



CLIMATE CHANGE SECURITY THREATS

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JCSP 49

Exercise Solo Flight

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INTRODUCTION

Another rainy season without rain. Another year without food. Flies swarm on the carcasses of the livestock, once the providers of so much sustenance for the people. At one time, moving the livestock with the rains was possible. Now, the rains are so far away, it cannot be done. The young herder feels less and less like the pastoral provider his father had been. His neighbour, with whom he traded milk for grains, has long since departed for the city, where food programmes attempt to cope with the growing number of desperate mouths displaced from around the country. The herder could join them, but the disease and violence are too much. He could eke out an existence on barren land and hope, but he will probably die. Moving out of the country is not an option – he has no money to pay the smugglers. He could join the group of young men with guns. They have money and purpose.

Two years later, the herder has connected with a relative in Canada. He has earned just enough through his time with the armed group to buy a new identity, and to pay to get out of the region. He has done some things he isn't proud of, but he isn't alone. He can make his way to his relative in Canada. There are so many others that maybe he can slip through the cracks.¹

The earth's climate is changing, and human civilizations will change with it. Environmental changes affecting economics, politics, and trade, are being experienced in different ways depending on geography and state resilience. Ultimately, the effects of environmental changes affect security considerations. Security, both national and international, exists as a system of systems where change to one element can impact all. Climate is one element that impacts all of the systems in one way or another.

The effects of global climate change are posing new threats to security, by changing permanent and temporary migration patterns, increasing famine, reducing opportunities for development, and enabling crime, amongst other issues. Canada must prepare its institutions to cope with the impacts it will experience as a result of large shifts in climate in other parts of the world, especially from regions whose systems are less resilient to shocks.

This paper will be limited to publicly available information. To maintain a common language with its referenced works, this essay will use the term 'threat' to describe negative impacts of environmental factors on security. It could be argued that 'risk' is a more appropriate term for a phenomenon that cannot possess intent, rather than 'threat,' which implies it does. However, the scope in this work will be limited to impacts, rather than probabilities of the environmental hazards coming to fruition, thus terminology arguments regarding the use of 'threat' vs 'hazard' are unnecessary.

¹ This is a work of illustrative fiction, based on the research conducted for this essay.

The essay will describe the concept of national security, and will be followed by discussion of transnational environmental factors impacting security. Somalia will be used as a case study to demonstrate the relationships between climate change, stability and security. This will be followed by a description of Canada's actions relevant to climate change and security. The paper will conclude by identifying potential actions or considerations for the Canadian government and its instruments to best prepare for the security challenges posed by climate change and its related environmental conditions in a globalized world. A notable limitation is that this essay will discuss climate change and security with emphasis on human security impacts; issues at the intersection of geography and sovereignty, such as the opening of the Northwest Passage, will not be explored here.

WHAT IS SECURITY?

International Relations lecturer Shahin Malik distils the concept of security to, at its core, "the protection of values we hold dear."² This is particularly applicable to Canada's approach to security, given the Canadian government's emphasis on democratic and Canadian values as the basis for policy. For example, Canada's National Security Policy (NSP) notes, "There is no conflict between a commitment to security and a commitment to our most deeply held values. At their heart, both speak to strengthening Canada."³ Strengthening Canada must include protecting it from threats to allow the space and opportunity for development and growth. Such protection is achieved through the concept and institutions of national security.

The SAGE encyclopedia describes national security as a contentious and evolving concept, traditionally thought of as "military power and protection from external threats."⁴ Such an understanding of national security is of limited value in the current context of the world, primarily because of the globalization enabled by technological advances. No longer are nations only concerned with the ability of others to violate their territory or exert direct actions against their citizens abroad. Rather, they must now monitor, understand, and respond to events and spreading ideologies emerging and evolving around the world which could impact their own stability, national interests, and security at an unprecedented pace. Others define national security in terms invoking issues of sovereignty, and the need to protect people and broadly-defined *national interests* against outside threats.⁵

What happens when national security instruments fail to meet the challenges and security is not achieved? Such a state could be described as national insecurity. SAGE

² Malik, Shahin. "Framing a Discipline." In Peter Hough et al., *International Security Studies: Theory and Practice* (Milton: Taylor & Francis Group, 2020a). <https://ebookcentral.proquest.com/lib/cfvlibrary-ebooks/reader.action?docID=6264271&ppg=22>. 4.

