

“Canada’s Contribution to Global Security”

Canadian Pugwash Group Conference

Dalhousie University
Halifax, Nova Scotia, July 23-25, 2017

Report of Proceedings: August 15, 2017

CONTACT: Paul Meyer
pmeyer@sfu.ca
admin@pugwashgroup.ca



**DALHOUSIE
UNIVERSITY**

Centre for the Study of
Security and Development



***Canadian Pugwash gratefully acknowledges the
contribution of our sponsors***

**Dalhousie University, Centre for the Study of Security and Development
Defence Targeted Engagement Program, Department of National Defence**



**The Simons Foundation
Pugwash Park Commissioners
Village Commission, Pugwash, Nova Scotia
Stephen & Dennice Leahey
Canadian Pugwash Members**

MESSAGE TO CANADIAN PUGWASH
from JAYANTHA DHANAPALA, PRESIDENT OF PUGWASH INTERNATIONAL
JULY 2017

It is appropriate that the 60th anniversary of the first Pugwash Conference should be marked with a conference in Canada in the 150th year of that nation's existence and in close proximity to the fishing village of Pugwash in Nova Scotia - the birthplace of our great movement. It is also historic that this Conference should be held in the year that has witnessed the long awaited Treaty on a Ban of Nuclear Weapons concluded at the United Nations in New York on July 7.

The village of Pugwash, Nova Scotia, Canada, birthplace of the American philanthropist Cyrus Eaton, who hosted the 1957 meeting, has become a virtual pilgrimage centre and is today a national heritage site. The stimulus for the 1957 gathering was a Manifesto issued in 1955 by Bertrand Russell and Albert Einstein which called upon scientists of all political persuasions to assemble to discuss the threat posed to civilization by the advent of thermonuclear weapons. The 1957 meeting was attended by 22 eminent scientists (seven from the United States, three each from the Soviet Union and Japan, two each from the United Kingdom and Canada, and one each from Australia, Austria, China, France, and Poland).

Sixty years later the torch continues to be carried by Pugwash despite myriad challenges. That is what was intended as our goal according to the Nobel Prize citation in 1995 which stated -

“The Conferences are based on the recognition of the responsibility of scientists for their inventions. They have underlined the catastrophic consequences of the use of the new weapons. They have brought together scientists and decision-makers to collaborate across political divides on constructive proposals for reducing the nuclear threat.

The Pugwash Conferences are founded in the desire to see all nuclear arms destroyed and, ultimately, in a vision of other solutions to international disputes than war..... It is the Committee's hope that the award of the Nobel Peace Prize for 1995 to Rotblat and to Pugwash will encourage world leaders to intensify their efforts to rid the world of nuclear weapons”. Through advocacy of dialogue across divides Pugwash has pursued peace and disarmament consistently. Our national groups must remain tied to Pugwash International with mutually nourishing bonds. Pugwash Canada has a proud record of service to Pugwash ideals

We are at a transformational moment. Violence and conflict triggered by extremist ideologies and an arms race among great powers has resulted in a total of \$1676 billion of military expenditure in 2016. Nine nuclear weapon armed states with a total arsenal of 15,395 warheads, 4120 of them operationally deployed threaten the catastrophe of nuclear war intentionally or by accidents like computer error or hacking. They are being modernized all the time. Populism – a counterfeit brand of democracy – is being enthroned in the West and other parts of the world and growing intolerance of minorities is spreading, triggered by the largest wave of human migration of refugees and displaced people since World War II.

As I leave the Presidency of Pugwash I thank Canadian Pugwash for their support and their work to strengthen the organization. I regret my inability to be present at your conference but I wish you all success.

“Canada’s Contribution to Global Security”
Canadian Pugwash Group Conference
Halifax, Nova Scotia, July 23-25, 2017
Report of Proceedings: August 15, 2017

Executive Summary:

Canada’s contribution, past, present and future, to global security was the principal focus of the Canadian Pugwash Group (CPG) conference marking the 150th anniversary of Confederation and the 60th anniversary of the Pugwash movement. The international Pugwash movement, of which the Canadian group is an affiliate, has its birth place in the seaside village of Pugwash, Nova Scotia and its national historic site of “Thinkers Lodge”. CPG’s mission is to harness “science” broadly understood in the effort to counter existential threats to humanity and this core focus informed the selection of the seven thematic sessions comprising the conference.

The first session on “Current Challenges to Global Security” set the stage via an address by the Hon. Douglas Roche O.C. on the challenges posed by building the security architecture for a world without nuclear weapons. He characterized the humanitarian movement that had led to the Treaty on the Prohibition of Nuclear Weapons as the contemporary equivalent of the 19C movement to abolish slavery and foresaw a similar impact on the world. Sean Howard decried the “cancers” of the 20C arising from a belief in domination over cooperation and elucidated the imperative to shift to a strategy of “sustainable peace”.

What the Government of Canada might contribute to a “sustainable peace” effort was highlighted in presentations by DND and GAC officials on the outcomes of the Defence Policy and International Assistance Policy reviews. Noting the security problems posed by a return of great power rivalry, both presentations stressed the conflict prevention orientation of the respective policies. It was acknowledged that the root causes of conflict required attention via a “whole of government” and that peace was an essential condition for realizing the Sustainable Development Goals.

The current state of nuclear arms control and disarmament was featured in the third session with a stress on the real progress represented by the nuclear weapons prohibition treaty and the challenge it posed to “outmoded doctrines” of nuclear deterrence as well as specious objections that international security conditions were not “ripe” for nuclear disarmament. The Government of Canada was encouraged to engage in global efforts to eliminate nuclear weapons.

Multilateral peace operations and Canada’s role with respect to them was a natural focus for the conference’s fourth session. While current Canadian contributions to UN peace operations had fallen to an all-time low, there was hope that the Government would finally make a specific commitment to an existing UN mission worthy of the host of the November ministerial meeting. The “mission multiplier” role that surveillance and other technology could impart to UN peace operations was showcased. Complementary efforts Canada could play in enhancing African peacekeeping

capability and the development of security sector approaches to dealing with child soldiers were further subjects of attention.

The potential for preventive diplomacy in the fragile, but vital environment of outer space was the focus of the fifth session. The importance of the 1967 Outer Space Treaty, the 50th anniversary of which occurs this year, for preserving space for “peaceful purposes” was emphasized. At the same time, there is a need to reinforce the legal regime for outer space with additional Transparency and Confidence-building Measures if its peaceful orientation is to be sustained. The destabilizing effects of the unchecked development of ballistic missile defence for both space security and as a check on further reductions of nuclear forces was also stressed. The new environment of cyberspace was flagged as an increasingly crucial asset for humanity that will require proactive steps by governments and civilian stakeholders if it is not to become just another domain for war-fighting.

Climate change has long been recognized by Pugwash as an existential threat to humanity, one that has only been intensified by the recent research linking nuclear weapon use with gravely adverse climatic changes. The exacerbating effects of climate change for provoking conflict was highlighted in the sixth session as was the need for continued civil society advocacy at all levels of government for implementing the targets set out in the Paris agreement.

Global warming has had a disproportionate impact on the Arctic. The seventh session examined strategies to ensure that increased commercial activity, such as navigation, fishing and hydrocarbon exploration and drilling did not produce an increase in militarization in the region. The advisability of continued multilateral cooperation in the harsh Arctic environment, together with the intention of many non-circumpolar states to participate in Arctic development will introduce security issues which are outside the mandate of the Arctic Council. The potential stabilizing effects of an Arctic Nuclear Weapon Free Zone were discussed in this context.

The conference’s keynote speech, delivered by Ernie Regehr O.C. addressed the diminishing utility of violence in achieving political goals. Regime destruction does not equate with positive regime change. Attaining sustainable development objectives is predicated on maintaining a modicum of peace and security. The development of good governance and institutions for the just and peaceful settlement of disputes merit priority attention by the international community rather than enlarging the capacity to wage war. It is time to heed the UN Secretary General’s call for a shift in focus from response to prevention.

A concluding presentation by CPG’s Chair, David Harries, on “The Way Forward” noted the statement by Elissa Golberg of the establishment of a Foresight staff at GAC and recommended broader application of strategic foresight to global security challenges in three areas: anticipation of changes to security context, engaging youth, and exploring the real costs of nuclear nonproliferation and nuclear disarmament.

A feature of CPG conferences is the development by participants of action-oriented recommendations for consideration by the Government of Canada. The breakout groups comprising the second day of the conference enabled all attendees to relate

expert presentations to potential solutions for pressing problems in keeping with CPG's "thinking and doing" character. These recommendations are appended to the present report.

