature will provoke an X increase in regional or global conflict? And what are the defence mechanisms required to face these – conventional or completely new?

Is there a defence mechanism or policy to handle the impact of ice melting, climbing ocean water level, loss of arable land, drought, floods, desertification, spreading diseases, and tornadoes – or their consequences – reduced access to food or insecurity thereof, social tension, diminished access to water, increased poverty, and insecurity? Clearly the flow of migrants coming to Europe has little to do with climate change and we should not confuse man-made disasters at which we are so good and that wrought upon us by Mother Nature.

It behooves us to be clear about what we are talking about. Yet, even from a very static view we cannot but underscore that the incremental nature of climate change has an impact upon existing stressful situations, locally, regionally, and globally. That is probably where we need to adapt our security and defence postures and policies – or is it too early to talk about “defence posture”? Did Egypt not nearly go to war against Ethiopia on Nile waters management? Might we have to recognize that the fact of globalization – globalization is a fact, not a purpose – does not make it any easier to think through those issues even if it should unite people in looking for solutions both in the management of our environment and of human nature?

Voltaire used to say “if you wish to converse with me, let us first agree on a terminology”. I think this panel has its work cut-out and I give the floor first to Andreas Kraemer.

Ferry de Kerckhove
Executive Vice-President
CDA Institute

Workshop Summary

Discussion began with moderator Ferry de Kerckhove asking the participants three questions: Is climate change a strategic challenge? Is there a direct link between climate change and conflict? And, what is our policy to meet this, both as a country and on a global scale? The three speakers each made a fifteen minute address to answer these questions, followed by an informative question and answer period.

“Discussion began with moderator Ferry de Kerckhove asking the participants three questions: Is climate change a strategic challenge? Is there a direct link between climate change and conflict? And, what is our policy to meet this, both as a country and on a global scale?”

The first speaker was R. Andreas Kraemer, the founder and director emeritus of Ecologic Institute in Berlin and a specialist in the influence of science on public policy. He began by sharing a German proverb with the audience: “one mishap is rarely on its own.” Kraemer explained the concept of the synchronous failure of systems, developed by Thomas Homer-Dixon, CIGI Chair of Global Systems at the Balsillie School of International Affairs.¹ This theory argues that multiple stresses, such as rising population, financial crisis, and climate change, are increasing the risk of violence and conflict. This was a common theme amongst the three speakers: that climate change may not directly lead to increased conflict, but that it acts as a compounding factor. As an example of synchronous failure, Kraemer pointed to the Three Mile Island nuclear reactor meltdown of 1979. In that instance, there was no single cause of this accident but rather an unfortunate combination of technological and human errors. Kraemer referred to the work of Charles Perrow, who notes that the Three Mile Island incident can be viewed as a “normal accident” caused by multiple failures: in other words, an accident that becomes inevitable in a system that is complex, tightly coupled and with catastrophic potential.² Ultimately, Kraemer believes that we are in a world in which “crisis is the new normal.”

Andreas Kraemer then applied these thoughts to the situation in Germany. He defended Germany’s move away from nuclear energy, claiming that nuclear power makes little economic sense, not to mention the risk of environmental disaster. He affirmed that the German decision predated the Fukushima disaster in Japan, and was not just caused by the headlines. When an audience member asked about the reasons why Germany had increased its coal consumption since phasing out nuclear power, he noted that Russia’s manipulation of natural gas forced Germany to expand its reliance on coal to meet its agreement to sell energy to France. However, Kraemer also discussed the national security benefits of renewable energy. Energy sources such as wind, hydropower, and solar are “non-deniable,” in the sense that they cannot be jeopardized by Russian President Vladimir Putin or by the closure of the Straits of Hormuz. Kraemer noted with pride that when it comes to security, Germany focuses on collective (as opposed to national) security, given its position in the centre of Europe and NATO.

Germany, like Canada, will likely be spared the direct effects of climate change. But one should also recognize the possible indirect impact, such as increasing migration. Interestingly, Kraemer discussed the constitutional and legal aspects of the military's role as it pertains to climate change. In Germany, as in many countries, the military is the only organization that has the capacity to rapidly deploy. The result is that the German military increasingly performs key functions, including the processing of incoming refugees, which may go beyond the strict defensive constitutional limits placed on the Bundeswehr. Kraemer asked rhetorically, "do we want the first thing a refugee sees when they enter Germany to be a soldier with a gun?" As climate change leads to an increasing number of refugees, these questions will only become more complex.