³ *Securing an Open Society: Canada's National Security Policy* (Canada: Privy Council Office, 2004). <https://publications.gc.ca/collections/Collection/CP22-77-2004E.pdf>. 1.

⁴ Wallace, Wendell Codrington. "National Security." In *The SAGE Encyclopedia of Surveillance, Security, and Privacy*, edited by Arrigo, Bruce A. (Thousand Oaks, CA: SAGE Publications, Inc., 2018.) <http://cfc.idm.oclc.org/login?url=https://www.doi.org/10.4135/9781483359922.n295>. 648.

⁵ Wallace, "National Security." In *The SAGE Encyclopedia of Surveillance, Security, and Privacy*. 649.

describes this condition as “a real or perceived sense of vulnerability experienced by the residents of a country as its leaders struggle to cope with new and existing security threats.”⁶ Political instability is a root cause of insecurity as it leads to poorly functioning institutions, which are then unable to cope with security challenges.⁷ This creates a cycle of dissatisfaction and revolution that further destabilizes political systems. The cycle may also create conditions that exacerbate environmental factors. As more environmental degradation is caused, a destabilized system of government is unable to cope, leading to food and water insecurity and further feeding the cycle of dissatisfaction.

The interconnectedness and interdependence of the world has driven up the number and complexity of issues that ought to be considered to ensure the preservation and defence of national interests. Security is considered to be a multifaceted concept where the factors in the political, military, economic, social, infrastructure, and information (PMESII) realms intersect and interact to contribute to security or insecurity.⁸ In addition to these broad headings, new security fields have emerged, including environmental, food, health, and resource security.⁹ No one factor will account completely for insecurity, thus an understanding of the concern and a thorough analysis of its impact in context is important.

As is the case for the more traditional PMESII factors, the regional contexts for the newer security considerations will greatly impact each one’s prominence and impacts on national security interests. A state’s decision as to how to allocate resources to each of these considerations will be highly tailored to its perspective of its own national interests, but to neglect important issues to focus only on the traditional ones would be disadvantageous. As Rodrik and Walt point out, “a country that invested all its resources in military capabilities and neglected other objectives-such as an equitable and prosperous economy or the climate transition-would not be secure in the long run.”¹⁰

CLIMATE CHANGE IS A SECURITY ISSUE

The idea that environmental issues can pose national security threats is not new, although it has become more accepted. From as early as the late-1940s and into the 1970s, issues such as resource scarcity were being linked to the roots of conflict and to environmental degradation, but were not accepted by consensus as significant enough to warrant a high degree of attention.¹¹

⁶ *Ibid.* 653.

⁷ *Ibid.* 653.

⁸ Wallace, “National Security.” In *The SAGE Encyclopedia of Surveillance, Security, and Privacy*. 652.

⁹ *Ibid.* 652.

¹⁰ Dani Rodrik and Stephen M. Walt, “How to Build a Better Order: Limiting Great Power Rivalry in an Anarchic World,” *Foreign Affairs*, 2022, 142.

<https://login.cfc.idm.oclc.org/login?url=https%3A%2F%2Fwww.proquest.com%2Fmagazines%2Fhow-build-better-order-limiting-great-power%2Fdocview%2F2715489659%2Fse-2%3Faccountid%3D9867>

¹¹ Hough, Peter. “Environmental Security.” In Peter Hough et al., *International Security Studies: Theory and Practice* (Milton: Taylor & Francis Group, 2020). <https://ebookcentral.proquest.com/lib/cfvlibrary-ebooks/reader.action?docID=6264271&ppg=22>. 208-210