Summary Reports on Conference Sessions

Session 1: Current Challenges to Global Security

The Hon. Douglas Roche O.C. spoke on "Nuclear Weapons and the Destiny of Humanity" asking if the "human proclivity for the acquisition of power..." is too powerful to overcome, thereby damning humanity to a future *with* nuclear weapons. He vehemently disagreed with any interpretation which deprives humans of their individual agency, but underlined that peace – like war – is not a predetermined condition.

For evidence of concrete human progress on disarmament, he cited the new multilateral Treaty Prohibiting Nuclear Weapons (TPNW), which 122 states agreed to present for signature. However, there has been opposition, specifically from nuclear weapon states and others sitting under the nuclear "umbrella". Even though there exists an "emergence of a culture of peace" many states still find it difficult to implement policies consistent with the UN Charter and their obligations under the Nuclear Non-Proliferation Treaty. Roche poses the question: "How are humans to treat one another in the globalized world where weapons of mass destruction and human rights are incompatible?"

Canada should step forward and sign the new Treaty, argued Mr. Roche, but it should also present an accompanying statement indicating that Canada will work to bring NATO policy in line with the prohibitions and obligations of the TPNW, at which point Canada could ratify the treaty.

Mr. Roche ranks nuclear disarmament among the great social struggles of our time; of the same magnitude as ending apartheid, slavery and colonialism. He further detailed how one struggles against these evils: by our resilience. Resilience in the face of overwhelming odds is a necessary and crucial prerequisite for the campaign against nuclear weapons. In closing, Roche reminds us that, although it is a daunting task, members of Pugwash and other peace organizations should take inspiration and guidance from those eminent activists who came before them.

Dr. Sean Howard's presentation on "If War Goes On...": The Imperative of 'Joined-Up Thinking' in the Search For Sustainable Peace", reflected upon the lessons and the trauma of the Great War to describe the perilous state of international politics today. World War 1 was matched only in death and destruction by its near-immediate successor, but its political ramifications affect us more deeply than counting the number of casualties sustained on both sides. The Great War formally introduced the idea of industrialized total war, and created an impetus for peace that was new.

However, this peace was one-sided and non-cooperative; it was peace imposed by force. The Versailles Treaty corrupted the hopes for a lasting European and global peace. Sean Howard then referred to a more modern tragedy, the Balkan Wars. What happened between these two events in Sarajevo, between World War 1 and the slaughter in the 1990s?

Throughout the 20th century, people and governments made concerted commitments to embrace the ideals of universal human rights, cooperative relations, and disarmament as embodied in the UN Charter. However, tensions still existed, and power still played a major role in global politics. Howard cited Jonathon Schell's concept of the 'dual-monarchy', the combined near-total global influence of the USSR and USA that resulted in a spoiling effect on cooperation and sustainable peace. The cycle of violence, proxy conflicts, and peace through mutually-assured destruction dominated until Michael Gorbachev's "deadly serious embrace of cooperative, mutual, demilitarized security across and beyond Europe." He was rewarded with a massive drop in Russian global influence relative to the USA, the breakup of the USSR, and the expansion of NATO in Europe.

Ultimately, the expansion of NATO led to Russian distrust of the Western Powers, especially the United States. This dubious expansion of an organization, whose sole purpose was resisting the Soviet enemy that no longer exists, dashed any hopes of creating a sustainable, mutual, and cooperative security apparatus across Europe. Even Canada, once a committed UN contributor and peacekeeper, is increasing its own 'hard-power' resources and national defense spending. DND's new 'feminist' foreign aid policy does not come close to funding on offensive capabilities.

Howard believes that Canada should mirror Ireland: with a more cooperative, mutually-beneficial foreign policy incorporating both disarmament and peacekeeping. Additionally, Canadians need to overcome industrial economic and domestic political influences that drive the Canadian state to regressive foreign policies. We should not shy away from the "overthrow of "money and cannon". Howard drew attention in particular to the recent "NGO Defence Policy Statement" calling for a shift to sustainable common security.

Session 2: Canada's Defence and International Assistance Policy Reviews

Ms. Isabelle Desmartis of the Department of National Defence (DND) provided a broad overview of Canada's new 'Strong. Secure. Engaged.' defence policy. The policy emphasizes putting people first and a significant increase in Canada's defence spending (70 percent over ten years). New people-centered initiatives include growing the capability of the Canadian Armed Forces (CAF), enhancing the health and wellness of military personnel, and better support for military families. Increasing diversity is also a priority, with a goal of women representing 25 percent of CAF members by 2026. The new policy focuses more on peace operations, humanitarian assistance, and capacity-building than in the past, with particular attention to the experiences of women and girls.

Ms. Elissa Golberg of Global Affairs Canada (GAC) introduced Canada's new Feminist International Assistance Policy. She described the policy as a realignment to protect the vulnerable by taking an integrated whole-of-government approach that focuses on women and girls as agents of change. There are six key areas of action: (1) gender equality, (2) human dignity (including health, education and humanitarian assistance), (3) sustainable growth, (4) environment/climate action, (5) inclusive governance, and (6) peace and security. Initiatives relating to peace and security include a new action plan on Women, Peace and Security, addressing the primary causes of conflict such as inequality and humanitarian disaster, and ensuring that Canada responds to conflict and fragility in a 'gender responsive manner'.

Dr. Brian Bow of Dalhousie University served in the role of discussant. He highlighted a different emphasis in the purposes of the two policy reviews processes, suggesting that the defence policy review was intended to reassure voters (and the CAF) that defence and the CAF remain priorities of this government, whereas the international assistance policy review focused on developing a complex response for a complex policy area. He suggested that what each review process and resulting policy was missing was the strength of the other one.

The discussion in this session was lively. One person asked whether the international assistance and defence policies were incompatible, as they saw expanded military power as incompatible with peace and international development. The presenters responded that both departments work quite closely together and provide a range of tools to address complex problems. Several audience members critiqued the defence review process for its perceived lack of transparency and accessibility. Another audience member asked about Canada's peacekeeping contributions. The presenters noted that peacekeeping budgets depend on the requirements of the United Nations (UN) each year, however Canada is currently the ninth largest financial contributor to the UN's peacekeeping operations and gives voluntary contributions beyond what is asked. Other audience members noted that it is important to keep in mind that the choice of where we procure our military equipment can affect peace and security and that the same countries that provide the highest levels of development assistance are often the largest arms providers as well.

Session 3: Nuclear Arms Control & Disarmament

This session was of particular interest to conference attendees, given its focus. The overarching context for the session was the announcement of a Treaty on the Prohibition of Nuclear Weapons (referred to by speakers and participants as 'the Ban Treaty') at the United Nations on July 7, 2017.

Prof. Erika Simpson of Western University focused her remarks on the implications of the Ban Treaty as well as the legacy of disarmament within the existing Nuclear Non-Proliferation Treaty (NPT) and, in particular, the challenges presented by present NATO doctrine with respect to nuclear weapons. Progress to date of the NPT is not good, Prof. Simpson noted, highlighting that stockpiles have continued to rise, with the US and Russia owning the overwhelming share; the former, in particular, has called for

modernization (and therefore retainment), which will be a major challenge for disarmament efforts moving forward. This stance highlights NATO's continued reliance on the doctrine of nuclear deterrence.

Prof. Simpson further noted that Canada has not taken a leading position on disarmament, preferring to defer to the US within NATO and the status quo with respect to NATO's nuclear policy (which considers nuclear weapons 'essential core capabilities'). Despite many of the same old excuses being offered as to why disarmament efforts have stalled within the NPT and NATO (step-by-step approach tried and failed; Canada not influential enough; timing not propitious, premature etc.), Prof. Simpson highlighted several upcoming opportunities for advocates to push the disarmament agenda, including NATO's 70th anniversary in 2019 (which will bring much publicity and summits and conferences, meaning opportunities to discuss nuclear policy); ongoing concerns about American President Trump with his finger on the nuclear trigger (which may increase responsiveness to arguments for disarmament); and the Ban Treaty itself, which was under-reported in Canadian media (and therefore is an opportunity to press for greater visibility of the issue).

Mr. Cesar Jaramillo of Project Ploughshares began by noting the crucial but often overlooked fact that Canada and many other nations are simply *not* currently committed to the principle of nuclear abolition. The reality is that current policies and attitudes perpetuate nuclear weapons, and ensconce them as a legitimate part of security doctrine. What is important is to get diplomats and decision-makers to discuss the issue honestly, absent the lofty – but ultimately empty – rhetoric.

Mr. Jaramillo then discussed the context of the Ban Treaty negotiations. The global landscape, he argued, has changed dramatically; it is no longer necessary to get countries to agree the issue is consequential, this has become a fact on the ground. Old-hat obfuscations will be tried (Treaty does not reflect international security realities) but are no longer sufficient (ok, then what *should* it look like?). Advocates, he warned, must be aware of red herrings – attempts to portray the Treaty for what it is not – and opponents trying to imply ban advocates want something they in fact do not want. Perhaps most importantly, the criticism that the Treaty is premature does not hold water – if not now *when*? We cannot wait to solve all international security issues before the disarmament agenda can move forward, Mr. Jaramillo stressed, in which case we will be waiting forever.

