

THE PLOUGHSHARES MONITOR

VOLUME 45 | ISSUE 1

SPRING 2024



A challenging year ahead for nuclear disarmament

AUTONOMOUS WEAPONS

AI targeting in Gaza
and beyond

OUTER SPACE

- We can't ignore the militarization of space
- The limits of satellite data

ARMS TRADE

Top Canadian weapons
suppliers to the U.S.

*"and they shall beat their swords into ploughshares,
and spears into pruning hooks; nation shall not lift
up sword against nation; neither shall they learn war
any more." Isaiah 2:4*

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Cover image: The Doomsday Clock set by the *Bulletin of the Atomic Scientists* remains at 90 seconds to midnight, the closest it has ever been to Armageddon.

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From the Director's Desk

A challenging year ahead for nuclear disarmament



Written by Cesar Jaramillo

Anyone hoping to see progress on nuclear disarmament in 2024 will need to temper expectations. In an era marked by heightened geopolitical tensions, rapid technological advancements, increasing military spending, and major overlapping conflicts – some involving nuclear-weapon states – the pursuit of nuclear disarmament faces formidable challenges. This remains true, even as we live under the real threat of nuclear conflict.

The Doomsday Clock set by the *Bulletin of the Atomic Scientists* remains at 90 seconds to midnight, the closest it has ever been to Armageddon. It serves to remind us of the urgent need for nuclear disarmament. But the road to that goal is rife with obstacles. Here are three.

1 Heightened nuclear weapons risk in the Ukraine conflict

Key stakeholders in the Ukraine conflict – Russia, the United States, and NATO members France and the United Kingdom – possess most of the world's nuclear arsenal. All claim to adhere to the doctrine of nuclear deterrence, which posits that the possession of nuclear weapons can prevent conflict by deterring adversaries.

In fact, these states believe that the use of nuclear weapons could be justified under certain

circumstances.

Now Russia is making reckless threats to use nuclear weapons in its current conflict with Ukraine, which it frames as an existential struggle with the West. A significant defeat in a conventional battle could create a justification for Russia to use nuclear weapons.

Russia does not have a nuclear No-First-Use policy. Indeed, its nuclear doctrine includes conditions under which it would use nuclear weapons in response to conventional attacks.

2 The nexus between AI and nuclear weapons

Rapid technological advancements, particularly those with military applications, such as artificial intelligence (AI), present another significant challenge to nuclear disarmament efforts. Some of this new tech could make nuclear systems more vulnerable to attack or provoke the use of nuclear weapons in self-defence. And, while it might be argued that AI-driven technologies promise enhanced efficiency and precision in targeting, they also introduce new complexities and uncertainties, which could raise fears, also encouraging the use of nuclear weapons.

AI could, for instance, disrupt traditional command-and-control structures. As AI systems

A disheartening state of affairs

On February 28, Project Ploughshares hosted a webinar, "Prospects for Peace in the Ukraine War, Two Years On," with Executive Director **Cesar Jaramillo** moderating. The speakers were University of Toronto professor Seva Gunitsky, President of the Rideau Institute Peggy Mason, and former Canadian ambassador to Finland Chris Shapardanov.

Cesar stated the Ploughshares position: the Russian invasion in 2022 was illegal and must be condemned. Nevertheless, we call for early peace negotiations.

The speakers seemed to think such negotiations unlikely. They generally agreed that Western military aid to Ukraine should continue, but that a decisive military victory by either side was not in the cards. Only too possible was an ongoing "frozen" conflict.

No one was optimistic about getting from the battlefield to the negotiating table in the near term. However, as Cesar noted, while conditions are not ripe for negotiations, conditions don't just happen. They can be, and are, created.

The webinar can be found on the Project Ploughshares YouTube page.



become increasingly autonomous, there is a risk that they could misinterpret signals or escalate conflicts beyond human control. AI-driven cyber capabilities could target nuclear infrastructure and command systems, undermining confidence in the security and reliability of nuclear arsenals, and lead to destabilizing escalatory responses.

AI-enabled disinformation campaigns and cyber manipulation tactics could exacerbate tensions and inflame existing conflicts, increasing the risk of nuclear brinkmanship.

3 A weakened NPT

The Nuclear Non-Proliferation Treaty (NPT) has failed to deliver on – or even make progress toward – the objective of nuclear abolition. Two successive NPT review cycles, which concluded with Review Conferences in 2015 and 2022, have failed to produce even a consensus outcome document.

Still, most stakeholders seem to agree that the NPT remains the centrepiece of the global nuclear disarmament and non-proliferation regime. Nuclear-armed member states support it, perhaps because it provides a forum in which, thus far, they have been able to shape the official nar-

ative.

This summer in Geneva, the first of the next set of NPT Preparatory Committee meetings leading to the 2026 NPT Review Conference will be held. But more and more stakeholders question if this regime presents a viable path to nuclear abolition.

Recently 69 states – the total membership of the Treaty on the Prohibition of Nuclear Weapons (TPNW) and all parties to the NPT – went on record to declare that nuclear-armed NPT member states the United States, the Russian Federation, China, France, and the United Kingdom are in breach of their legal obligations under the NPT. This extraordinary consensus was articulated in the declaration of the Second Meeting of States Parties to the TPNW, held at the United Nations in New York from November 27 to December 1, 2023.

The NPT's Article VI outlines obligations for nuclear-weapon states (NWS) to pursue disarmament in good faith. Yet, according to Article 24 of the TPNW declaration, the behaviour of NWS "unquestionably" represents "a failure to meet their legally binding obligations under Article VI of the NPT." It goes on to declare that in the period since the First Meeting of States Parties to the TPNW, "none of the Nuclear-Weapon States

have made progress in accordance with Article VI of the NPT and in their unequivocal undertaking to accomplish the elimination of their nuclear weapons.”

Article 24 serves as a groundbreaking indictment of NWS and underscores the growing determination of non-nuclear-armed states to demand concrete and demonstrable action toward nuclear abolition. Yet the divide between TPNW supporters and NWS remains deep.

The big question

Is the international community willing to risk certain catastrophe if Russia or any nuclear-armed state decides to deploy nuclear weapons? Surely the current threat of nuclear escalation underscores the urgent need for diplomatic efforts to mitigate such a risk.

The obstacles discussed – and others – reveal a pressing need for enhanced dialogue to address the escalating risks that nuclear weapons will be employed. At a minimum, effort must be exerted to enhance nuclear security to mitigate the risks of unintended escalation and to preserve global peace and stability. □

See also An indictment of non-compliance: States Parties to the TPNW accuse nuclear-weapon states of legal breach on the Ploughshares website. Go to Research and Reports.

5 obstacles to disarmament

In early January, Ploughshares Executive Director Cesar Jaramillo participated in an international civil-society webinar, *The New Agenda for Peace and a UN Special Session on Disarmament*. He presented key hurdles to an SSOD. In fact, the five points he outlined can readily be seen as obstacles to disarmament itself. They are:



1. The transformation of the world order from unipolar (the United States the only hegemon) to multipolar (rise of Russia and China, in particular);
2. A loss of faith in multilateral processes, including the nuclear disarmament regime and the Arms Trade Treaty, which has not slowed “unscrupulous arms dealings”;
3. A global arms industry with great political influence;
4. Emerging military technologies that are advancing more rapidly than regulators can handle;
5. No state or group of states – in the West at least – leading the drive for disarmament.