At the most fundamental level, Kraemer argued that Germany, by moving away from nuclear and fossil fuels and by recognizing the security implications of climate change, is a force for good on this important file, with the implication that Canada should follow its example.

Following Andreas Kraemer's remarks, the invitation-only audience heard from The Honourable Lloyd Axworthy, Minister of Foreign Affairs and International Trade in Canada from 1996-2000. Axworthy focused his remarks on the Arctic, where the interplay of environmental and security concerns is particularly relevant to Canada. He began with what he referred to as a "public mea culpa." In 1996, Axworthy led the Canadian delegation that negotiated the creation of the Arctic Council in Ottawa. He recalls that, in order to get both Russia and the United States to agree to the deal, he had no choice but to attach Canada's signature to a document that did not make any mention of security cooperation.³ As a result, the Arctic Council as a forum is not capable of making rules to limit nuclear submarine activity or naval military buildup in disputed waters. With the exception of limited cooperation on search and rescue efforts,⁴ the Arctic is essentially "ungoverned" when it comes to security. Axworthy noted Russia's increased militarization in the Arctic, following its recent claim of 1.2 million square kilometres of Arctic shelf.⁵ He also noted that Norway has increased its military capabilities in the Arctic as well. Furthermore, a Chinese navy icebreaker was recently spotted in the Bering Strait. While he did credit Prime Minister Stephen Harper with making the Arctic more prominent from a political point of view, he also called the current government "completely disengaged from effective diplomacy" on matters relating to climate change.

Lloyd Axworthy lamented the poor state of Canada's military and civilian capacity and infrastructure in the far north. As temperatures increase, many roads and runways built on the permafrost are crumbling; the government needs a plan to repair them. Furthermore, as increasing

“Lloyd Axworthy lamented the poor state of Canada’s military and civilian capacity and infrastructure in the far north....Furthermore, as increasing amounts of fossil fuel reserves are discovered in the Arctic, the importance of this region will only increase.”

amounts of fossil fuel reserves are discovered in the Arctic, the importance of this region will only increase. Axworthy also made clear that if a similar degree of militarization took place off the Atlantic Coast, the threat would be taken much more seriously. But, due to the ambivalent nature of international law in the region and the general lack of public awareness, Canadians remain relatively unalarmed about what is currently happening in the Arctic today. Axworthy also spoke of the importance of including northern indigenous populations in Arctic negotiations. The former minister discussed the norm of Responsibility to Protect (R2P) in regards to these issues. There is growing consensus that state sovereignty is not absolute; that the international community has a right to intervene to stop genocide and egregious war crimes. Perhaps, as he argued, it is time to consider extending this concept in a moderated fashion to climate change – the international community has the right to pressure states to take action on climate change. He ended his remarks with a question: President Obama has stated his desire to work with other Arctic nations to take action on climate change – is Canada ready?

The final speaker was Michael Brklacich from the Department of Geography and Environmental Studies at Carleton University, who was recently appointed Chancellor’s Professor in 2014. The topic at hand is not a new interest for the professor; his work since he joined Carleton University in 1992 has focused on the human dimensions of climate change. He used his remarks to explain to the audience the functioning of the Intergovernmental Panel on Climate Change (IPCC), the purpose of which is to provide policy-makers with a scientific assessment on climate change. The agency has three working groups, and Brklacich organized his remarks around the themes explored by each working group.

The first group studies the physical science of climate change by following a wide range of variables, including carbon levels, rainfall, and particles in the atmosphere. Brklacich credits the Department of National Defence (DND) as taking changing temperatures seriously as early as the 1990s, particularly their impact on infrastructure in the Arctic. While agreeing with the two earlier speakers that climate change could indeed impact national security, he elaborated on the importance of looking at its impact on human security. To this end, he referred the audience to the recent book *The Right to Be Cold* by Canadian author Sheila Watt-Cloutier.⁶ In this book, the author describes how climate change threatens the survival of Inuit culture, and is therefore a human rights concern – which reinforces the comments made earlier by Lloyd Axworthy about a duty for states to intervene in climate change.