Mr. Jaramillo similarly noted the concerns over the Canadian governments' handling of this issue; civil society advocates and experts in the area of nuclear disarmament have been nearly unanimous in *not* endorsing the current Canadian strategy. The Trudeau government has continued the policies of the previous government, virtually point-by-point.

Mr. Jaramillo concluded his remarks by discussing what might come next with respect to the Treaty and the disarmament agenda more broadly. Will the Ban Treaty become customary international law? Who knows, he said, as no one can know its ultimate effect, but it is clear that it is an unprecedented undertaking. The door remains open for outliers to join – including Canada – but not at any cost. The decision to join must be genuine and in good faith, and with the design of tangibly moving the agenda

forward, not merely to symbolically increase the number of nations ostensibly supporting the Treaty.

A third scheduled presentation by Hans Kristensen (*Federation of American Scientists*), was cancelled as Mr. Kristensen was unable to attend.

In the general discussion and Q & A that followed, several points were raised. It was noted that a general belief in, and acceptance of, the principle of nuclear deterrence is spreading, pushed in part by NATO. There is a belief that one is more secure under a nuclear umbrella; advocates must have pushback against this perception in the media.

A question was asked as to whether Canada can be active vis à vis the Ban Treaty (including signing and ratifying) given its membership in NATO. The answer was yes, NATO membership is not a straightjacket in this regard, but Canada's participation will only be welcomed if genuine; also, Canada should be working *within* NATO to alter nuclear policy, this is the point of membership in the alliance!

Session 4: Multilateral Peace Operations:

Dr. David Harries, the moderator, opened the Panel with a brief comment on how very much the context for peacekeeping operations had changed since his first UN mission, in Cyprus, in 1974. He noted that the panelists would be addressing themes that were not matters of UN concern at that time, by design – peacekeeping technology, or default– the need for strong contextual and political understanding and engagement; and, child soldiers.

The first speaker of the panel on Multilateral Peace Operations was **Professor David Black** who gave a presentation on the challenges of peacekeeping operations for the United Nations, and particularly the struggles of peacekeeping in Africa, an increasingly complex region of the world. Professor Black prefaced his presentation with the reminder that, in terms of Canada's role in peacekeeping in Africa, there is an important part to play, but the effects of any mission may not be clear quickly. There will be uncertainty and lessons to be learned in every Canadian peacekeeping operation, so we as a society must acclimatize ourselves to that. Without that acceptance, Canada will be stuck providing far less than it is capable of offering.

The first step, according to Black, is to understand the nature of the challenge, that is, what it means to put Canadian boots on the ground, in a peacekeeping capacity, in a complex operating environment in Africa, an environment in which it will take time to acclimatize. One of the major causes of this regional complexity is the limited capacity of many states in Africa. This is combined with an increased participation of non-state armed groups, which has created a struggle to address conflict in the region by other states and non-governmental organizations. Black suggests that any operations in Africa be accompanied by sophisticated contextual and political understanding and engagement.

Secondly, Black spoke about the challenges of, and faced by, the institutions operating in these areas. There is a growing array of institutional agents involved in operations

across Africa, as well as forums in which interactions may take place. Adding to the growing array of agents, forums, and interactions are the complex cultural differences between those from within and outside of Africa. The difficult environments reflect the fact that operations often take place in countries low on the Human Development Index. Low development, combined with differences in history, culture, language, and capability demands that planning and operations call for especial care and patience. Western countries' assistance in Africa often takes the form of technology and engineering means, field hospitals, and air transport, leaving the riskiest, ground combat operations for African nations' soldiers. This division of labour does not engender trust of Western nations by Africa ones.

Professor Black began his third point by discussing Canada's deep attachment to the idea that the country is a peacekeeping nation. This attachment is not nationally universal. The Harper decade left Canadians feeling especially disenchanting with military operations in the name of peacemaking. As well, many of Canada's peacekeeping deployments since the 1960s were less than successful in the eyes of civil society. These previous traumas are part of the reason for Canada's diminished participation in peacekeeping in Africa.

Canada's peacekeeping operations have been consistently inconsistent, which makes it difficult to be optimistic about a Canadian contribution to peacekeeping in Africa.

The second panelist, **Dr. Shelly Whitman**, began her talk on the impact of child soldiers in UN peace support operations by reminding the audience that, in the past, children were forced to fight in spite of their youth but that now they are beginning to be forced to fight because of their youth. It has been shown that conflicts where child soldiers fight tend to be longer and more severe, and that United Nations/African Union soldiers, as well as police, suffer particular physical and mental consequences when they fight armies with child soldiers.

Whitman identifies four pieces of the puzzle, as she describes it: international law, security sector response, child protection, and demobilization/disarmament/reintegration. The security sector response has been missing for a long time, and without its participation child soldiers will continue to be used by militias. The security sector has become one of the most powerful stakeholders in peacekeeping operations, and their lack of assistance in curbing the use of child soldiers is a disappointing one. Whitman described the cycle of child soldier recruitment, in which the differences between wartime and peacetime are very slight. Children are recruited and used for crime and resource extraction, as well as for armed conflict. Militias need funding, and child soldiers are a cheap and easy work force when there is little to no fighting happening. Whitman made it clear that we cannot understand the use of child soldiers and end it during times of conflict if we cannot understand how it happens during times of peace. According to Whitman, the deployment of child soldiers has been found to be an early indicator of mass atrocities and genocide. Understanding the root causes of child soldier recruitment and use may be an important step in progress in curbing major violence. The use of child soldiers can have serious consequences for troop morale, as seen in South Africa and the Central African Republic. All armed conflict is physically

and emotionally draining, the more so when it is children one has to fire at, and children that are firing back.

Those at the Romeo Dallaire Child Soldiers Initiative use the United Nation's Six Grave Violations as a basis with which to learn about, understand, and report violence against children. The six grave violations are:

1. Killing and maiming of children
2. Recruitment or use of children as soldiers
3. Sexual violence against children
4. Abduction of children
5. Attacks against schools or hospitals
6. Denial of humanitarian access for children

Using these six indicators will, Whitman hopes, allow us to better understand the world of child soldiers, and identify ways and means to reduce and prevent recruitment and use of child soldiers in armed conflicts everywhere..

Dr. Walter Dorn began his presentation on "Technology as a Force Multiplier in UN Peace Support Operations" with the reminder that every single day, nations give up some of their most precious assets, people, in order to save lives and prevent suffering. The United Nations Security Council operates under five mandates: enforcing the rule of law, human rights, security, reconciliation and peace processes, state building, and humanitarian assistance. Dorn is working with the United Nations to help it become more technologically advanced, so peacekeepers are better equipped to uphold those mandates, and reduce mission risks.

Dorn enthusiastically announced that the dream of a technologically equipped United Nations is finally becoming a reality, and very quickly. The United Nations is increasing its capacity to monitor cease fires, peace agreements, protected places and people, elections, human rights, sanctions, resource exploitation, armed groups and spoilers, and the safety and security of UN personnel. Without appropriate technology, monitoring only goes so far, as United Nations personnel can only monitor what they can see, in daylight, on the surface and when protected against opponents' fire. Modern technology now allows all-condition monitoring with little physical risk to the peacekeeper. Ground radars, air radar, ground penetrating radar are all commonly used in the field now by the United Nations. But the technology is only part of the picture. Training and education on peacekeeping technology is vital and more must be done.

One way to achieve this would be for technology-providing countries to be accorded the same status troop- providing countries are, not as less important than those providing soldiers on the ground. This suggestion by Dorn is a fascinating one, and relates to Professor Black's assertion that many countries in Africa grow frustrated that they are called upon to carry out the most dangerous mission tasks. Both points have merit.

It was clear from the three presentations that more will need to be done, in all areas and aspects of peacekeeping, for Canada to set out on its next peacekeeping mission with confidence and competence.

Session 5: Outer Space Security

The panel on “Outer Space Security” focused on why preserving space for peaceful purposes was critically important for future global security. The panel moderator, **Cesar Jaramillo** from Project Ploughshares, opened by asking whether space should be seen as a sanctuary, or another domain for war-fighting akin to the air, sea, and land. The panel’s focus was on the implications of weaponizing space, and what alternatives were possible for building international cooperation in the peaceful use of this increasingly important environment.