Then in the 1980s, some argued that the accepted definition of national security narrowly focused on military threats to the detriment of security more broadly, including environmental security. One proposed definition, proposed by Richard Ullman, stated that “a threat to national security [was] ‘an action or sequence of events that threatens drastically and over a relatively brief span of time to degrade the quality of life for the inhabitants of a state.’”¹² Ullman gave the example of earthquakes as comparable to nuclear conflict, a prominent possibility at the time, as a threat to security based on potential impacts to people and the state.¹³ This was echoed by Jessica Mathews, an American diplomat, who described transnational environmental concerns as the roots of regional instability.¹⁴ Instability creates challenges to security that may lead to a state of insecurity, depending on the context and capabilities nested in the region. These thoughts are repeated in Rodrik and Walt’s belief in a multifaceted approach to security.¹⁵

Environmental security factors are not only significant as a contributor to instability and insecurity, but also because they can be influenced to the advantage or disadvantage of a state. ‘Mother Nature’ is not a free agent in the complex systems of regional stability, conflict, and national security; in speaking to climate change and its consequences, the UN has stated, “It is unequivocal that human influence has warmed the atmosphere, ocean and land.”¹⁶ The UN further considers that “human and ecosystem vulnerability are interdependent,”¹⁷ which is supported by the detailed findings of the International Panel on Climate Change’s 2023 report summarizing scientifically observed changes to the environment and their impacts to human societies.¹⁸ This suggests that this factor can be mediated through intervention.

Some of the negative impacts of climate change are especially pronounced in states and regions considered lower-developed or fragile. In these areas, there is increased food and water insecurity; mortality and morbidity related to extreme heat; increased food-, water-, and vector-borne diseases related to climate; and displacement of the population, both internally and externally.¹⁹ These issues directly impact people’s basic physiological and psychological needs in an adverse way, and can eventually lead to conflict. Researcher Adrien Detges notes, “When survival is a pressing issue, resource scarcity can drive conflict over access to the resource.”²⁰ People must adapt to their

¹² Malik, “Framing a Discipline.” In Hough, *International Security Studies: Theory and Practice*. 5.

¹³ *Ibid.* 5.

¹⁴ Hough, “Environmental Security.” In Hough, *International Security Studies: Theory and Practice*. 210.

¹⁵ Rodrik, “How to Build a Better Order: Limiting Great Power Rivalry in an Anarchic World,” *Foreign Affairs*, 2022, 143.

¹⁶ Intergovernmental Panel on Climate Change, *Synthesis Report of the IPCC Sixth Assessment Report: Summary for Policymakers* (United Nations, 2023). 5.

https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf.

¹⁷ Intergovernmental Panel on Climate Change, *Synthesis Report of the IPCC Sixth Assessment Report: Summary for Policymakers*. 6

¹⁸ *Ibid.* 3.

¹⁹ *Ibid.* 5-6

²⁰ Adrien Detges, “Local Conditions of Drought-Related Violence in Sub-Saharan Africa: The Role of Road and Water Infrastructures,” *Journal of Peace Research* 53, no. 5 (2016), 696-710.

environmental conditions, but have limited options in their economic and political contexts to do so.

That said, addressing global climate change will not stop conflict, rather, it reduces risk factors for conflict. Being a state impacted by the effects of climate change does not doom the state to inevitable conflict and instability. Context and intervention will affect how much climate change negatively affects a state, and these are characterized by complex interactions between the PMESII and other factors.²¹ By way of example, Detges sought to understand the connection between drought and support for violence. He found that during drought, the relationship between the people and government, and between peoples within the state, had an impact on the level of support for political violence.²² That is, when times are tough, those who feel supported by a capable government and aligned with their neighbouring communities, are less likely to support or engage in political violence. Further, in a study of drought and group conflict in Africa, De Juan and Hanze concluded that trust between groups decreased as the disparity between their exposure to drought increased.²³ Positive levels of trust and relationships between groups correlated to lower risk of conflict or mobilization against other groups or the State, but “hazard-inequality can undermine this preventive effect and thereby increase the risk that climate shocks lead to violent conflict.”²⁴

The states suffering negative impacts from climate change the most, however, often do not benefit from highly developed institutions and stable governance. This may allow for greater inequity amongst different populations. An unstable government, along with geographic considerations, leads to unequal experiences of climate change within the state. This puts them at greater risk of conflict due to climate shocks than those with stable, effective governance, and relatively equal exposure to hazards. This limits the state’s ability to meet development markers²⁵ they and the UN set out, and to mitigate the risk of political instability and violence, which leads to a host of destabilizing results.