Michael Brklacich continued by explaining how the second IPCC working group focuses on the macro-level impact, adaptation, and vulnerability of climate change. He himself was an

“Brklacich argues that that before Hurricane Katrina in 2005, North American society viewed climate change as being distant in two ways: far away geographically, and far off in the future. However, we are increasingly seeing the effects of climate change on our continent.”

editor of a review published by this working group between 2010 and 2014. The idea of climate change “adaptation” was a topic, as the speaker described, quite “unfashionable” at the time, as it implied the acceptance of the damage of climate change instead of trying to slow it down. However, as the pace of climate change increases, adaptation becomes increasingly essential. Brklacich argues that that before Hurricane Katrina in 2005, North American society viewed climate change as being distant in two ways: far away geographically, and far off in the future. However, we are increasingly seeing the effects of climate change on our continent. For example, the speaker referred to the mobilization of the Canadian Armed Forces (CAF) to assist with the 2013 floods in Calgary to show the defence implications of climate change. As well, Brklacich agreed with Kraemer that the CAF might have to deploy to Europe to assist with the processing of refugees, as there is no civilian government department with the capacity to do this.

The third group of the IPCC focuses on mitigation of climate change. Brklacich was very clear: we need to keep carbon in the ground. At the current level of carbon dioxide in the atmosphere, approximately 400 parts per million, a two-degree increase in global temperatures is a near certainty. The speaker argued for major changes in the way we do things as a society, specifically when it comes to transport. In terms of the impact on national defence, he noted that DND is itself a major user of fossil fuels. Essentially, Brklacich agreed with the other two speakers that climate change is a threat “multiplier,” and that defence organizations should continue to take it seriously.

Following these remarks, audience members were invited to ask questions. The first question was about the science of climate change itself. The audience member commented on the need to have more debate on the science behind climate change, arguing that there is still evidence that climate change is not significantly related to human activity. The three panelists countered that proposition; all of them were on the same page about the reality of anthropogenic climate change. As Michael Brklacich responded, while carbon dioxide levels have indeed fluctuated over the past millennia, current levels are far higher than they have ever been.

Another question was from the defence critic of the Liberal Party of Canada, Joyce Murray, who commented on the importance of “climate diplomacy” and the role that Canada can play on the world stage in preventing problems related to climate change. Lloyd Axworthy agreed that the Canadian government needs to be more engaged in climate diplomacy. This, according to Andreas Kraemer, is in contrast with Germany, which is already a climate change diplomacy leader. Another audience member, Lieutenant-General Andrew Leslie (Ret’d), raised the interesting point that American, British and Chinese military commands have all identified climate

change as a military threat, but DND has not. In fact, the Canadian Armed Forces spent more time in the past year engaged in disaster relief efforts than in combat. In response, Kraemer reiterated his support for the German embrace of collective security, and encouraged Canada to increase its involvement with NATO regarding the military threats of climate change.

The conversation then moved to the importance of water to international security, after a comment raised by Elinor Sloan, a professor in the Department of Political Science at Carleton University. She noted that, contrary to conventional wisdom, there may not be any evidence that water shortage actually increases the likelihood of conflict. She referred to a 2011 study in *International Security* by Magnus Thiesen et al. which studied water levels and conflict in Africa over a 40-year period.⁷ The study concluded that other factors, such as the political marginalization of certain ethnic groups, are the main causes of civil war, not water shortages. While the authors do believe there exists a general link between climate and security, it is wrong to talk about “climate wars” and to posit a direct causation between drought and conflict. On the other hand, however, Sloan referred to a competing study by Kelley et al. from the National Academy of Sciences, which found that the drought in Syria from 2007-2010 – a product of climate change – was a major contributing factor to the conflict in that country.⁸