The webinar can be found at <https://www.youtube.com/watch?v=Wlt0eFtSefA>.

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Advancing new program "Climate, Peace, and Security"

The program's first major event was held November 23 at the Balsillie School of International Affairs in Waterloo, Ontario. Project Ploughshares staff workshopped with friends and colleagues from academia, the military, and civil society to explore the many points at which climate, peace, and security intersect. The objective: to provide advice and guidance for a peace research institute that has long focused on disarmament and international security on how to craft the parameters of this new field of endeavour. Participants presented a variety of options for the niche that Project Ploughshares could most effectively and usefully inhabit.



We can't ignore the militarization of space

Written by Jessica West

For decades, the mantra of space security has been that space is “militarized but not weaponized.” A core objective of our work at Project Ploughshares has been to prevent the weaponization of space; the United Nations refers to the prevention of an arms race in outer space (PAROS). But preserving a distinction between militarization and weaponization has failed us by normalizing the militarization of space in ways that encourage weaponization and other harmful activities.

Military origins

It might be true, as some say, that “space has always been militarized.” But much of this activity has been camouflaged. In my work, I have explored how militarization has been normalized as “peaceful use,” meaning that space objects are not used aggressively in space. And indeed, there have been peaceful benefits from military space programs, running the gamut from verification of arms control agreements to civilian uses of global space-based positioning, navigation, and timing services, which now underpin daily activities on Earth. So, perhaps the problem really is with the weaponization and not militarization of outer space.

But both processes exist in the same web of violence. The military origin story of human space activities is detailed in Bleddyn Bowen’s book, *Original Sin*, which traces the pursuit of space technology to “enhance the killing capa-



bility of the state.” This aim spurred the development of weapons capabilities, both in space and targeting space, with testing beginning in 1958.

So far, we have managed to avoid blatant weaponization and warfighting in outer space, both because making effective space weapons is hard to do and because, for a time, military dependence on space by dominant actors created a disincentive for destructive actions. But times are changing.

The space security dilemma

The 1991 Persian Gulf War has been dubbed “the first space war” because of the pivotal role that the U.S. Global Positioning System (GPS) and other space systems played in navigating, communicating, and guiding American forces and weapons. It showcased the power of leveraging space systems to achieve military objectives and activities on Earth, and spurred the global development of such systems. But it also raised fears about dependence on such vulnerable systems. A decade later, a report by the U.S. Space Commission headed by Donald Rumsfeld depicted space capabilities as the soft underbelly of American power and raised fears of a space “Pearl Harbor.”

We are now in an era in which the most advanced military doctrine emphasizes the ability to use outer space at all times, while denying that ability to others. Weapons and other capa-

Finding success in failure: A report on the final session of the OEWG on reducing space threats

In January, Project Ploughshares published a major report by Senior Researcher Jessica West: *The Open-Ended Working Group on Reducing Space Threats: Recap of the fourth and final session, August 2023*. In it, she describes the dynamics of the final session, which ultimately failed to produce a substantive or even procedural final report.

Nonetheless, Jessica found much to value in this session and the entire OEWG process. She wrote that the OEWG successfully reinvigorated “conversation and cooperation by identifying threats and perceptions of threats that drive insecurity, arms racing, and conflict and then showing how to mitigate threats through norms, principles, and rules of behaviour rooted in existing international law and governance frameworks.”

Because the scope of discussion was “unprecedented,” by the end of the final session, participating states “had a much better understanding of how they and other states perceive threats in outer space and of the tools available to mitigate such threats.”

As well, “inclusivity at OEWG discussions was exceptional.” Among the voices heard were those from academia, civil society, industry, and developing states.

This OEWG was notable for cooperation by “both advanced and emerging spacefaring states.” Thirty-three of these states signed the final group statement.

The report noted “the growing convergence of views on international law; the contributions of politically binding commitments to the implementation of law and governance more broadly; and core measures to protect civilians and the environment, and to mitigate the drivers of armed conflict.”

Finally, many states “expressed a desire to continue the OEWG discussion.”

As Jessica remarks in the report, “the organizers, facilitators, and participants should all be proud of these achievements.”

To access the report, go to the Ploughshares website (www.ploughshares.ca), click on “Research,” “Reports,” and scroll down.



bilities that inflict harm on space systems are essential to this effort. Each year, my colleagues at Secure World Foundation and the Center for Security and International Studies produce detailed reports tracking the widening scope and proliferation of such capabilities.

Space militarization goes mainstream

Militarization involves actively preparing for war. This process is becoming more pronounced in outer space. The United States is often singled out in this regard, but it is far from alone.

According to the Union of Concerned Scientists Satellite Database, approximately 30 states, from all regions of the world, operate military satellites today. The latest Space Re-

port by the Space Foundation pegs global military spending in 2023 at \$54 billion (U.S.) – a whopping \$10 billion more than in 2022. These figures are likely low, given incomplete information on China.

While most of today’s operational satellites are commercial, most commercial operators depend on government contracts, particularly those involving national armed forces. Over time, the private sector has gone from building military hardware and providing ad hoc services such as communications to providing capabilities that fully integrate with routine, daily military operations. These additional services include Earth observation, space situational awareness, space transport, and emerging and

on-orbit logistics and servicing.

The war in Ukraine is revealing the scope of third-party purchases of satellite data on the warfighting efforts of both sides. We can see that the value of space-derived data is continuing to grow in an emerging era of warfighting powered by artificial intelligence. Commercial operators are now fully in the crosshairs of competing militaries, and a core focus of competing deterrence and defence efforts.

Although, in theory, no one wants war in space, many states are preparing for it. At least 12 – Australia, Canada, China, France, Germany, India, Italy, Japan, Russia, Spain, the United Kingdom, and the United States – have military units and commands dedicated to protecting and defending their assets in outer space. Their defence capabilities include those intended to deny potential adversaries the use of space, which Theresa Hitchens has referred to as “offensive by any other name.”

Space is also embedded in many military alliances and cooperation arrangements, including the recently expanded Combined Space Operations Center led by the United States, NORAD, NATO, Five Eyes, the European Union, the Quadrilateral Security Dialogue (Australia, India, Japan, United States) and AUKUS (Australia, United Kingdom, United States). China and Russia are also pursuing a closer military relationship in space, and there are both security and space dimensions to China’s Belt-and-Road infrastructure initiative.

The old distinction between passive and aggressive uses of space is increasingly blurred. For example, the United States, Russia, and China are engaged in an ongoing cat-and-mouse game of close approaches and quick escapes, using highly manoeuvrable satellites supposedly designed for inspections. Both China and the United States operate space planes that carry unknown cargo. So-called Russian doll satellites have released subsatellites and other objects in orbit. And sleeper objects believed defunct have come back to life.

Other advanced capabilities, such as removing defunct objects from orbit and grappling with another satellite for refueling or servicing needs, are being pursued by both military and civilian operators. All could be used for harmful purposes.

Now this process of militarization is expanding beyond Earth orbit. Although the Outer Space Treaty specifically sought to demilitarize the Moon, military interest in the Moon and the surrounding area is intensifying. While exploration activities, such as the Artemis program, are civilian, key infrastructure processes, including situational awareness, communications, and navigation and timing, which will support space activities on and around the Moon, have military leads. And talk of the need to protect civilian and commercial lunar activities is growing.