IS CLIMATE CHANGE REALLY A SECURITY ISSUE?

There are arguments against framing climate in security terms. One argument is that climate as a security factor is exaggerated. Indeed, Detges notes from one study that, “the overall contribution of drought measures to predicting violent events is modest in all calculated models [of the study],”²⁶ providing a measured caution to exaggeration.

²¹ Ayyoob Sharifi et al., “Climate-Induced Stressors to Peace: A Review of Recent Literature,” *Environmental Research Letters* 16, no. 7 (2021): 11

²² Adrien Detges, “Droughts, State-Citizen Relations and Support for Political Violence in Sub-Saharan Africa: A Micro-Level Analysis,” *Political Geography* 61 (2017): 88. doi:10.1016/j.polgeo.2017.07.005.

²³ Alexander De Juan and Niklas Hänze, “Climate and Cohesion: The Effects of Droughts on Intra-Ethnic and Inter-Ethnic Trust,” *Journal of Peace Research* 58, no. 1 (2021), 163-165.
<https://doi.org/10.1177/0022343320974096>

²⁴ *Ibid.* 165.

²⁵ Intergovernmental Panel on Climate Change, *Synthesis Report of the IPCC Sixth Assessment Report: Summary for Policymakers*. 5

²⁶ Detges, “Local Conditions of Drought-Related Violence in Sub-Saharan Africa: The Role of Road and Water Infrastructures.” 696.

However, as described earlier in this essay, climate is but one factor in the concept and process of national security. Sharifi provides a literature review on the topic of climate change and security, noting that "...studies confirm the complexity of the nexus, raising caution over simplified interpretations of its linkages and overstated impact of climate change on peace. Several political/institutional, economic, and social factors bridge climate change to peace."²⁷ The relative impacts to national security are not at issue here, rather it is the need to incorporate an analysis of climate impacts into national security policies.

While applying a security lens has likely helped raised the prominence of climate change to the highest political levels, some argue that this results in a narrow focus on military solutions concerned with issues such as conflict over resources or threats stemming from overwhelming migration caused by the loss of safe human habitat.²⁸ These arguments posit that climate change as an issue cannot be resolved through military action, which it certainly cannot. The fear is that focusing on military solutions to the threats to security and national interests that arise from climate change will draw resources and attention away from tackling the human causes of climate change. While this is understandable, both the causes and effects must be addressed and this does require the national security apparatus to be involved. There is no doubt that a whole of government (WoG) approach is required to reduce climate change and its impacts.

Some also argue that securitization of climate change is unnecessary and creates the opportunity for government overreach. Securitization theory is predicated on the idea that extraordinary measures are needed to address the issue. Rita Taureck summarizes the process of securitization like this: "a particular referent object is threatened in its existence [according to a securitizing actor], a securitizing actor claims a right to extraordinary measures to ensure the referent object's survival."²⁹ These extraordinary measures do not necessarily need to manifest immediately, such as they did with the invocation of the Emergency Measures Act after the Ottawa 'convoy protest' was securitized. Rather, small innocuous steps expanding the power and authority of the State can be achieved, eventually resulting in a substantial shift to the accepted norms.

As researcher Waever notes, securitization of an issue can be seen as a failure of the state to adequately address the issue using norms of the governance and political systems.³⁰ One way to interpret this in the context of climate security, is that the norms may be inadequate to cope with the severity of the issue. Securitizing it would allow for the extraordinary measures to become the new norms that are necessary, moving it from the security realm, back into the usual day-to-day of governance and politics. This would

²⁷ Sharifi, et al. "Climate-Induced Stressors to Peace: A Review of Recent Literature." 12.