The Panel’s first speaker, **Dr. Laura Grego** from the Union of Concerned Scientists, wanted the conference to consider whether anti-satellite weapons (ASATs) and space weapons in general would really create an atmosphere of security, as she argues that all space lies within our global “neighborhood”. Given that satellites have now become critical instruments for national security, there is growing concern among those state and non-state actors of the possibility of tampering, interfering, or even destroying these satellites. The destruction of satellites could “quickly escalate a conflict or generate other unpredictable and dangerous consequences”. Furthermore, populating space with an increased number of satellites and space-based weapons could result in an arms race, especially among the larger military powers seeking to master the “high ground” by increasing their space assets. States such as the United States and China have already re-orientated themselves to the idea that space should be seen as a theatre of war. While larger national security architectures require “extensive and sophisticated” technologies, low-powered lasers can dazzle imaging sensors and many sub-state actors can easily obtain these low-tech weapons. Laura Grego concluded her presentation by stating that the international community is in need of a new comprehensive treaty on space-based weaponry that would establish limits, which she argues would improve security and lower the risk of future crisis escalation.

The second presenter, **Paul Meyer**, the former Ambassador for Disarmament, Adjunct Professor at Simon Fraser University, and Senior Fellow at The Simons Foundation, focused his presentation on the concept that both outer space and cyber space are two environments in which we have the ability to choose between actions that would lead to war or peace. Under the Outer Space Treaty of 1967, outer space was granted the status as a “global commons” that should only be used for peaceful purposes for all human kind. Paul Meyer argued that this was a great achievement in preventative diplomacy as it anticipated the potential to render space as an arena of conflict. This early agreement on a normative framework has allowed outer space to escape direct weaponization; however, the importance of space based technologies for the intelligence and military communities has continued to drive interest in space technology and weaponry. While the “peaceful purposes” clauses of the Outer Space Treaty were interpreted to allow the use of non-aggressive military technologies, Meyer fears that the current climate of increased threat assessments and East-West tensions could result in the revival of a space arms race.

In comparison, an even newer environment, cyber space, has lacked an early foundational agreement, resulting in states and non-state actors taking steps to militarize cyber space and operate unchecked by international constraints. Both outer space and cyber space have experienced increased militarization, however with the

use of diplomacy and advocacy by concerned stakeholders in the private sector and civil society, we might be able to prevent the weaponization of these environments.

The final speaker of the panel, **Peggy Mason**, President of The Rideau Institute, focused her remarks on the issue of Canadian participation in the American strategic system for the Missile Defence of North America. She argued that Canadian participation in North American Ballistic Missile Defence (BMD) is not a priority for Canada, as it would involve significant investment in a project that would not guarantee a Canadian voice in its management and which so far has failed to work reliably. Nor would Canadian involvement provide a guarantee that Canadian cities would be protected in the event of a missile attack. Furthermore, the development of a working strategic BMD system could destabilize the security environment and could encourage rival actors in the international system (such as Russia and China) to build more advanced offensive systems that are not only cheaper to produce than defensive weaponry but would have the ability to overwhelm BMD. She discussed the fact that low level threats, such as North Korea, can be better addressed through the current nuclear non-proliferation architecture, mirroring the approach successfully taken with Iran. In addition, by staying out of BMD, Canada would be better positioned to take a meaningful role in any future negotiations to bring North Korea back into the NPT. Peggy Mason concluded that not only would the cost of participation in BMD be very high, what Canada would get out of the program would not be worth the costs, and there are other areas of national defence that are in greater need of investment.

Session 6: Climate Change Post-Paris

Prof. Lee-Anne Broadhead of Cape Breton University began her presentation by thanking Pugwash for including topics related to climate change as part of the conference, because as she said, there is little doubt that climate change is a threat to global security. The Brundtland Report called upon countries to include climate change as a risk to human security, along with force and violence from other states. While there may seem to be a lot happening regarding climate protections internationally, Broadhead was quick to point out that there has been little movement away from state-centric climate change/human security issues. As a global population, we must become more human-centric in our efforts to curb climate change, and get away from the state-centric approach that has been largely taken so far. The Stockholm Declaration was pointed out by Broadhead as an excellent example of a step towards a more sustainable future, albeit through state-centric measures, designed to not encroach upon any state sovereignty. Broadhead made mention of a separate, independent climate change conference that occurred in Stockholm in 1972, at the same time as the United Nations conference was occurring. This independent conference focused on how state sovereignty was a barrier to environmental protection, and therefore a threat to state security.

Broadhead began the second half of her presentation with this incredible vital point: there has been too much focus on defence against threats arising from the changing climate, and how this risk should be managed. Broadhead suggests that those in the security and defence sectors should instead be looking at how defence and security is a driver of these changes, and the security risks related to that. The security and defence sectors are great expenditures for states, and they hold a great deal of power

both within the state and internationally. Instead of using that power to dominate and coerce, the security sector should be focusing its power on bringing people together on a human level, in a way that past state-centric climate change declarations have been unable to do.

Prof. Anders Hayden of Dalhousie University spoke on “Climate Politics in the Age of Trump: The Good, The Bad, and The Ugly”. Much of the discussion surrounding climate change today centers around the 2°C rise in global temperature goal that scientists have largely agreed upon. Any global warming over this 2°C rise will lead to increasingly detrimental effects to our planet. The chances of us staying within that target are low, and getting lower and lower by the day. The United States’ carbon budget is shrinking quickly, and we are currently on track for a 2.7°C rise in global temperature, according to Hayden. Our planet is going to begin changing at a rapid pace without some major jumps forward in climate protection and policy, which seems unlikely, especially from the United States. The new Republican administration has made deep cuts to the Environmental Protection Agency, and to the climate science activities of NASA and the National Oceanic and Atmospheric Association (NOAA). The administration has also withdrawn from the Paris Accord, and have plans to dismantle the Clean Power Plan created under former President Barack Obama. As Hayden reminded us, the most upsetting part about all of these failed goals and budget cuts is that it will largely be the underdeveloped global south that will most feel the effects of this global temperature rise. The hottest regions of the world will only get hotter, making them potentially inhospitable, and certainly unfit for any sorts of farming or agriculture. As the global population rises, the places in which we can grow the food necessary to feed everyone is shrinking.

There is some good news amongst all of this doom and gloom though. There have been massive steps forward in the renewable energy sectors, as non-renewable resources dwindle, and it becomes more economically prudent to switch to invest in renewables. A recent study cited by Hayden states that over half of the new net generating capacity added globally has been through renewable energy. Building and investing in renewable energy sources, and halting the burning of fossil fuels all together will be a major step towards achieving the 2°C goal set out by climate change scientists. Britain and Ontario have both stopped burning coal, and Alberta is on target to do so by 2030. China's coal consumption has peaked, and France has announced it will ban fossil fuel cars by 2040. In the United States, many individual cities and states have been pushing back against the federal administration, creating their own environmental protection programs and greenhouse gas reduction plans. California has recommitted to a cap and trade system, and even some red states have strong renewable sectors. As Dr. Hayden mentioned, there is a lot of wind blowing in Iowa.

Internationally, China's role in global climate politics has shifted recently, due to the rise in need for more renewable energies for safety and security purposes, as well as the economic incentives in renewable energy technologies. France and Sweden have also taken large strides in their environmental protection programs while the United States has isolated themselves.

Hayden left us with the challenge that global leaders are facing right now, which is how to engage with citizens on the importance of environmental protection, and how to

bring environmental protection into the realm of high politics. Hayden believes that while on a larger scale, we should be questioning our planet's use of a growth economy, it is wise to find economic opportunities in the transition to new energy systems. As climate change becomes an increased risk to state security, there must be a shift in societal thinking regarding the political legitimacy of environmental protection. Caring about our environment and our planet's future should be a requirement of a legitimate politician, not an added bonus.

Session 7: Arctic Security

Ernie Regehr's presentation argued that, while the Arctic cannot be entirely isolated from political tensions in other parts of the world, and while Arctic countries are building up northern military capabilities, the Arctic continues to be a region focused on international cooperation and mutual security. He noted that the Canadian Government's recent defence policy statement acknowledges the record of cooperation among Arctic states and emphasizes that the primary responsibilities of Canadian Forces in the north are to contribute to domain awareness and public safety rather than to counter state-level military threats. He said the absence of overt military threats creates opportunities for the Canadian forces to enhance their contributions to civilian authorities in areas such as search and rescue, border patrols, and enforcing marine regulations. He also emphasized the opportunities for the Arctic region as a whole to work toward the creation of a durable Arctic security community in which there is the reliable expectation that change will be peaceful, where states emphasize defensive military deployments in aid of public safety, and where the NATO/Russia tensions of Europe are eschewed. He said that continuing to develop the Arctic as zone of peace will help to encourage a global security architecture more amenable to the pursuit of a world free of nuclear weapons.