A course correction

It’s time to call attention to the escalating militarization of space. The intention is not to demonize states or deny their legitimate national security interests in outer space. It must be acknowledged that there will be military use of space. But the current trajectory is headed for a military confrontation that risks disaster for everyone.

In the absence of multilateral commitments to ban weapons in outer space, short-term efforts to de-escalate and de-centre the militarization of space and the arms racing that it leads to should include:

1. The pursuit of norms of behaviour that prevent and mitigate misperceptions and misunderstandings that can escalate to armed conflict, and help to differentiate peaceful/non-aggressive uses of outer space from harmful ones;
2. The adoption of unilateral arms control measures, such as the moratorium on destructive tests of direct-ascent anti-satellite weapons, which will not only prevent unnecessary contamination of the space environment but diminish one source of the brewing arms race;
3. Decoupling, where possible, military from civilian and commercial capabilities and activities to mitigate growing perceptions of threats and to prevent unnecessary harm from potential military actions against dual-use systems;

4. Promoting non-military activities and capabilities in space to facilitate cooperative governance and share the benefits of outer space more widely, including on the Moon;
5. The integration of discussions on outer space security with other arms control,

strategic stability, and demilitarization discussions.

We need to de-emphasize outer space as a military and warfighting domain. The focus of military policies and objectives that relate to outer space should shift from defending and warfighting to de-escalation and preventing armed conflict. □

Jessica West is a Senior Researcher at Project Ploughshares. She can be reached at jwest@ploughshares.ca.

Dr. Jessica West: Space Pioneer!

On February 15, the Space Policy Pioneers Podcast released an interview with Ploughshares Senior Researcher Jessica West. The interviewer was Andy Williams, Director of Science in Space, a niche space policy consultancy firm.

The podcast interviews “leading space policy experts” about “their informative and inspirational career stories” to help listeners “learn about the different career paths in space policy and the skills you need to be successful.”

Ploughshares supporters, even those not planning a career in space policy, will be interested to learn about how Jessica’s graduate studies and work background have contributed to her success as a space policy researcher and analyst. Although she didn’t study space security or space technology in grad school, she honed many “soft skills” that have served her well in her career. One of the things that she learned to do well is, in Andy’s words, “to summarize a complex topic in an understandable and digestible way.”

Jessica illustrates this skill in her concise and thoughtful discussion on the United Nations First Committee, which deals with disarmament and international security matters, and on some of its subsidiary bodies, including the Committee on the Peaceful Uses of Outer Space and the recently concluded Open-Ended Working Group on Reducing Space Threats (see p. 7; a series of her reports on the OEWG can be found on the Ploughshares website).

Jessica also feels that she has learned how to “discern good from bad information, to evaluate sources, to ask critical questions, and to dig and really be able to piece together a picture of what’s happening.” She emphasizes the value of this skill when advising the interns that Ploughshares is mentoring in increasing numbers.

These skills are apparent in the written reports, articles, and analysis that Jessica produces. Mr. Williams acknowledges the value of her work on the topic of preventing war in outer space: “I really appreciated some of the articles that you wrote about this process [of establishing norms]. I think it’s really shining a light on a different aspect of space governance.”

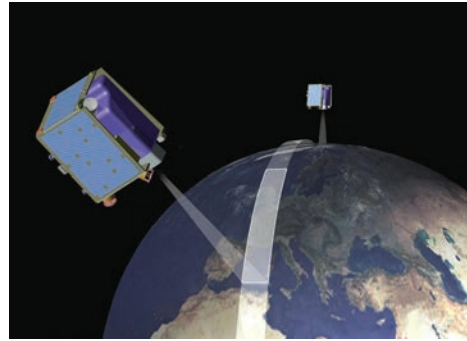
Jessica does an excellent job in describing the various facets of her current job as a Senior Researcher with Project Ploughshares, and how her work contributes to wider efforts. She also talks about the value of community, of networking (especially for women), and of civil society in the process of decision-making relating to space governance.

And Jessica talks about the need for peace, which she calls “the bedrock of our ability to use outer space.” She sees her work at Ploughshares in this context: “The ability to maintain peaceful use of outer space, to maintain an outer space environment that benefits everyone, that takes a community.... It takes commitment. It takes constant actions, both big and small. And so, I try to see my work as part of this collective effort.”

To listen to the complete podcast, go to <https://podcasts.apple.com/us/podcast/the-space-policy-pioneers-podcast/id1719520552>.



Tracking human rights violations with no certain access to satellite data



Rendering of the RapidEye satellite constellation in action around the Earth. Credit: Rmatt / [CC BY-SA 3.0](#).

Written by Saad Hammadi

Data from Earth observation (EO) satellites can be critical in identifying and documenting human rights abuses. But some satellite companies are currently restricting access by human rights organizations to geospatial data on Israel while Israel conducts military operations in Gaza. This situation raises questions about transparency, political leverage, and how decisions about who should have access to the data are made.

Satellite data and human rights

Easy access to open source and commercial satellite data in the last decade has revolutionized the ways in which media, aid agencies, and human rights organizations document and expose war crimes and grave human rights violations, particularly in places of conflict.

According to the Union of Concerned Scientists, there are currently more than 1,100 active EO satellites, with about half owned and operated by private entities. State-owned satellite programs such as the European Space Agency's Copernicus or NASA's Earth Observation Satellite have an open data policy that serves strategic interests, including exchange of information and climate diplomacy.

Growing private sector participation in EO has drastically expanded paid access to higher resolution imagery and specialized services. These private capabilities have also expanded public benefits; for example, some leading private companies

have made data available to support humanitarian efforts.

In September 2017, Amnesty International used satellite evidence to show that the Myanmar military had burned villages in Rakhine State. The destruction forced nearly one million Rohingya men, women, and children out of the country. Over the last two years, human rights groups and media have also used satellite data to document Russia's military invasion and destruction of Ukraine.

Timestamps and comparative analysis of satellite images have been used by media and human rights organizations to document changes in Gaza's landscape following the latest Israeli invasion. The images showed the October deployment of hundreds of Israeli military tanks and armoured vehicles in northern Gaza, and how vast swaths of land have been destroyed by land and air strikes since the invasion began. But accessing useful data has not always been straightforward.

Clash of interests

Governments and the military, the biggest clients of commercial satellite operators, have tools to block public access to certain images. For example, parts of Israel and other militarily sensitive locations around the globe are completely blurred on public platforms such as Google Earth. As commercial imaging capabilities proliferate around the globe, maintaining such bans is be-

Calling for legal controls on military AI

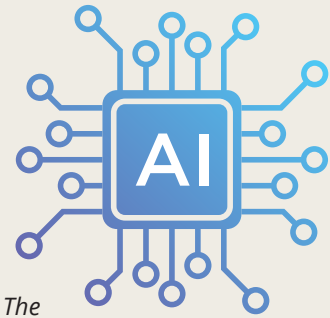
Last November, the Centre for International Governance Innovation posted an updated version of an opinion piece by Ploughshares Senior Researcher Dr. Branka Marijan that first appeared on the websites of C4ISRNET and *Defense News*.