²⁸ Hough, "Environmental Security." In Hough, *International Security Studies: Theory and Practice*. 216-219

²⁹ Taureck, Rita. "Securitization Theory and Securitization Studies." *Journal of International Relations and Development* 9, no. 1 (2006): 54.

³⁰ *Ibid.* 55.

introduce risk, as overreach is possible, but in a democratic state such as Canada, this risk could be mitigated by the checks and balances in place.

SOMALIA

Somalia is one example of a state experiencing institutional fragility, social inequity, and conflict, exacerbated by climate change. Somalia is ranked the world's second most fragile state,³¹ one where the government competes with the al-Shabab terrorist group, local authorities, and other non-state actors for control and influence.³² With its reliance on agriculture, long-existing intrastate conflicts, and weak governance structures, Somalia is at great risk of climate-related shocks. The resulting increased vulnerable populations, market shocks, and competition all play into furthering the instability and insecurity of the country.

In terms of the natural environment, Somalia is a hot country that experiences two rainy and two dry seasons each year,³³ and the land is 80% arid or semi-arid. This land composition factor alone increases Somalia's susceptibility to the effects of extreme weather associated with climate change, as the dry soil poorly absorbs water and is subject to erosion.³⁴ Despite frequent and unpredictable flooding, Somalia is also experiencing a fourth season of drought, with 7.8 million people affected, including 38% of the Somalian population experiencing high levels of hunger.³⁵ This food insecurity is compounded by the 70% poverty rate, exacerbated by a majority of livelihoods in Somalia being tied directly to agriculture.

Further, the environmental situation is worsened by people using agricultural or resource-extraction methods that degrade the land. The government is unable to effectively enforce basic laws and environmental policy,³⁶ resulting in continued land degradation. This leaves the land even more vulnerable to drought, flooding, and erosion than before.

Of the two million internally displaced people (IDPs) in Somalia,³⁷ the UN estimates that "more than 1 million [were] displaced by drought including nearly 99,000 in August [2022]."³⁸ These numbers do not account for those who were displaced and have been unable to return since the last drought. Displacement and migration to urban

³¹ Global Data *Fragile States Index*. <https://fragilestatesindex.org/global-data/>, accessed 19 Apr 23

³² Michelle Gavin, *Climate Change and Regional Instability in the Horn of Africa*. (Council on Foreign Relations, 2022). 5.

³³ Karolina Eklow and Florian Krampe, *Climate-Related Security Risks and Peacebuilding in Somalia*. (Stockholm International Peace Research Institute, 2019). 10.

³⁴ *Ibid.* 11.

³⁵ United Nations Food and Agriculture Organization. "Somalia: New data show how drought in the Horn of Africa is driving up acute hunger." <https://www.fao.org/newsroom/detail/somalia-new-data-show-how-drought-in-the-horn-of-africa-is-driving-up-acute-hunger/en> 12 Apr 22.

³⁶ Eklow, *Climate-Related Security Risks and Peacebuilding in Somalia*. 16.

³⁷ Gavin, *Climate Change and Regional Instability in the Horn of Africa*. 4.

³⁸ United Nations Office for the Coordination of Humanitarian Affairs. *Somalia Situation Report*. 31 Aug 2022. Somalia | Situation Reports (unocha.org)

areas, despite urban susceptibility to climate changes such as flooding, results in high rates of unemployment and socioeconomic problems. Even in the contested but most stable region of Somalia, more frequent droughts are causing increased migration to urban areas,³⁹ increasing the needs of those areas, unprepared for the influx of people. Regional impacts of large migrations have been seen. In areas close to Kenya, refugees flee into that nation, which sees their arrival as a major security concern, worried that al-Shabab terrorists are using refugees as cover.⁴⁰ This adds fuel to Kenya-Somalia tensions and raises the potential for cross-border conflicts.

Inter-community conflicts and disputes were reported by community leaders to be increased when droughts cause the interests of herders and farmers to intersect, competing over increasingly limited land.⁴¹ Traditional mediators of these disputes have been displaced by major conflict and climate, or the traditional conflict-resolution methods have been replaced in al-Shabab-controlled areas by Sharia law.⁴² These unresolved inter-community disputes become lasting grievances that reduce trust, which was identified earlier as a mitigating factor for conflict during climate crises.