In her presentation, *Arctic Nuclear Weapon Free Zone: proposing Canada's role in this novel variation*, **Dr. Adele Buckley** spoke to Canada's potential position of leadership in circumpolar nations negotiations for a nuclear-weapon-free Arctic, starting with the Non-Nuclear Weapon States (NNWS). An early goal for each NNWS would be a policy statement aspiring to a nuclear-weapon-free Arctic. As a NATO member, Canada is a 'nuclear-dependent' country, but Canada, expressing a right to independent policy, opposes NATO entry into the Arctic region. Since the time of the Cold War, the Arctic Ocean has been "host" to patrols of submarines by both Russians and Americans. China and other Arctic Council observers who are also NWS, plan an active role in Arctic development. Without early action to prevent Chinese and other nuclear-weapon-equipped submarines entering Arctic waters, the risk is high that such military activity will become an additional source of nuclear weapons in the Arctic. Eventual inclusion of the United States and Russia in an Arctic NWFZ, may require special provisions such as 'innocent transit'. The Arctic NWFZ would create a regional Nuclear Weapons Convention, thus providing opportunity to test and build confidence in detailed procedures for NW reductions and verification.

Recommendations Developed by the Thematic Breakout Groups

Resolution #1: Canada Signing Treaty on the Prohibition of Nuclear Weapons

The Canadian Pugwash Group,

Deeply concerned about the catastrophic humanitarian consequences that would result from any use of nuclear weapons, and recognizing the consequent need to completely eliminate such weapons, which remains the only way to guarantee that nuclear weapons are never used again under any circumstances,

Acknowledging the ethical imperatives for nuclear disarmament and the urgency of achieving and maintaining a nuclear-weapon-free world, which is a global public good of the highest order, serving both national and collective security interests,

Concerned by the slow pace of nuclear disarmament, the continued reliance on nuclear weapons in military and security concepts, doctrines and policies, and the waste of economic and human resources on programmes for the production, maintenance and modernization of nuclear weapons,

Recognizing that a legally binding prohibition of nuclear weapons constitutes an important contribution towards the achievement and maintenance of a world free of nuclear weapons, including the irreversible, verifiable and transparent elimination of nuclear weapons, and determined to act towards that end,

Stressing the role of public conscience in the furthering of the principles of humanity as evidenced by the call for the total elimination of nuclear weapons, and recognizing the efforts to that end undertaken by the United Nations, the International Red Cross and Red Crescent Movement, other international and regional organizations, non-governmental organizations, religious leaders, parliamentarians, academics and the hibakusha,

Noting the historic adoption July 7, 2017 at the United Nations of the Treaty on the Prohibition of Nuclear Weapons (A/CONF.229/2017/L.3/Rev.1), which prohibits, inter alia, the development, testing, production, manufacturing and possession of nuclear weapons; using or threatening to use nuclear weapons; assisting, encouraging or inducing in any way, anyone to engage in any prohibited activity,

Noting that Canada endorses the current NATO doctrine of nuclear deterrence,

Deploring that the Government of Canada has so far taken a position opposing the new Treaty,

Calls on the Government of Canada to:

1. Sign the Treaty on the Prohibition of Nuclear Weapons with an accompanying statement that Canada will, through dialogue and changes to its own policies and practices, persist in its efforts to bring NATO into conformity with the Treaty, with a view to Canada ratifying the Treaty as soon as possible.

2. Revivify its work in nuclear disarmament and lead in the spirit of the new Treaty by also:
 - a. Enlarging its work on the International Partnership for Nuclear Disarmament Verification
 - b. Leading attempts to initiate negotiations for a Fissile Material Treaty in the U.N. General Assembly in 2018.

3. Demand nuclear weapons states reduce nuclear risks by, among other things:
 - a. taking nuclear weapons off high alert status,
 - b. adopting no first-use policies, and
 - c. ensuring adequate physical security of existing nuclear weapons.

Resolution #2: Sustainable Peace and Common Security

The Canadian Pugwash Group,

Noting that, in Concurrent Resolution 2282 (2016), the United Nations Security Council and General Assembly embraced the language and perspective of sustaining peace as a guiding principle and common vision of society,

Noting the substance and recommendations of the Submission by leading civil society organizations to the Defence Policy Review entitled A Shift to Sustainable Peace and Common Security,

calls on the Government of Canada to:

1. Convene a high-level Roundtable, taking into account the Submission and involving its contributing organizations, among others, to explore opportunities for developing a comprehensive, whole-of-government approach to sustainable peace and common security

Resolution #3: Multilateral Peace Operations

The government's oft-stated intention to re-engage in peace operations is very welcome, a testament to a philosophy of enlightened self-interest. The world is interconnected, and the problems in any region are a threat to humanity as a whole. Diseases (like ebola), terrorism (falsely justified by religion or narrow-minded thinking), transnational crime, wide-scale displacement of unprecedented numbers of people from conflict zones, and the drug trade are global problems that transcend borders all too easily. These are issues that matter to the security and prosperity of Canadians. If Canada is committed to a secure and just global order, it needs to be engaged. Contemporary peace operations are a critical and effective means for such engagement.

Key partners within the international community have noted that Canada has so far failed to seize the opportunity to assert its place as a peacekeeping nation. The time for inaction is over. Canada's indecision has weakened its credibility in the international community and its case for a Security Council seat. It must soon give concrete manifestation to its August 2016 pledge of up to 600 military personnel and 150 police to UN operations. We are at an important juncture, in which Canada must embark upon an impactful return to peace operations, especially in Africa.

Re-engagement in Africa needs to include a substantial understanding of the local, social, political and cultural contexts, in which we are engaging. Canada needs to move away from working with short-term time-horizons, towards longer-term commitments. Canada needs a deep understanding of the situations, in which it engages, in order to maximize its constructive and durable impact. A key part of this is listening and understanding, with regard to key Western and African actors and capacities. The landscape of peace operations has become more institutionally complex, while the pursuit of durable peace must involve an understanding of local community authorities and dynamics.

In alignment with Canada's recently published Defence Policy and feminist International Assistance Policy, we recommend that the government of Canada commit meaningfully and substantially to a people-centric approach to multilateral peace operations, including all people in theatre. This would involve:

A concrete and ongoing investment in consultative processes, which reinforces training, education, and research. This will require a substantial reinvestment in standing capacities, of the sort that the Pearson Peacekeeping Centre (1995-2013) aspired towards, and that peacekeeping training centres in key regions of Africa have and continue to build, even in Canada's absence since 2013.

A more nuanced and effective understanding of what 'whole-of-government' coordination means and how it is operationalized in peacekeeping. As the Canadian government explores the possibility of applying a whole-of-government approach, it should recognize that experiences from Afghanistan can be usefully drawn upon but cannot be imposed on peacekeeping operations in Africa. The United Nations has strong country teams and a multidimensional mission within which to contribute. Any new chain of command must not disrupt the existing structures established by the United Nations and its agencies.

A re-commitment to the practical requirements of protecting civilians, including, but not limited to, building on the Canadian Force's new doctrine on child soldiers and ensuring important alignment between peace operations and the feminist international assistance policy.

Along with the people, the technological tools need to be developed. In our digital age, with technology revolutionizing military affairs, the United Nations is now trying to bring its operations into the Twenty-first Century. Canada can help by serving as a leading technology contributing country (Tech CC). In addition to its traditional contributions in signals engineering and communications technology, it could assist with monitoring (especially aerospace observation), water purification, renewable power and many other technologies. Canada has already contributed experts to help the UN

make technological progress, but much more can be done. Technology in peacekeeping can be a pivotal point for discussion and progress at the Vancouver ministerial meeting in November 2017.

We are at a historic moment of opportunity. We need to demonstrate specific commitments in order to exercise credible leadership at the Peacekeeping ministerial meeting in Vancouver this fall.

To avoid being a poor example as a host at the ministerial in November, opportunities cannot be missed in advance of the November meeting:

August 9 is International Peacekeeping Day, which can be celebrated and used as a key moment to announce Canada's deployment to a specific location in Africa.

The Prime Minister's opportunity to speak at the UN General Assembly will give further opportunity to show the world that Canada acts on its pledges.

Preparing for the Vancouver ministerial does not simply mean issuing conference invitations and making arrangements. It means being an example and showing leadership. At a pledging conference, Canada should show it keeps its own pledges and can act quickly and decisively to assist the United Nations and our wider world.

Resolution #4: Outer Space and Cyberspace Security

The Canadian Pugwash Group calls on the Government of Canada to:

1. convene no later than 2018 the first ever meeting of States Parties to The Outer Space Treaty of 1967,
2. convene in 2018, a multilateral meeting on how to implement the consensus recommendations from the 2013 UN group of governmental experts on transparency and confidence-building measures in outer space,
3. articulate a national space policy that would ensure the continued safe, secure and sustainable access to outer space, and
4. promote international arrangements to ensure the peaceful use of cyberspace.