“We need hard laws on the military uses of AI – and soon” surveys the “flurry of recent governance activity” related to military uses of artificial intelligence (AI). Initiatives discussed include the U.S. Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence and the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, initiated by the United States, supported by 31 states at the time of writing (and 51 states by the time this issue of *The Monitor* went to press). The lack of significant involvement by either China or Russia is noted, with concern.

Most of the efforts taken so far involve voluntary measures to control military AI. Even these efforts are hampered by geopolitical tensions among some of the major players, including the United States, Russia, India, and China.

But voluntary agreements are not likely to suffice in the future, when “more states deploy AI and more autonomous systems in battlespaces.” Once this happens, “it will be important to have clarity on what is permissible, open communication channels, and clear rules guiding uses of AI and autonomy.”

Branka concludes that “more governance, including hard laws and complementary processes on military AI and autonomous weapons, is needed.” Getting to this stage will require “skilled diplomacy” that engages both allies and adversaries.



coming more difficult. However, other means continue to be available to shroud sensitive images.

States have a history of buying exclusive rights to images of areas they do not want anyone else to access; some commercial companies even specialize in selling exclusive rights to geospatial data. According to *The Guardian*, the U.S. Pentagon spent millions of dollars to secure exclusive rights to images of the effects of bombing in Afghanistan in 2001. Although the U.S. government already had the legal right to shutter control – a restriction on the imaging of certain areas – obtaining commercial rights was seen to be the most feasible way to prevent media from accessing the images.

As the EO industry has evolved, some commercial satellite operators have started offering non-exclusive rights to images as a strategy to expand their business and to make the data available to the media, the United Nations (UN), and human rights and humanitarian agencies.

While private satellite companies have no legal or commercial obligations to make geospatial data publicly available, providing commercial access can sustain the business and make public access to humanitarian data feasible, Agnieszka Lu-

kaszczyk, Vice President, Government Affairs for Europe, Middle East and Africa at Planet Labs, told *Geospatial World*.

Some companies feel that releasing such data is their social responsibility, one that enables transparency and makes accountable not only the commercial providers but also governments and the military. The cases against Myanmar, Russia, and Israel currently before the International Court of Justice for grave international crimes have been documented with satellite evidence.

But some satellite operators face conflicting demands, some of which might threaten their businesses; some fear repercussions from their home governments for making geospatial data available to actors who may be considered a threat. For example, Canada’s Remote Sensing Space Systems Act has a provision to suspend or cancel the licence of an operator if their operation is deemed “injurious to ... Canada’s conduct of international relations.”

So, while the demand for information from the media and humanitarian agencies is intense, companies must “balance the potential for operational harm,” says an industry expert. The potential for harm and abuse of the data can affect “our

The Summit of the Future 2024

In September, the United Nations will hold the Summit of the Future, “a once-in-a-generation opportunity to enhance cooperation on critical challenges and address gaps in global governance, reaffirm existing commitments including to the Sustainable Development Goals (SDGs) and the United Nations Charter, and move towards a reinvigorated multilateral system that is better positioned to positively impact people’s lives.”



Last December, the Summit’s co-facilitators invited “written inputs” from “Major Groups and Other Stakeholders” and from “other civil society networks and organizations, non-governmental organizations, the private sector and academia.” Several hundred submissions were received and posted on the UN website.

One of the topics open for discussion in September is “Sharing the benefits of space.” Project Ploughshares joined with the Outer Space Institute in submitting on this topic. Dr. Jessica West of Ploughshares served as the coordinator and focal point. The six-page document now on the UN website provides “practical measures” “in support of a holistic approach to the governance of outer space activities.”

ability to deliver in other places of the world,” where it is also needed, says the expert. And so some operators self-censor.

The situation in Gaza

While many of the effects of the Israeli military operation on Gaza have been documented through satellite images, human rights researchers find it difficult to access high-resolution images of Israel. Access to such data is critical to the ability to investigate and corroborate claims of violence and human rights violations committed by Israel, Hamas, and other armed groups in the region.

The U.S. government has a unique cap on resolution for images of Israel; it explicitly prohib-

its national satellite operators from imaging at a higher resolution than the specified limit. Micah Farfour, Amnesty International’s Special Advisor for Remote Sensing, has expressed concern that companies and popular platforms that host the relevant images have further degraded the resolution over key areas in Israel.

Data governance

That states such as Israel and the United States have significant leverage over satellite service providers raises questions about data governance, transparency, and the accountability of the commercial satellite imagery industry.

Images from satellite operators provide important evidence for human rights organizations wanting to document human rights violations. But these organizations are often forced to rely on the goodwill of commercial operators that also serve major military and government clients. In the end, satellite operators could choose to deny services to legitimate users – the human rights organizations – to avoid displeasing these major clients.

Due regard for human rights and international cooperation for remote sensing are enshrined in the Principles Relating to Remote Sensing of the Earth from Outer Space, which were adopted by the UN General Assembly in 1986. However, the principles relate primarily to natural resource management, land use, and protection of the environment. The potential use of satellite capabilities in the observation of conflicts and human rights violations was not considered in the 1980s. Neither was the role of commercial satellites.

Clearly, these principles need to be updated to reflect new and critical functions of remote sensing, such as the documentation of human rights violations in conflicts and the defining parameters for data access. State and nonstate actors must come together to set norms and standards on transparency, accountability, and protection of human rights that are in line with international humanitarian and human rights law. □

Saad Hammadi is a human rights advocate and has a Master of Arts in Global Governance from the Balsillie School of International Affairs. He was selected as a Policy Researcher at Project Ploughshares for Winter 2024 through the BSIA Technology Governance Initiative. He can be followed on Twitter/X @saadhammadi.

AI targeting in Gaza and beyond



The ruins of Watan Tower destroyed by Israeli airstrikes in Gaza City on October 8, 2023. Credit: Palestinian News & Information Agency (Wafa) in contract with APImages / [CC BY-SA 3.0](#).

Written by Branka Marijan

Is the world entering an era in warfare in which autonomous or semi-autonomous weapons, augmented by artificial intelligence (AI), become so accurate that military targets are hit with precision, sparing nearby civilian populations? Some experts and countries, including the United States, seem to think so. They are putting their faith in algorithms, which, by analyzing vast amounts of relevant data, can supposedly produce a map of potential targets on the battlespace, prioritize those targets, and then identify the best weapons to use to attack each target.

But we see something else when we examine current military practice involving AI-assisted military systems. We learn that AI tools that work well in a laboratory or a simulation are far from perfect in a real war, particularly one fought in a densely populated area.

Gaza not a laboratory

Consider the current war in Gaza, which has rapidly escalated from a localized crisis to a catastrophic humanitarian emergency with global impacts. In its quest to eliminate Hamas in Gaza, Israel is making significant use of AI to locate and select military targets. Yet the scale of the devastation is truly shocking.

Onlookers are left with key questions: If military AI systems are so advanced and precise, why have so many civilians been killed and maimed in Gaza? And why so much destruction of civilian infrastructure? There are several possible an-

swers. An increasingly convincing one is that AI-aided technology does not live up to the hype.

Flaws in how AI-assisted tech worked in actual combat could already be seen in 2021. Israel launched Operation Guardian of the Walls against Hamas in Gaza, dubbing the action the “world’s first AI war.” Israel Defense Forces (IDF) used data from various sources, including satellite imagery and signals intelligence, in at least three AI-decision-support systems developed by elite Unit 8200 (the Intelligence Corps).