Al-Shabab, other armed groups, and political factions exploit community and ethnic grievances to stoke discord and advance their agendas. In the case of al-Shabab, IDP camps become recruiting grounds, drawing the young and unemployed. Political factions are able to raise local ethnic or tribal grievances to the national level, destabilizing overall governance.⁴³

CANADA'S SECURITY INTEREST IN CLIMATE CHANGE

Canada has clearly stated its intentions to combat climate change and has alluded to the connections between environmental factors and security. Global Affairs Canada (GAC), the department responsible for foreign affairs, international trade, and international development, reiterates Canada's emphasis on values as the underpinning of its international policies. It states that GAC aims to increase its involvement and influence on the world stage, basing its actions on "...national security, sustainable and inclusive economic prosperity, and key values..."⁴⁴ which intimates a connection between the three, including the environmental concerns implied by the use of the word *sustainable*.

Further, and more directly, GAC's plan includes "mitigating the consequences of...climate change and biodiversity loss on the most marginalized and vulnerable communities," in sub-Saharan Africa.⁴⁵ As well, the Peace, Development, and Security

³⁹ Gavin, *Climate Change and Regional Instability in the Horn of Africa*. 20.

⁴⁰ Gavin, *Climate Change and Regional Instability in the Horn of Africa*. 10.

⁴¹ Eklow, *Climate-Related Security Risks and Peacebuilding in Somalia*. 15-16.

⁴² *Ibid.* 19.

⁴³ *Ibid.* 21.

⁴⁴ Global Affairs Canada. *Departmental Plan 2022-2023*. (Canada: Global Affairs Canada, 2022). gac-2022-23-departmental-plan.pdf (international.gc.ca) 5.

⁴⁵ *Ibid.* 13.

program is designed so that each element is complementary. It explicitly repeats GAC's intent to address climate change.⁴⁶ These two statements indicate a recognition that climate change is tied to increasingly vulnerable populations who may experience humanitarian crises, which exacerbate vulnerability to crime, political instability, and insurgency. These can then contribute to insecurity, and the need for international intervention, whether through economic, aid, and development programs, or through military operations.

Canada's most recent NSP, published in 2004, acknowledges the complexity of national security⁴⁷ and notes that national security and international security are intersectional.⁴⁸ The rules-based international order that Canada and its allies strive to maintain for the betterment of all, also has an impact on national interests.⁴⁹ In Canada's case, the NSP defines three core national security interests that describe the objectives to which the government strives, regardless of the type of threats that may be presenting. Two are particularly relevant.

The first relevant core interest is, "protecting Canada and the safety and security of Canadians at home and abroad."⁵⁰ This covers threats such as espionage, terrorism, subversion, sabotage, etc., but also explicitly refers to health hazards such as SARS⁵¹ (prominent at the time) or COVID-19 (in the contemporary context). It is not a stretch to extrapolate that threats from environmental issues that have come to the forefront of the global agenda since the publication of the NSP would fall under this category. This is supported by the inclusion of climate change as a key part of the mandate letters for the Ministers of Foreign Affairs, International Trade, International Development, National Defence, and Public Safety & Emergency Preparedness.⁵² Canada's Indo-Pacific strategy lays out Canada's interest in that region and connects environmental concerns with security: "When security, biodiversity loss and climate challenges overlap, as they do in several cases in the Indo-Pacific, they aggravate and amplify each other."⁵³

The second relevant interest is, "contributing to international security."⁵⁴ This is more open to interpretation than the first. However, the NSP notes that "Canadian security will be increasingly dependent on our ability to contribute to international security,"⁵⁵ again acknowledging a globalized context and the transnationalism of modern threats. Given Canada's reliance on immigration for growth, it has a vested

⁴⁶ *Ibid.* 29.

⁴⁷ *Securing an Open Society: Canada's National Security Policy*. 1-3.

⁴⁸ *Ibid.* 3.

⁴⁹ Global Affairs Canada. *Departmental Plan 2022-2023*. 15.