Resolution #5: Climate Change in Relation to Global Security

The Canadian Pugwash Group endorses the January 2017 statement of the Science and Security Board of the Bulletin of the Atomic Scientists acknowledging that nuclear weapons and climate change are both "existential threats" to humanity.

We recognize that military preparations and operations significantly contribute to greenhouse gas emissions, and that instability caused by climate change is best addressed through prevention.

We therefore recommend that the Canadian Government

1. rebalance the federal budget by directing resources to programs which are effective in reducing climate change thus helping to prevent security threats, and increasing Canada's contribution to human security, and
2. include greenhouse gas emissions of overseas military operations in the official accounting in accordance with commitments under the Paris Climate Change Accord, seek to reduce such emissions, and urge other states to do the same

Resolution #6: Arctic Security

The Canadian Pugwash Group recommends that the Canadian Government convene a conference of Arctic States at the highest level to launch an ongoing security forum to consolidate and advance peaceful cooperation in the Arctic Region.

Such a conference must include active participation by representatives from the organizations of the indigenous peoples of the Arctic Region.

The conference should consider:

1. the security implications of the fundamental environmental changes and increasing accessibility of the region,
2. measures to avoid an arms race in the region, including the designation of all or parts of the Arctic as a Nuclear-Weapon-Free Zone (NWFZ),
3. practical measures for military consultation and cooperation among Arctic States, and

the safety and security needs of the indigenous people and communities.

Conference Program and Bios for Moderators and Panelists

“Canada’s Contribution to Global Security”

Commemorating Canada’s 150th and Pugwash’s 60th

July 23-26, 2017, Dalhousie University, Halifax and Pugwash, Nova Scotia

Sunday July 23

Arrival of participants and transfer to accommodations

1500: **Registration Opens:** 2nd floor, Students Union Bldg, 6136 University Avenue

1930 - 2130: **Reception** with light refreshments and cash bar

Welcome: Bev DeLong, Program Coordinator, Board Member, Canadian Pugwash

Location: Dalhousie Students Union Building, Council Chambers

Monday July 24

Plenary - Location: McInnes Room, Dalhousie Students Union Building

0815-0830: Registration (new and pre-registered)

0830 - 0845: **Welcome and Explanation of Program**, from the Conference Chairperson, Mr. Paul Meyer, former Ambassador for Disarmament, Adjunct Professor, Simon Fraser University and Senior Fellow, The Simons Foundation

Greeting from Jayantha Dhanapala, President, Pugwash Conferences on Science and World Affairs.

0845-0930: **Session 1: Current Challenges to Global Security**

Moderator: Mr. Robin Collins, World Federalist Movement – Canada;

Student Rapporteur: Andrew Moreira, Mount Allison University

Panel:

The Hon. Douglas Roche O.C., former Senator and Ambassador for Disarmament
“Nuclear Weapons and the Destiny of Humanity”

Dr. Sean Howard, Adjunct Professor, Communities & Connections, School of Arts and Social Sciences, Cape Breton University

“International Security and Cooperative Security: Can they be combined?”

0930 - 1030: **Session 2 - Canada’s Defence and International Assistance Policy Reviews**

Moderator: Mr. Paul Meyer, former Ambassador for Disarmament, Adjunct Professor, Simon Fraser University and Senior Fellow, Space Security, The Simons Foundation.

Student Rapporteur: Susan Manning, Dalhousie University

Panel:

Ms. Isabelle Desmartis, Director-General Policy Planning, Department of National Defence

“What role for Canada's Defence Policy in contributing to global security?”

Ms. Elissa Golberg, Assistant Deputy Minister, Partnerships for Development Innovation, Global Affairs Canada

“How will Canada's International Assistance contribute to global security?”

Discussant:

Prof. Brian Bow, Director, Centre for Study of Security & Development, Dalhousie University

1030-1045: Refreshment break

Sequential Panels:

1045-1215: **Session 3: Nuclear Arms Control & Disarmament**

Moderator: Ms. Peggy Mason, President, The Rideau Institute, former Canadian Amb. for Disarmament

Student Rapporteur: John Mitton, Dalhousie University

Panel:

Mr. Hans Kristensen, Federation of American Scientists

“Nuclear Force modernization and NPT compliance”

Prof. Erika Simpson, Department of Political Science, Western University

“NATO and the NPT: Strategies for ending the two solitudes”

Mr. Cesar Jaramillo, Executive Director, Project Ploughshares

“Negotiation of a Nuclear Ban Treaty: First impressions and future options”

1215-1300: Lunch Location: Dalhousie Students Union Bldg,

1300-1400 **Session 4: Multilateral Peace Operations**

Moderator: Dr. David Harries, Chair, Canadian Pugwash Group, Associate Executive Director of Foresight Canada

Student Rapporteur: Michelle Brazzoni, Dalhousie University

Panel:

Prof. Walter Dorn, Canadian Forces College

“Technology as a force multiplier in UN peace support operations”

Prof. David Black, Chair, Department of Political Science, Dalhousie University

“Peacekeeping in Africa: Indigenous versus External Capacity”

Dr. Shelly Whitman, Director, Child Soldiers Initiative, Dalhousie University

“The problem of child soldiers in UN peace support operations”

1400-1500: **Session 5: Outer Space Security**

Moderator: Mr. Cesar Jaramillo, Executive Director, Project Ploughshares;

Student Rapporteur: Michelle Legassicke, Dalhousie University

Panel:

Dr. Laura Grego, Union of Concerned Scientists

“ASATs and Space Weapons: A Blast from the Past?”

Mr. Paul Meyer, former Ambassador for Disarmament, Adjunct Professor, Simon Fraser University and Senior Fellow, The Simons Foundation.

“Outer Space and Cyberspace: War or Peace?”.

Ms. Peggy Mason, President, The Rideau Institute

“Ballistic Missile Defences as a threat to security”

1500-1515: Refreshment break

1515-1600: **Session 6: Climate Change Post-Paris**

Moderator: Prof. David Fleming, Department of Physics, Mount Allison University,

Student Rapporteur: Angus Docherty, Dalhousie University

Panel:

Prof. Lee-Anne Broadhead, Cape Breton University

“Climate Change Implications for Global Security”

Prof. Anders Hayden, Dalhousie University

“Climate Politics in the Age of Trump”

1600-1645: **Session 7: Arctic Security**

Moderator: Prof. Aldo Chircop, JSD, Professor of Law, Canada Research Chair in Schulich School of Law, Dalhousie University

Student Rapporteur: Maya Hibbeln, Dalhousie University

Panel:

Mr. Ernie Regehr, Senior Fellow, The Simons Foundation; Research Fellow, Conrad Grebel College, University of Waterloo;

“Militarization and Arctic Security Governance”

Dr. Adele Buckley, Canadian Pugwash Group, Pugwash Council

“Arctic Nuclear Weapon Free Zone: proposing Canada's role in this novel variation”

1645 – 1700 **Closing Remarks:** Paul Meyer

1900 - 21:00 **Conference Dinner**

LOCATION: McInnes Room, Dalhousie Students Union Bldg,

Keynote Speaker, Mr. Ernie Regehr Senior Fellow, The Simons Foundation; Research Fellow, Conrad Grebel College, University of Waterloo

“Wars or Rumours of War? Preventing Armed Conflict”

Tuesday July 25

Breakout Sessions: Location: McInnes Room, Dalhousie Students Union Building
Participants: All persons attending the conference are invited to join a group

0845-0900: Guidance to Breakout Groups

0900-1030: **Discussion in breakout group**

1030-1045: Refreshment break

1045-1230: **Continuation of discussion and formulation of recommendations**

1230-1330: Lunch Location: Dalhousie Students Union Building

Plenary

1330-1530: Reports from breakout groups and consideration of recommendations

1530-1600: Refreshment break

1600-1630: "Way Forward" Dr. David Harries, Chair, Canadian Pugwash Group

1630-1730: Finalization of recommendations

1730-1800: Concluding remarks

from 1900: Dinner - on your own

Wednesday July 26

Standalone Excursion to Pugwash N.S. and Thinkers Lodge

0845- Departure from Halifax at Dalhousie Students Union Building

1115- Arrival in Pugwash

1130-1215 **Tour of Thinkers Lodge**

1215-1330 Lunch Location: Thinkers Lodge Dining Hall (The Lobster Factory)