A system named Alchemist analyzed incoming data and alerted troops in the field to possible attacks. Depth of Wisdom mapped out the network of tunnels, including the depth of each tunnel. This information was critical because the network was so extensive. Reports indicate that Hamas controlled an elaborate 300-mile network of tunnels in Gaza – almost half the length of the New York City subway system (hence the term “Gaza metro”).

Israel also employed an AI targeting-recommendation system named Gospel to zero in on Hamas combatants and their weapons, thus supposedly minimizing civilian casualties. The recommendations from the AI tools were then sent to the air force and ground forces through an application called Pillar of Fire.

With all these AI systems available, the operation still claimed approximately 243 Palestinian lives and wounded another 1,910. According to Israel, more than 100 of those killed were Hamas operatives; the other deaths and

injuries were attributed to rockets fired by Hamas.

The quality of human oversight

The systems in use since the 2021 operation have likely been refined. It seems that new technologies have been advanced, including one referred to as Fire Factory. This tool is thought to be capable of evaluating the ammunition capacity and allocating targets to various combat platforms, including both crewed fighter jets and uncrewed drones. The anticipated outcome would be a reduction in civilian casualties and an increase in targeting accuracy.

Gospel and other AI decision-support tools used by Israel for targeting are not seen as fully autonomous, because a human must approve the targets. The recommendations are reviewed by human analysts who then decide whether to approve the target. We don't know, however, how such decisions are made or how often the recommendations are rejected.

And it is critical to know the extent to which the individuals who approve the target engagement are fully aware of how the AI system arrived at its recommendation. Speaking to the *Japan Times*, an IDF colonel noted that it can be hard to know how certain decisions were made. He stated, "And then sometimes I'm willing to say I'm satisfied with traceability, not explainability. That is, I want to understand what is critical for me to understand about the process and monitor it, even if I don't understand what every 'neuron' is doing."

If the humans who approve the targeting do not fully understand how the recommendation was determined, their decision should be judged as not meeting the standards of international humanitarian law (IHL), even if current law does not adequately cover AI targeting.

The Guardian's investigation of AI targeting by Israel quoted a source who said that a human eye "will go over the targets before each attack, but

it need not spend a lot of time on them." There is a tendency for humans to trust too much in technology – what is known as automation bias.

Yet, Tal Mimran, a Hebrew University of Jerusalem law lecturer who has served in the IDF, has noted that AI targeting tools have limitations. He acknowledged that "there is a point where you need to make a value-based decision."

International response needed

In a rapidly changing world, more militaries are becoming increasingly dependent on AI-enhanced tools for targeting and other military operations. The current situation in Gaza is only one case that illustrates an immediate need for a robust international response, not only to mitigate the devastating consequences of AI tech on civilian populations but to protect civilian populations.

The challenge is that decision-support systems are not viewed as weapons. Therefore, they are outside the remit of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems or the Convention on Certain

Conventional Weapons (CCW) in Geneva.

In an article posted February 2 on the website of the Lieber Institute at West Point, several academics argued that Gospel – along with similar systems – "should be considered as a means of warfare as it forms a military system, or platform, that is being used to facilitate military operations." If so considered, these systems fall under the scope of the CCW, which is a body of IHL. Therefore, discussion at the CCW could, in theory, be expanded to include decision-making and decision-support systems. At the very least, states could share views on decision-support systems and how they relate to growing autonomy in weapon systems.

However, the CCW relies on consensus – increasingly taken to mean unanimity – to advance



The current situation in Gaza is only one case that illustrates an immediate need for a robust international response, not only to mitigate the devastating consequences of AI tech on civilian populations but to protect civilian populations.

all measures and, with certain opposition from key states such as Russia, the CCW seems ill-suited to deal effectively with autonomous weapons or decision-support systems. Newer parallel discussions on responsible military AI offer another avenue on how best to address the use of AI in targeting.

The existing legal obligations of warring states are designed to ensure proportionality of attacks and preserve the distinction between combatants and civilians. These standards must

not only be maintained but expanded.

The push to use AI systems in warfare is victimizing civilians. Instead of greater precision, it seems that AI is ushering in greater carnage and destruction. Without clear and enforceable rules and norms on the use of all military AI systems, the dangers of escalating violence loom large.

For more on this topic, see Branka's "How Israel is using AI as a weapon of war" on the website of The Walrus. □

Branka Marijan is a Senior Researcher at Project Ploughshares. She can be reached at bmarijan@ploughshares.ca.

A response to a questionnaire on human rights implications of new and emerging technologies in the military domain

Late last year, Project Ploughshares responded to a questionnaire produced by the Advisory Committee of the United Nations Human Rights Council. Its answers joined those of seven Member States and Observers and six nongovernmental organizations. Ploughshares was the only Canadian respondent.

The answers that Ploughshares provides reveal our multiyear commitment to the analysis of new and emerging military technologies that rely on machine learning and artificial intelligence (AI). One answer outlines various Ploughshares contributions, including participation in "international discussions." Also, "we have published several reports of interest on key principles on responsible military AI as well as opinion pieces in national and international publications. We have also engaged in numerous expert panels and public facing events on the issue of autonomous weapon systems and military applications of AI. Key accomplishments include elevating the public debate on the issue in Canada and beyond."



Our responses to the questionnaire reveal our unswerving belief that "new law regarding use of AI and autonomy in the military domain is necessary to bolster IHL [international humanitarian law] and indeed, international human rights law (IHRL)." Acting on this belief, "we have promoted the need for an international dialogue and a legally binding instrument on autonomous weapons."

One of the key points – if not THE key point – of such new law is to ensure "meaningful human control" of the weapons, "to ensure both IHL and IHRL are respected." This directly relates to the ability to establish human accountability. For now, this is difficult because "there is little clarity on who would be held accountable for a system that can 'learn' or change course, resulting in actions that a human could not have anticipated."

The answers provided by Project Ploughshares reveal a valid fear that new tech could produce unpredictable and deadly results. Bioweapons are one concern: "Advances in biotechnology could lead to the development of new bioweapons with the potential to cause widespread harm to both military personnel and civilian populations." As well, "AI-enabled systems and use of generative AI introduce new vulnerabilities as more states adopt these technologies in their critical infrastructure as well as security and defence institutions."

The solutions recommended come under three headings:

- Develop and strengthen regulatory frameworks;
- Address insufficient industry standards and codes of conduct;
- Require Human Rights Assessments.

In answering the questions posed, Ploughshares provides an excellent analysis of new and emerging military tech and makes clear its views on the need for strong regulation and maximum transparency. Readers are encouraged to go to the site of the UN Human Rights Council (<https://www.ohchr.org/en/hr-bodies/hrc/advisory-committee/human-rights-implications>) to read the entire Ploughshares submission.

Top Canadian military suppliers to the United States: Fiscal year 2023



Written by Kelsey Gallagher

The Canadian Commercial Corporation (CCC), a crown corporation and agency of Global Affairs Canada, is Canada's largest broker of military goods. Each year, the CCC facilitates large-value contracts with foreign governments to supply defence-related materiel, with the United States generally the largest customer.