The panelists agreed with Elinor Sloan that there is still ambiguity on this issue. From a methodological point of view, both papers examine specific case studies whose findings may not be applicable to other situations. Brklacich also noted instances in which water shortages can lead to cooperation, citing University of Oregon Professor Aaron Wolf’s work about water shortage in the Jordan River as a catalyst for negotiations on a wider range of issues between Israel and Jordan in the 1990s.⁹ Kraemer referred to his own 2012 paper, “Dissolving the Westphalian System,”¹⁰ and noted how agreements over water have had enormous historical ramifications. For instance, the 1785 Mount Vernon Compact over riparian rights between Maryland and Virginia was the precursor to the United States Constitution, and the 1868 Mannheim Act between various German states paved the way for German unification and the modern institutions of the European Union. Lloyd Axworthy shared his beliefs that water shortages do lead to conflict, but that they are also an opportunity: if solar panels in desert Arab countries could be used to power Israeli desalinization technology, the world would be a much better place.

The panel concluded by discussing the very important theme of “slow violence.” Indeed, this summarizes most of the morning’s discussion. While climate change may not be a direct causal contributor to large scale war, droughts and environmental scarcity will steadily increase low-level violence around the world. After the panel ended, participants were invited to a reception

CDA Institute / L'Institut de la CAD

151 Slater Street, Suite 412A
151, rue Slater, Suite 412A
Ottawa ON K1P 5H3

Copyright © 2015

All logos and trademarks used are the property of their respective holders. Use in this publication is under non-commercial and normative fair use provisions of applicable Canadian law.

Tous les logos et les marques de commerce utilisés sont la propriété de leurs détenteurs respectifs.

L'utilisation qui en est faite dans cette publication l'est en vertu des dispositions de la loi canadienne applicable sur l'utilisation équitable non commerciale et nominative.

About the series /**À Propos de la Série:**

CDA Institute Analysis is a series of short policy briefs that explore topical security and defence issues of interest to Canadians. Views expressed here are those of the authors and do not necessarily reflect those of the CDA Institute.

L'analyse de L'Institut de la CAD est une série de rapports qui explorent des questions de sécurité et de défense pertinents au Canadiens. Les opinions exprimées sont celles des auteurs, et ne reflètent pas nécessairement les opinions de L'Institut de la CAD.

at the French Embassy, where discussion was held under Chatham House rules. Overall, the event was thought-provoking and very successful.

Notes

1. Thomas Homer-Dixon, "Synchronous Failure: The Real Danger Of The 21st Century," (speech delivered at the Elliott School of International Affairs, Washington, DC, 4 December 2002), <http://www.homerdixon.com/2002/12/04/synchronous-failure-the-real-danger-of-the-21st-century/>.
2. Charles Perrow, *Normal Accidents: Living with High-Risk Technologies* (Princeton, NJ: Princeton University Press, 1999), p. 5.
3. Arctic Council, *Declaration on the Establishment of the Arctic Council: Joint Communiqué of the Governments of the Arctic Countries on the Establishment of the Arctic Council* (Ottawa: 1996).
4. See Paul Koring, "Arctic treaty leaves much undecided," *The Globe and Mail*, 11 May 2011, <http://www.theglobeandmail.com/news/politics/arctic-treaty-leaves-much-undecided/article579628/>.
5. "Russia Launches Military Drills in Arctic," *DefenseNews via Agence France-Presse*, 24 August 2015, <http://www.defensenews.com/story/defense/international/europe/2015/08/24/russia-launches-military-drills-arctic/32276347/>.
6. Sheila Watt-Cloutier, *The Right to Be Cold* (Toronto: Allen Lane, 2015).
7. Ole Magnus Theisen, Helge Holtermann and Halvard Buhhaug, "Climate Wars? Assessing the Claim That Drought Breeds Conflict," *International Security* 36, 3 (2011): pp. 79-106.
8. Colin P. Kelley et al., "Climate Change in the Fertile Crescent and implications of the recent Syrian drought," *Proceedings of the National Academy of Sciences of the United States of America (PNAC)*, 112, 11 (2015): 3241-3246.
9. Aaron T. Wolf, *Hydropolitics along the Jordan River: Scarce Water and its Impact on the Arab-Israeli Conflict* (Tokyo: United Nations University Press, 1995).
10. R. Andreas Kraemer, "Dissolving the 'Westphalian System,'" *Strategic Review: the Indonesian Journal of Leadership, Policy and World Affairs* 2, 4 (2012): pp. 43-47.