1330-1445 **Town Hall Meeting** at Pugwash High School

Greeting from Jayantha Dhanapala, President Pugwash Conferences

Contemporary Peace: Reflections

A Panel Discussion presented by Canadian Pugwash

Douglas Roche, Ernie Regehr, Walter Dorn, David Harries

THE OLD MASONIC LODGE IS OPEN ALL AFTERNOON FOR A QUICK VISIT

1445-1530 Light refreshments and ongoing informal discussion

1530 – 1540 Individual transportation arrangements

1545- Departure from Pugwash for return to Halifax via Halifax Airport if necessary

1800 (approx.)-Arrival in Halifax

Acknowledgements

Canadian Pugwash expresses its gratitude to the members of the Organizing Committee for this conference:

Fmr. Ambassador Paul Meyer, Conference Chair

Dr. Adele Buckley, Conference Treasurer

Professor David Black, Dalhousie University

Dr. David Harries, Chair, Canadian Pugwash Group

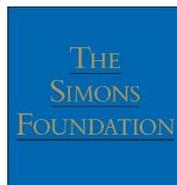
Ms. Joan Hicks, Organizer, Local Logistics

Ms. Bev Tollefson Delong, Chair, Cdn. Network to Abolish Nuclear Weapons

**Canadian Pugwash gratefully acknowledges the
contribution of our sponsors**

Dalhousie University, Centre for the Study of Security and Development

Defence Targeted Engagement Program, Department of National Defence



The Simons Foundation

Pugwash Park Commissioners

Village Commission, Pugwash, Nova Scotia

Stephen & Dennice Leahey

Canadian Pugwash Members

Bios for Moderators and Panelists

David Black is Lester B. Pearson Professor of International Development Studies, and Professor and Chair of Political Science at Dalhousie University in Halifax. His research has focused primarily on Canada's involvement in Sub-Saharan Africa (including diplomacy, human security, development assistance and the extractive sector), human rights and identity in South African foreign policy, Sport in World Politics and Development, and Disability and Global Development. His recent publications include: *Canada and Africa in the New Millennium: the Politics of Consistent Inconsistency* (Waterloo: Wilfrid Laurier University Press, 2015); *Rethinking Canadian Aid*, 2nd edition (Ottawa: University of Ottawa Press, 2016, co-edited with Stephen Brown and Molly den Heyer); and a Special Issue of *Commonwealth and Comparative Politics* on "South African Foreign Policy: Identity and Directions through Bilateral Attachments" (Vol. 54, No. 2, 2016, co-edited with David Hornsby).

Brian Bow is Associate Professor of Political Science and the Director of the Centre for the Study of Security and Development at Dalhousie University. His PhD is from Cornell University, and he has been a visiting researcher at the Woodrow Wilson Center, Georgetown University, American University, Carleton University, and the Australian National University. He teaches courses on International Relations theory, foreign policy analysis, American foreign policy, Canadian foreign policy, diplomacy and negotiation, and research methods. He has published widely on Canada-US relations, Canadian foreign and defence policy, and regional politics in North America. His 2009 book—*The Politics of Linkage*—was awarded the Donner Book Prize, as the best public policy book published in Canada that year.

Lee-Anne Broadhead is Professor of Political Science at Cape Breton University in Canada. She is the author of *International Environmental Politics: The Limits of Green Diplomacy* (Lynne Rienner, 2002) and has published widely on peace and security issues as well as on the social and political consequences of globalization in such journals as *British Journal of Canadian Studies*, *International Journal*, *Canadian Woman Studies/les cahiers de la femme*, *Peace Magazine* and others. Her current work is focused on critical remembrance – a concept she utilizes to focus, through the lens of critical social theory, on global social justice including the consideration of specific issues and historical examples of economic, environmental, military and imperial injustice.

Adele Buckley, physicist, engineer and environmental scientist; Past Chair of Canadian Pugwash (CPG), currently Treasurer, Executive Committee; member of international Pugwash Council. Wide ranging work in environmental technology and science. Formerly V.P. Technology and Research, Ontario Centre for Environmental Technology Advancement; formerly V.P. Solarchem Environmental Systems; founding partner of Sciex, developer and manufacturer of mass spectrometry systems w. extensive worldwide installations. Leads CPG campaign for a nuclear-weapon-free Arctic; presentations in 8 countries. At Thinkers' Lodge, Pugwash Nova Scotia, was lead organizer for international conference *A Secure World without Nuclear Weapons* (WWNW) 2012, and lead organizer for *The Way Forward to a World without Nuclear*

Weapons, 2015. Advisory board, Canadians for a Nuclear Weapons Convention. For Global Issues Project (GIP) – a series of roundtables on looming crises of sustainability, compounded by climate change. Active involvement in six roundtables, e.g. – Securing the Peaceful Uses of Space for Future Generations. Leader of the international expert roundtable on Freshwater.

Aldo Chircop is Canada Research Chair in Maritime Law and Policy and professor of law at the Schulich School of Law. He is also research associate at the Centre for the Study of Security and Development at Dalhousie. He chairs the International Working Group on Polar Shipping of the International Maritime Committee. He has published extensively in the fields of the international law of the sea, maritime law and polar shipping.

Robin Collins is national secretary of World Federalist Movement - Canada. He works on several disarmament campaigns, and in support of sustainable common security, responsibility to protect and a UN emergency peace service.

Bev Delong co-founded Project Ploughshares Calgary, served as President of Lawyers for Social Responsibility from 1991 - 2010, and is a Director of the International Association of Lawyers Against Nuclear Arms (IALANA). She serves as Chairperson of the Canadian Network to Abolish Nuclear Weapons, a Director of Canadian Pugwash and a member of the Steering Group of Canadians for a Nuclear Weapons Convention.

Isabelle Desmartis is currently Director General Policy Planning at the Department of National Defence. In this capacity, she provides strategic policy direction to senior DND/CF leadership that incorporates advice on current and emerging global trends in the defence and security domain. Key files include defence policy review, cyber policy, space security policy, Arctic, regional and functional strategic analysis on global trends, as well as arms control and non-proliferation.

Ms. Desmartis has extensive experience in intelligence and policy issues, particularly in the area of international and national security. From 2011 to March 2015, she served as the Assistant Chief of Defence Intelligence, supporting the Chief of Defence Intelligence for the Department of National Defence and the Canadian Armed Forces in all his leadership functions as his deputy. She has also worked in various policy functions at National Defence from 1998 to 2005, including the area of weapons of mass destruction and arms control, culminating in the position of Director of Strategic Analysis. From 2006 to 2011, Ms. Desmartis occupied various positions in the areas of national and transportation security, including Director of Intelligence and Senior Director of Aviation Security Policy at Transport Canada. Ms. Desmartis trained as a lawyer and has a PhD in international security from Laval University.

Walter Dorn is Professor of Defence Studies at the Royal Military College of Canada (RMC) and the Canadian Forces College (CFC). He teaches officers of rank major to brigadier-general from Canada and about 20 other countries. He specializes in arms control, peace operations, just war theory, international criminal law, international verification and enforcement, and the United Nations. As an "operational professor" he participates in field missions and assists international organizations. In 2017,

Dr. Dorn took up an appointment with the United Nations as "Innovation and Protection Technology Expert" to help select technologies for testing, piloting and employing in UN peace operations. His two most recent books are *Air Power in UN Operations: Wings for Peace* (Ashgate, 2014) and *Keeping Watch: Monitoring, Technology, and Innovation in UN Peace Operations* (UNU Press, 2011)

David Fleming completed his graduate studies in Medical Physics at McMaster University. Following a post-doctoral position at McMaster, he spent four years as Assistant Professor in the Department of Biomedical Technologies at the University of Vermont. From 2002-12, David was the Canada Research Chair in X-ray Fluorescence Medical Physics at Mount Allison. He has served as the Chair of the Division of Medical and Biological Physics of the Canadian Association of Physicists, and recently completed a term as Head of the Physics Department at Mount Allison.

Elissa Golberg was named Assistant Deputy Minister – Partnerships for Development Innovation at Global Affairs Canada in February 2015. She is also currently the department's champion for innovation. Ms. Golberg has successfully pioneered complex policy and program initiatives, and led multi-disciplinary teams working on significant international peace and security, human rights, emergency management, and sustainable development challenges. Her previous roles have included Ambassador and Permanent Representative of Canada to the United Nations in Geneva and to the Conference on Disarmament; Director-General of the Canadian Government's Stabilization and Reconstruction Task Force; Representative of Canada in Kandahar, Afghanistan; and Executive Director of the Independent Panel on Canada's Future Role in Afghanistan. Ms. Golberg is a recipient of the NATO ISAF General Service medal, the Queen's Jubilee Medal, the Public Service Award of Excellence, and 3 Ministers' Awards for Foreign Policy Excellence. She has been a World Economic Forum Young Global Leader, and a member of the Forum's Global Agenda Council on Violence and Fragility

Laura Grego is a Senior Scientist in the Global Security Program of the Union of Concerned Scientists, where she focuses on the technology and security implications of national missile defense and of space security. She is the author or co-author of roughly 30 peer-reviewed, published papers on a range of topics, including cosmology, space security, and missile defense. Since joining UCS in September 2002, she has been cited by Boston Globe, Chicago Tribune, Los Angeles Times, New Scientist, New York Times, Washington Post and USA Today, and has appeared on CNN, Fox News, the Discovery Channel, and NPR. She also has testified before Congress and addressed the United Nations Conference on Disarmament on space security issues. Before joining UCS, Grego was a postdoctoral researcher at the Harvard-Smithsonian Center for Astrophysics. She earned a doctorate degree in experimental physics at the California Institute of Technology and a bachelor of science degree in physics and astronomy at the University of Michigan.