As established under the Defence Production Sharing Agreement between Canada and the United States, all contracts valued at more than U.S.\$250,000 that involve the shipping of Canadian-made military goods to the United States are required to be administered by the CCC. For fiscal year (FY)2023 (April 1, 2022-March 31, 2023), the CCC signed contracts worth more than \$885 million* with the U.S. Department of Defense (DoD) on behalf of 30 companies.

What follows is a list of the top recipients of CCC-brokered prime contracts for the supply of military goods to the DoD in FY2023. The data was obtained through Access to Information and Privacy requests. Further information on individual contracts and suppliers was found in secondary sources, including DoD procurement data, CCC promotional materials, and company press releases.

The values represent the sum of all prime contracts listed for each supplier to the United States for FY2023. Many large-value individual awards are elements of larger, multiyear contracts that consist of scores, sometimes hundreds, of indi-

vidual subawards. The total value indicated for each Canadian supplier includes all awards to those suppliers in FY2023.

Project Ploughshares conservatively estimates that the total annual value of Canadian military exports to the United States exceeds one billion dollars. However, the Government of Canada does not regulate the majority of Canada's military transfers to the United States; the total is, therefore, not officially reported or known.

I General Dynamics Ordnance and Tactical Systems (Canada) (GD-OTS) - \$229,364,980

GD-OTS, a Canadian plant of U.S.-based General Dynamics, is a major manufacturer of ammunition and explosives, from smaller calibre simulation rounds to howitzer and tank shells. The company has three locations in Québec and a fourth site in Newfoundland and Labrador. With a dominant share of the Canadian market for ammunition, GD-OTS is also typically among the top Canadian suppliers of military exports to the United States.

In FY2023, GD-OTS won contracts worth approximately one-quarter of the total value of reported CCC-brokered prime contracts to the DoD. The total represents a major increase over FY2022, when GD-OTS contracts to the United

Top Canadian suppliers of military goods to the United States (FY2023)

Supplier	Sum of prime contracts
General Dynamics OTS	\$229,364,980
Ultra Electronics TCS Inc.	\$82,274,865
General Dynamics Land Systems-Canada	\$74,525,589
Lockheed Martin Canada Inc.	\$56,097,683
L3Harris Wescam Inc.	\$48,693,993
Canadian Helicopters Ltd.	\$35,905,339
Uncharted Software Inc.	\$27,337,600
Indal Technologies Inc.	\$25,841,584
Emergent BioSolutions Canada Inc.	\$22,353,320
CMC Electronics Inc.	\$19,383,928
3M Canada Company	\$16,939,850
Rolls-Royce Canada Ltd.	\$14,622,527
MTU Maintenance Canada Ltd.	\$14,042,239
Standard Aero Ltd., Winnipeg	\$12,774,025
Cascade Aerospace Inc.	\$10,882,888

States were valued at \$116 million. The increase appears to have been fueled by a surge in orders of 155mm artillery shells to replenish Ukrainian stockpiles, with the GD-OTS Canadian operation producing the propellants.

2 Ultra Electronics Tactical Communications Systems (TCS) Inc. - \$82,274,865

Ultra Intelligence and Communications (formerly Ultra Electronics TCS) is the Montreal-based subsidiary of the large defence contractor Ultra, based in the United Kingdom. Ultra Intelligence and Communications produces a wide range of communications, command-and-control, and cyber security goods.

During FY2023, Ultra Intelligence and Communications was engaged in fulfilling two major contracts with DoD: a 10-year contract worth up to U.S.\$145 million for the U.S. Navy's Amphibious Tactical Communications System (ATCS),

and a five-year contract worth up to U.S.\$500 million to supply Orion radio systems to the U.S. Army's Terrestrial Transmission Line of Sight (TRILOS) Radio Program.

3 General Dynamics Land Systems-Canada - \$74,525,589

GDLS-C is perhaps one of the best examples of the significant integration between Canada's defence industrial base and the U.S. military. At any given time, GDLS-C is engaged in long-term CCC-brokered contracts with the DoD worth hundreds of millions of dollars for the manufacture, upkeep, and servicing of armoured vehicles.

In particular, GDLS-C has been a major supplier of light armoured vehicles (LAVs) to the DoD since the 1980s. Canadian-made LAVs saw their first combat use by U.S. forces in Panama in 1989. In November 2000, the U.S. Army selected an altered version of the LAV-III as its new six-

Ploughshares on Canada's decision to end ban on military exports to Türkiye

On January 26, *Globe and Mail* reporter Steven Chase revealed that Canada's ban on military exports to Türkiye had ended. In "Canada to resume exporting air strike-targeting gear to Turkey, report says," he wrote that "Canada has reportedly agreed to resume military exports to Turkey – specifically air-strike targeting gear used on military drones – less than 3½ years after Ottawa halted shipments in the wake of Ankara's illegal diversion of this technology to help ally Azerbaijan fight Armenians." According to Reuters sources, Türkiye had now committed "to provide Ottawa information on the end users of Canadian-made equipment, especially if re-exported to non-NATO members."

But, as the news report reveals, Ploughshares researcher Kelsey Gallagher was not impressed. He is quoted as saying, "The news of these additional end-use assurances would be welcome if such provisions weren't required in the first place." In further quotes, he noted that Canada's legal obligations "do not permit officials to sign off on arms exports that are evidently risky, but politically expedient" and that Ankara has a "record of brazenly diverting Canadian weapon systems."

In a follow-up story by Chase, "Canada lifts ban on military exports to Turkey" (January 29), Ploughshares Executive Director Cesar Jaramillo was quoted as saying that the policy change "makes a mockery" of Canada's arms control regime.

Then, on February 8, the opinion piece "In lifting Turkish arms embargo, Canada politicizes arms controls," co-authored by Cesar and Kelsey, appeared on the Ploughshares website. It ended with this demand: "The decision to lift the arms embargo on Türkiye should be revisited, and full compliance with domestic and international norms should be seen to prevail over political calculation."



wheeled combat vehicle, later named the Stryker. The U.S. Army has since procured more than 4,000 Strykers, which have been used in multiple operations.

4 Lockheed Martin Canada Inc. - \$56,097,683

U.S. defence giant Lockheed Martin has five campuses in Canada. Its Québec manufacturing centre and largest recent benefactor of these CCC-brokered contracts, Lockheed Martin Canada Commercial Engine Solutions, is currently under contract with the U.S. Air Force to overhaul the KC-135R Stratotanker aircraft's F108 engine. The contract, originally signed in 2020, is currently scheduled to run until 2025. The KC-135R provides aerial refueling capabilities to U.S. Air Force, Navy, and Marine Corps aircraft, extending the global reach of U.S. combat and surveillance aircraft.

5 L3Harris Wescam - \$48,693,993

L3Harris Wescam, located in Waterdown, Ontario, is one of the world's leading manufacturers of optical surveillance and targeting sensors, which are used to detect and identify targets and, in some cases, direct smart munitions to those targets. Wescam boasts that more than 80 countries use its sensors in the air, sea, or on land.