⁵⁰ *Securing an Open Society: Canada's National Security Policy*. 5.

⁵¹ *Ibid.* 8.

⁵² Justin Trudeau. *Mandate Letters*. (Canada: Office of the Prime Minister, 2021). Mandate Letters | Prime Minister of Canada (pm.gc.ca)

⁵³ Government of Canada, "Canada's Indo-Pacific Strategy." 2022. 3.
<https://www.international.gc.ca/transparency-transparence/indo-pacific-indo-pacifique/index.aspx?lang=eng>

⁵⁴ *Securing an Open Society: Canada's National Security Policy*. 5.

⁵⁵ *Ibid.* 6.

interest in supporting the stability of nations abroad. It is from those nations that future Canadians flock, with 75% of Canada's population growth in 2022 stemming from immigration.⁵⁶

Canada's strategy of attracting immigrants to support its growth needs leads to security considerations that its programs need to address. Purdy and Smythe note, "Many weak states rank high not only in terms of vulnerability to climate change, but also as breeding grounds for terrorist movements."⁵⁷ This is not to say that immigration is a security risk in itself, but it does raise issues of which populations are more likely to migrate based on climate impacts, including conflict and terrorism. While there may be some individuals involved in terrorist movements who attempt to make their way to Canada, which is clearly a security issue, it is more likely that traumatized, impoverished people fleeing conflict will apply to Canada. This will have an impact on our institutions ability to process and integrate new arrivals, across the spectrum of society.

The sectors of transportation, health care, policing, language, education, etc. will all see challenges, just as they did when Canada accepted 25 000 Syrian refugees fleeing conflict in 2015-2016. That, however, was ad hoc and involved a massive churn of government departments, private organizations, and individuals to accomplish, with security concerns secondary to the humanitarian and logistics issues. This was not wrong, but early preparation and policy planning for such mass influxes, holistically thought-out prior to crisis could create more efficient and secure processes. Knowing that climate change is likely to increase immigration and natural disasters are expected to occur more frequently, preparation is warranted.

The key deduction from increased immigration as a result of climate impacts, is that there are considerations for the composition and mandates of the security apparatus that supports the immigration process, which would be stressed by an influx of immigrants and refugees. Which languages are prioritized in hiring in border services, policing, and intelligence services? Which embassies and consuls receive more resources? How does Canada support the health needs of those leaving fragile states, regions of conflict, or climate-devasted areas? What can the security service and other Canadian services provide outside of Canada, before an immigrant arrives? How are security threats communicated between departments? These are a few of the many questions that arise from the Government of Canada's (GoC's) stated international security interest that could be explored in detail in another paper.

IMPLICATIONS AND FUTURE STUDY

The GoC has not always put climate change as a meaningful factor in its security-related analyses. There is much space for further security analysis of climate change. For

⁵⁶ Government of Canada. "Canada Welcomes Historic Number of Newcomers in 2022," accessed Apr 18, 2023. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2022/12/canada-welcomes-historic-number-of-newcomers-in-2022.html>.

⁵⁷ Margaret Purdy and Leanne Smythe, "From Obscurity to Action," *International Journal (Toronto)* 65, no. 2 (2010). 411.

example, issues surrounding sovereignty, and regionally climate-vulnerable people could highlight other requirements for the composition and scope of Canada's national security institutions. A comprehensive and collaborative analysis of climate-related security issues is needed to identify specific adaptations to Canada's security institutions, including legal frameworks for those institutions. To continue with broad statements and stove-piped approaches will only lead to ad hoc solutions, with limited effect on both climate change and the security threats that it exacerbates. What it would highlight is the interdependent nature of security and environment, ensuring that multi-agency and WoG approaches can be developed prior to a crisis. While it may be found that the level of security threats and risks stemming from climate change effects are low, that does not negate the need to address them or the exacerbating factor. It is well-understand that discounting any PMESII security factor is a detriment, and the same applies to non-traditional factors.

Since Canada is most likely to be indirectly affected by the impacts of climate change on other states, it follows that preparedness should be at the forefront. Preparing specific policies to quickly shift the capacity, capabilities, and priorities of security institutions is needed. This does not remove the moral considerations or obligations to provide preventative development support abroad.