David Harries has lived in 20 countries and paid working visits to another 93. He earned two graduate degrees in nuclear engineering at the University of London then served Canada in the Canadian Forces for several decades as a NATO officer, a UN peacekeeper, an airborne engineer, a military professor, and finally as Director of Curriculum Planning and Deputy Commandant at the National Defence College of Canada in Kingston. Six years (1996-2002) were spent based in Jakarta and Singapore

working and teaching throughout Asia in private and public settings. From 2004 to 2008 he was Executive Director of the three MA programmes at the Royal Military College of Canada (RMC): Security and Defence Management and Policy. He has worked in the public and private sectors as a consultant in personal and corporate security, and as a senior advisor and professor in heavy engineering, national development, humanitarian aid, post-conflict/post-disaster response and recovery, executive development and university education. He is presently Chair of Canadian Pugwash and head of its Foresight Committee, a Fellow of the World Academy of Art and Science (WAAS), one of three Principals of the WAAS-supported online Security and Sustainability Guide, President of ProteusCanada, Foresight Advisor at IdeaConnector.net, Associate Executive Director of Foresight Canada and Assistant Coach of the RMC varsity men's rugby team.

Anders Hayden is Associate Professor in the Department of Political Science and College of Sustainability at Dalhousie University in Halifax, Canada. He is particularly interested in the evolving balance among three different approaches to climate change: “business as usual,” ecological modernization (or “green growth”), and sufficiency (which challenges the idea of infinite growth of production and consumption). He is the author of two books: *When Green Growth Is Not Enough: Climate Change, Ecological Modernization, and Sufficiency* (McGill-Queen's University Press, 2014) and *Sharing the Work, Sparing the Planet: Work Time, Consumption & Ecology* (Zed Books / Between the Lines, 1999). His articles have appeared in journals including *Environmental Politics*, *Politics & Society*, *Journal of Environmental Policy and Planning*, *Journal of Environment and Development*, and *Sustainability*.

Joan Hicks has been a member and chair of many boards and committees as well as collaborating on a variety of innovative community projects. Her work has concentrated on providing opportunities for learning that focused on equality for women, opportunities for adult literacy, seniors' learning, understanding international issues and promoting peace. This includes the Canadian Congress for Learning Opportunities for Women, International Council on Adult Education, Nova Scotia Voice of Women for Peace, NS VOW Peacemakers Camp, Veith House and the Curriculum Committee for Halifax for the Seniors College of Nova Scotia. She coordinated local logistics for the Canadian Pugwash meeting at Thinkers Lodge in 2012 on the theme World Without Nuclear Weapons.

Sean Howard is adjunct professor of political science at Cape Breton University, researching the diplomacy and politics of nuclear arms control, as well as the politics and culture of war commemoration. Sean holds a Ph.D. from the Department of Peace Studies, University of Bradford, UK. He has worked for a number of British NGOs and was founding editor of *Disarmament Diplomacy*, the journal of the Acronym Institute. He is also the author of three collections of poetry, the most recent – *The Photographer's Last Picture* (Gaspereau Press, 2016) – reflecting on the enduring cultural traumas of the Great War.

Cesar Jaramillo is Executive Director of Project Ploughshares, based in Waterloo, ON. His areas of expertise include nuclear disarmament, outer space security and conventional weapons control. As an international civil society representative, Cesar has addressed, among others, the UN General Assembly First Committee (Disarmament

and International Security), the UN Conference on Disarmament, the UN Committee on the Peaceful Uses of Outer Space (COPUOS), and states parties to the Nuclear Non-Proliferation Treaty (NPT). He has also given guest lectures and presentations at academic institutions such as the National Law University in New Delhi, the China University of Political Science and Law in Beijing, and the University of Toronto. An occasional columnist on matters of disarmament and international security, Cesar graduated from the University of Waterloo with an MA in global governance and has bachelor's degrees in honours political science and in journalism. Prior to joining Project Ploughshares, Cesar held a fellowship at the Centre for International Governance Innovation (CIGI).

Hans M. Kristensen is Director of the Nuclear Information Project at the Federation of American Scientists in Washington, D.C., where he is responsible for researching and documenting the status and operations of nuclear forces of the nine nuclear-armed states. He is a frequent advisor to the news media on the status of nuclear forces and policy. Kristensen is co-author of the bi-monthly FAS Nuclear Notebook column in the Bulletin of the Atomic Scientists and the World Nuclear Forces overview in the SIPRI Yearbook, both of which are some of the most widely used reference material on the status of the world's nuclear arsenals."

Peggy Mason - A former Canadian Ambassador for Disarmament to the UN and an expert on the political/diplomatic aspects of UN peacekeeping training, Peggy Mason is now the President of the Rideau Institute, an independent, think tank focusing on research and advocacy in foreign, defence and national security policy. In that capacity she brings a progressive voice to issues ranging from the imperative of nuclear disarmament to the centrality of UN conflict resolution, appearing regularly in the blogosphere, in print media and on radio and television. A lawyer and member of the University of Ottawa Common Law Honour Society, in 2016 she was awarded the Canadians for a Nuclear Weapons Convention Achievement Award.

Paul Meyer is Adjunct Professor of International Studies and Fellow in International Security at Simon Fraser University and a Senior Fellow with The Simons Foundation Vancouver. Prior to assuming his current appointments in 2011, Paul had a 35 year diplomatic career with Canada's Foreign Service, including serving as Canada's Ambassador and Permanent Representative to the UN and the Conference on Disarmament, Geneva (2003-2007). In addition to teaching a course on diplomacy at SFU's School for International Studies, his research interests include nuclear arms control and disarmament, outer space security and international cyber security. Paul is currently Vice Chair of Canadian Pugwash.

Ernie Regehr, O.C., is Senior Fellow in Defence Policy and Arctic Security at The Simons Foundation of Vancouver, and Research Fellow at the Centre for Peace Advancement, Conrad Grebel University College, the University of Waterloo. He is co-founder and former Executive Director of Project Ploughshares. His publications on peace and security issues include books, monographs, journal articles, policy papers, parliamentary briefs, and op-eds. His most recent book is *Disarming Conflict: Why peace cannot be won on the battlefield* (Between the Lines, Toronto, and Zed Books, London, 2015). He is an Officer of the Order of Canada.

Hon. Douglas Roche, O.C., is an author, parliamentarian and diplomat, who has specialized throughout his 40-year public career in peace and human security issues. Mr. Roche was a Senator, Member of Parliament, Canadian Ambassador for Disarmament, and Visiting Professor at the University of Alberta. He was elected Chairman of the United Nations Disarmament Committee at the 43rd General Assembly in 1988.

In 2010, the City of Hiroshima named him an Honourary Citizen for his nuclear disarmament work and particularly for founding the Middle Powers Initiative. The author of 21 books, his latest is *Hope Not Fear: Building Peace in a Fractured World*. Mr. Roche holds nine honorary doctorates from Canadian and American universities and has received numerous awards for his work for peace and non-violence, including the Mahatma Gandhi Foundation for World Peace Award (Canada) and the United Nations Association's Medal of Honour. In 2009, he received the Distinguished Service Award of the Canadian Association of Former Parliamentarians for his "promotion of human welfare, human rights and parliamentary democracy in Canada and abroad." He is an Officer of the Order of Canada. In 2011, the International Peace Bureau nominated him for the Nobel Peace Prize.

Erika Simpson is an Associate Professor in the Department of Political Science at the Western University; Vice-President of the Canadian Peace Research Association; a board member and past vice-chair of the Canadian Pugwash Group; a syndicated columnist for Postmedia; and the recipient of the Voice of Women's Shirley Farlinger Award for Peace Writings.

Shelly Whitman is the Executive Director of the Roméo Dallaire Child Soldiers Initiative. Dr. Whitman has an extensive career as an academic, teaching in International Development Studies and Political Science at Dalhousie University, Saint Mary's University and the University of Botswana. Her research interests have been broadly focused on issues related to peace, development and human security.