The DoD is likely Wescam's largest customer. In FY2023, Wescam was fulfilling a number of CCC-brokered prime contracts with DoD, including multiple awards related to the supply and servicing of Wescam's MX-series systems to the U.S. Army that were tied to a larger U.S.\$380 million contract brokered by the CCC in 2020. □

** Unless otherwise indicated, all figures are in Canadian dollars.*

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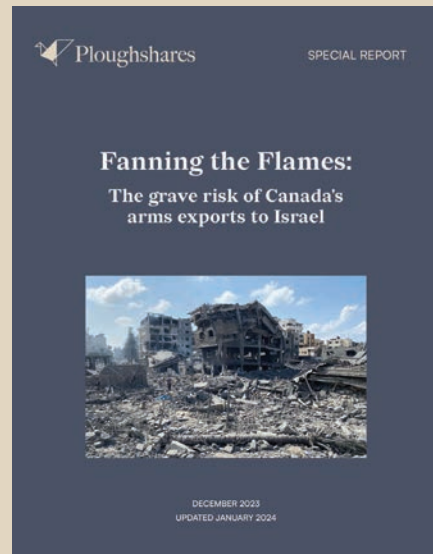
Canada's role in the war in Gaza: A new Ploughshares report and more

In mid-December 2023, Ploughshares posted a major new report by Researcher Kelsey Gallagher. *Fanning the Flames: The grave risk of Canada's arms exports to Israel* focuses on Canadian arms sales to Israel, particularly sales of military components to the United States that are then integrated into Israeli F-35I Joint Strike Fighter airplanes, which have reportedly participated in the bombardment of Gaza.

The report calls on Canada to halt the transfer of arms sales to Israel because the risk is too high that these arms will be used to violate international humanitarian law and international human rights law. It also urges Canada to revise its export regime to "close loopholes that allow the unregulated and unreported transfer of military goods to Israel through the U.S. Department of Defense."

Fanning the Flames has received significant media attention. A major piece by *Globe and Mail* senior parliamentary reporter Steven Chase, "Canada should halt weapons shipments to Israel, arms control advocate says" (published December 14), provides a solid summary of the Ploughshares report.

Ploughshares has been referenced in other press stories dealing with Canadian arms sales to Israel. Check out "Trudeau government accused of sowing confusion over Israel military exports" by Alex Cosh in *The Maple* on January 25, and Cosh's follow-up pieces on January 30, "Trudeau government admits it authorized new military exports to Israel after October 7" and on February 10, "Trudeau government authorized \$28.5 million of new military exports to Israel since October." Two pieces by Radio-Canada's Rania Massoud on arms sales to Israel include comments from Kelsey; see "Silence à Ottawa au sujet des exportations d'armes vers Israël" (published November 24, 2023) and "Ottawa dit envoyer des équipements militaires « non létaux » à Israël depuis le 7 octobre" (published January 31).



Also related to Gaza, Project Ploughshares is a signatory of an open letter sent to the Canadian Minister of Foreign Affairs, Mélanie Joly, on February 5. In *Open Letter: Civil society coalition urges Canada to stop arms transfers to Israel*, a large group of civil society organizations express their "profound concerns about the legal and humanitarian implications of Canada's transfer of weapon systems to the government of Israel." The letter concludes by urging the Canadian government to "take immediate action," "halting further arms exports, alongside export and brokering authorizations, to Israel."

In mid-February, Ploughshares Executive Director Cesar Jaramillo participated in a panel on conventional arms transfers as part of an online webinar, *The transfer and use of explosive weapons in the Gaza war*, hosted by international coalitions Control Arms and the International Network on Explosive Weapons (Ploughshares belongs to both). His discussion focused on the Arms Trade Treaty and the obligations that it imposes on member states involved in arms transfers. His final words condemned the destructiveness of this war, which he said should not be happening in the 21st century.

Also in mid-February, Project Ploughshares was referenced by Kitchener Centre Green MP Mike Morrice, who asked the government: "Will this government put in place an embargo on military exports destined for Israel?" As Mr. Morrice noted, "Project Ploughshares on January 28th warned that some Canadian-made military components, including those found in F-35s, are first shipped to the U.S. and then ultimately supplied to the Israeli military."

An updated version of Fanning the Flames was posted on the Ploughshares website in January. It can be found by clicking on Research and Reports. To find the open letter, in English and French, click on Research and then Analysis and Commentary.

Part Two: From then to now

Reconnecting with former Ploughshares interns



Written by Wendy Stocker

In the Winter 2023 issue of *The Monitor*, we looked at five former Ploughshares interns, what each did during the internship, what each liked (and didn't) about the internship, and how the internship contributed to ultimate work goals. Here the five discuss the path taken since the internship and reflect on the role of civil society.

Reintroducing our group of interns

Yelena Gyulkhandanyan, a Ploughshares intern in 2015, earned an MA in Peace and Conflict Studies from the University of Waterloo. Yelena is now Programme Coordinator (Community Resilience), with the International Organization for Migration (IOM) office in Micronesia region.

Kirsten Mosey, an intern in 2021, has a BA from the University of Waterloo. She is now a Nuclear Policy Officer with the Disarmament and Non-proliferation Division at Global Affairs Canada.

Benny Skinner, who first interned in January 2017, has a BA in Peace and Conflict Studies from the University of Waterloo and an MA in Global Governance from the Balsillie School of International Affairs. Benny is currently an Indigenous Research Advisor at the University of Waterloo.

Grace Wright, with a BA from the University of Waterloo, is now completing an MSc in International Social and Public Policy at the London School of Economics and Political Science in the United Kingdom. She interned with Ploughshares in 2021.

Erin Yantzi interned with Ploughshares in 2020 and has an MA in Political Science from the University of Waterloo. She now works at Global Affairs Canada.

Internship influences?

Yelena has had several positions with IOM, which is described as “the leading organization within the United Nations system promoting humane and orderly migration for the benefit of all.” She sees a link between her work now and the Ploughshares internship:

“Working with PP certainly helped me to get to where I am. I used the research, reporting and writing experience and skills, which were honed through working with PP, at the start of my career, primarily focusing on reporting and research. This then opened the door to build further experience in the humanitarian sector and

Ploughshares mentioned by new intern

On January 10, The *Hill Times* included an opinion piece by Saad Hammadi. “Canada’s sanctions face a test of effectiveness and commitment.” In it he writes:

There is a growing demand for Canada to impose an arms embargo on Israel to prevent its military technology from being used against Palestinian civilians. This includes closing the loopholes that allow the transfer of military goods to Israel through the US. These calls have been made by a number of civil society organizations including the Canadian peace research institute Project Ploughshares.

You will find an article by Saad on p. 10.



transition to working on project implementation and management. Therefore, I am absolutely grateful for having the PP work experience which helped open further doors for me in my field.

Kirsten found a direct link between the Ploughshares internship and her current position:

“While my time at Project Ploughshares was not focused on nuclear weapons, my experience working for Project Ploughshares was hugely impactful and 100% helped me land my current job. I first met my current colleagues at the 2021 Canadians for a Nuclear Weapons Convention and The Simons Foundation event in Ottawa, where I was the assistant rapporteur to Project Ploughshares’ Executive Director Cesar Jaramillo. I was able to follow up after that initial meeting and started working at GAC less than 6 months later!