This should be done with a holistic mindset and based on analysis that includes all relevant departments of government, whether domestically or internationally oriented. Private sectors can also provide valuable input into the analysis, and into development of support programs and technologies. In order to do this, Canada needs to ensure that first, the government's National Security and Intelligence Advisor includes climate change as a key factor in their national security assessment. Whether they are the best-suited person to ensure a collaborative and WoG approach to a broad security analysis is unclear. There may be others who are better positioned to work through inter-departmental barriers, but the key point is that there does need to be someone who is assigned and accountable for that work. Government analysis and assessment on this issue should be complemented by an independent study by Parliament.⁵⁸

The GoC could also enhance accountability on national security and climate change by better communicating the impacts of climate change on Canadians.⁵⁹ Rhetoric is not enough to raise the security element of climate change into the minds of the public – specific, relatable, evidenced effects must be communicated to Canadians. This is not an easy task given Canada's vast geography, regional economic interests, and cultures. However, it is time to move past rhetoric on climate change and spell out the implication to all aspects of national security, not just economic ones as have been emphasized by Canadian politicians in the past.

Limited resources must be allocated within the national security apparatus to deal with the most likely effects on security, again based on analysis. If they do not have the

⁵⁸ Simon Dalby and Leah Lawrence, *Climate Change Impacts on Canadian National Security* (Waterloo: CIGI, 2021). https://www.cigionline.org/static/documents/NSS_Report2_xM1Iy4Y.pdf. 7.

⁵⁹ Purdy, "From Obscurity to Action." 411.

authorities and accountabilities in place to cope with potentially large migrations or terrorism, for example, they will be unable to respond effectively or efficiently. Buy-in from rival political parties is needed to ensure that changes are supported, and will continue to be upheld through government transitions, and through the changing winds of public opinion when domestic audiences are impacted. Aligned values and rhetoric between parties regarding climate change impacts, such as the potential for the arrival of new diaspora, will help to mitigate the tensions that arise from these transitions and divisive narratives.

Assisting fragile nations in coping with the effects of climate change in their regions will also create opportunities for Canada to raise its level of influence. Tying climate change, national security, and international stability into the narratives surrounding Canada's participating in and support to programs that address climate change and instability could create political support domestically and credibility with international partners. It also aligns with Canada's humanitarian values to support those in need internationally. While Canada responded many times to natural crises with disaster relief and humanitarian assistance, increasing investment in fragile or at-risk states with a view of increasing their resilience⁶⁰ to climate shocks and natural disasters will have greater impact in the long-run. This aligns well with GAC's established priorities.

⁶⁰ Dalby, *Climate Change Impacts on Canadian National Security*. 7.

CONCLUSION

Climate change is evolving conditions for societies around the world. According to Greaves, “These conditions are well outside the range in which human civilization has developed and will result in a radically different global climate from that in which current social, demographic, and geographic configurations emerged.”⁶¹ The world must adapt its approaches to all sectors to thrive in new climate conditions, as climate change cannot immediately be halted. From this perspective, security emerges as one system that requires attention, analysis, and adaptation through an environmental lens. The environmental factor is not the only non-traditional security consideration that must be examined, but it does underpin our existence in the most basic sense. It leads to conditions that exacerbate existing security concerns, as demonstrated in the case study on Somalia. To ignore environmental security factors would be folly.

The Government of Canada has made commitments to slowing climate change and reducing human impact on the earth, but there is more to be done on this complex issue. Canada must prepare its institutions to cope with the impacts it will experience as a result of large shifts in climate in other parts of the world, especially from regions whose systems are less resilient to shocks. Should Canada not comprehensively analyze the climate change and national security nexus and effectively prepare its institutions, it will be hard-pressed to meet its commitments to the international community, and to the security of Canadians as laid out in the NSP.

⁶¹ Greaves, Wilfrid. "Climate Change and Security in Canada." *International Journal (Toronto)* 76, no. 2 (2021). 184.

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