Serendipity aside, she reflected:

“Project Ploughshares helped me learn how to write succinctly and identify the key points of a policy or argument. Further, the passion and commitment that Ploughshares has for its work helped encourage me that working on nuclear disarmament is not a

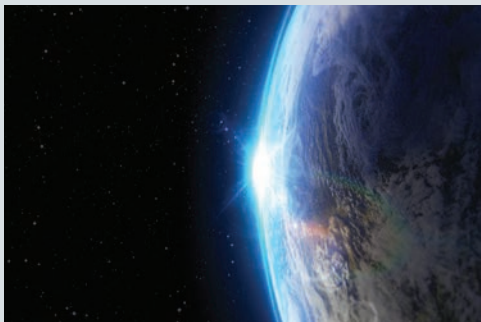
lost cause. Being passionate about this work is key – it is not for the faint of heart! The work of Project Ploughshares continues to inspire me!

She recommended the Ploughshares internship experience to others:

“Folks who are either already wildly passionate about peace and disarmament, or need a boost of inspiration in the goal of peace would benefit greatly! Given the ability to deep dive into topics, I think that Ploughshares really benefits graduate students – but I am a good example of the value of investing in students who are at the undergraduate level as well! I would recommend internships at Ploughshares to anyone who wants to be convinced of the importance of peace!

Benny was “very inspired by my various colleagues at Ploughshares who had completed their graduate studies at the Balsillie School of International Affairs, which led me to pursuing grad school.” Their examples “propelled me to continue pursuing research and advocacy.”

Benny is now “the first Indigenous Fellow at the BSIA,” an Indigenous Research Advisor at the University of Waterloo, and “a professional human rights advocate where I advise on policy, speak on panels, and provide educational pre-



Don't rely on luck

On February 5, the Centre for International Governance Innovation (CIGI) published on its website an opinion piece by Ploughshares Senior Researcher Jessica West entitled "Until now, humans have been lucky in space – It won't last forever." Its main idea: We must develop effective space governance to prevent the weaponization of outer space. If we fail, all the peoples of the world will suffer.

sentations and workshops, advocating for equity, diversity, inclusivity, and decoloniality in various spaces."

Besides offering inspiration, Benny noted with considerable appreciation the "MASSIVE help" provided by references from Ploughshares Executive Director Cesar Jaramillo.

Grace, currently a graduate student, said that her time as an intern "solidified my passion for policy and helped me identify the ways in which my skills were well suited for a career in policy. The perspective my internships gave me on policy development, and especially how it's shaped within an international system, also helped me gain insights that I am able to apply in my coursework and discussions."

Erin is early in her career and not sure what the future holds. "But I do know that I want to work with people like those I worked with at PP – hard workers and learners, smart, empathetic, supportive, always able to find a bit of light in hard situations or when dealing with difficult topics; those that are able to understand different perspectives and speak to a wide range of people."

Thoughts on civil society

From Yelena:

“ I think involving youth in advocacy and educational experiences significantly strengthens the role of civil society. There is a lot of momentum for youth activism, and it is important for civil society to leverage this. Involving youth in raising awareness and various forms of activism through social media is also a great opportunity. Specifically in the conflict resolution/social cohesion building thematic area, it would be great to involve youth in conflict resolution and mediation training. I took such training when I was doing my MA, and I still use the insights and skills I gained through this training daily as I consider them essential life skills.

From Kirsten:

“ In my current role, it is helpful to have civil society provide the deep dives on topics that we as public servants may not have the expertise on. It is also very helpful when we can have discussions that reflect the international environment that we work in. Obviously civil society in Canada is focused on Canada's actions but given that (at least in the nuclear disarmament sphere) the majority of our work takes place in an international context, actions and decisions often have to be considered within the broader multilateral environment.

From Benny:

“ Community-based and grassroots research is beginning to gain more recognition in academic spaces, especially with the growing number of Indigenous community members who are gaining access to the academy and its resources. It is my hope that this growing recognition will begin a mindset shift that will reflect a greater appreciation for civil society or-

ganizations to inform policy with greater legitimacy and seriousness.

That said, I think civil society needs to align itself with the concept of decolonization. When we delve into the world and why it looks the way it does contemporarily, too often we neglect the colonial legacies that have engrained warfare and violent conflict as a mode of social control. I think that if civil society underpins its mandates with the concept of decolonization, it will thrive in the sense of finding itself allied with other groups (i.e., Indigenous folks) who have been fighting for the same principles (nonviolence, inclusion, etc.). In addition, this will ensure that civil society organizations are not reproducing similar extractive and/

or prescriptive harms that have led to our contemporary global state to begin with. Essentially, civil society needs to understand its own positionality as part of a colonial legacy, hop on that decolonization train, and ally itself with others who are hoping to fight for the same outcomes. This will render it more effective and more well-supported.

Erin thought that her internship “helped me understand the ‘outside’/civil society perspective of governments’ foreign policy and (inter)national security issues and how civil society attempts to raise issues and concerns. Understanding this perspective is something that I don’t want to take for granted as I continue to work in government. Civil society and researchers are critical voices and an important part of international security discussions!” □

Wendy Stocker edits The Ploughshares Monitor.

The Nobel Peace Prize for 2023: A focus on the role of civil society

Last October, the Norwegian Nobel Committee announced that the 2023 Nobel Peace Prize was being awarded to Narges Mohammadi “for her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all.” As the official press release stated, “her brave struggle has come with tremendous personal costs” – she was then in an Iranian prison.

The press release noted that the award honoured not only Ms. Mohammadi but “the hundreds of thousands of people who, in the preceding year, have demonstrated against the theocratic regime’s policies of discrimination and oppression targeting women.” This 2023 award was situated in “a long tradition in which the Norwegian Nobel Committee has awarded the Peace Prize to those working to advance social justice, human rights, and democracy,” which are “important preconditions for lasting peace.”

Ms. Mohammadi was still in prison in December when the Peace Prize ceremony was held in Oslo, Norway. But she was able to smuggle out a speech, which was delivered by her children Ali and Kiana Rahmani.

In this speech, Ms. Mohammadi emphasized the value of community in the creation of a peaceful world. She spoke of the many brave Iranian women who share her cause, epitomized by the slogan “Woman – Life – Freedom.” She also spoke of a broader civil society, which she described as “the essence of democracy.”

Both Iranian civil society and international civil society have roles to play, she contends: “Undoubtedly, the people of Iran will continue their struggle, but in today’s globalized world, the importance of the role of governments and global civil society – including international organizations and institutions, media, and independent non-governmental organizations – is undeniable.”

Project Ploughshares congratulates Narges Mohammadi and pledges to continue to do its part to secure and protect human rights around the world.



Narges Mohammadi Public domain photo

A voice of reason

“In the panoply of peace and environmental organizations, Project Ploughshares occupies a unique position as a nationally regarded voice of reason. Its staff are quoted in national media because they have a particular depth of knowledge available only to those whose mandate is research.”

— Dale Dewar, “Project Ploughshares: A peace organization supported by Friends,” *Quaker Concern*, Winter 2024

Dale, who represents the Canadian Yearly Meeting of the Religious Society of Friends (Quakers) on the Project Ploughshares Management Committee, notes that Quakers have supported Project Ploughshares since its inception. Other churches and organizations have also been long-time supporters.

To all of you — and to our so-important individual donors — we say thank you. We could not do our work without you.

And thanks to you, Dale, for spreading the word!

Donate at www.ploughshares.ca or call 1-888-907-3223