

# THE PLOUGHSHARES MONITOR

VOLUME 42 | ISSUE 1

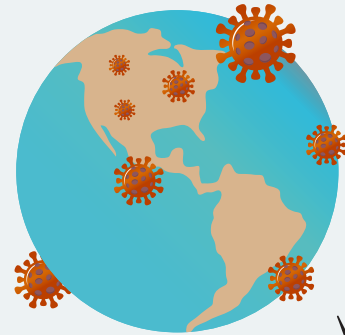
SPRING 2021

CANADIAN ARMS EXPORTS  
Top 10 suppliers in FY2020

FROM SAFETY TO SECURITY  
Working to make outer space  
peaceful and secure for all

IRAN NUCLEAR DEAL  
It's not too late to save it

AUTONOMOUS WEAPONS  
Time to re-start talks



## The plight of refugees in the COVID era

- Tracking COVID-related border closures worldwide
- Examining the devastation at Greece's Moria refugee camp



*“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*

## SPRING 2021

**3** **From the Director’s desk**  
It’s not too late to save the Iran nuclear deal  
*by Cesar Jaramillo*

**6** **Ploughshares at work**  
Q&A with Jessica West

**9** **From safety to security**  
Synopses of Ploughshares reports on outer space  
*by Jessica West and Gilles Doucet*

**12** **The impact of COVID-19 on global borders**  
Countries restrict access during pandemic

**14** **COVID devastates a refugee camp**  
A Q&A about Greece’s Camp Moria  
*by Kirsten Mosey*

**18** **Time to renew talks on autonomous weapons**  
UN discussions stalled  
*by Branka Marijan*

**21** **Selling Canadian military goods**  
A top-10 list  
*by Kelsey Gallagher*

The Ploughshares Monitor  
Volume 42 | Issue 1

PROJECT PLOUGHSHARES STAFF

**Cesar Jaramillo** Executive Director

|                         |                             |
|-------------------------|-----------------------------|
| <b>Julia Bandura</b>    | <b>Benjamin Skinner</b>     |
| <b>Kelsey Gallagher</b> | <b>Wendy Stocker</b>        |
| <b>Tasneem Jamal</b>    | <b>Barbara Wagner</b>       |
| <b>Branka Marijan</b>   | <b>Jessica West</b>         |
| <b>Matthew Pupic</b>    | <b>Kirsten Mosey</b> Intern |



*The Ploughshares Monitor* is the quarterly journal of Project Ploughshares, the peace research institute of The Canadian Council of Churches. Ploughshares works with churches, nongovernmental organizations, and governments, in Canada and abroad, to advance policies and actions that prevent war and armed violence and build peace. Project Ploughshares is affiliated with the Kindred Credit Union Centre for Peace Advancement, Conrad Grebel University College, University of Waterloo.

Office address:  
Project Ploughshares  
140 Westmount Road North  
Waterloo, Ontario N2L 3G6 Canada  
519-888-6541, 1-888-907-3223  
plough@ploughshares.ca; www.ploughshares.ca

Project Ploughshares gratefully acknowledges the ongoing financial support of the many individuals, national churches and church agencies, local congregations, religious orders, and organizations across Canada that ensure that the work of Project Ploughshares continues.



We are particularly grateful to The Simons Foundation Canada in Vancouver for its generous support.

All donors of \$50 or more receive a complimentary subscription to *The Ploughshares Monitor*. Annual subscription rates for libraries and institutions are: \$35 in Canada, \$45 (U.S.) in the United States, \$50 (U.S.) internationally. Single copies are \$5 plus shipping.

Unless indicated otherwise, material may be reproduced freely, provided the author and source are indicated and one copy is sent to Project Ploughshares. Return postage is guaranteed.

Publications Mail Registration No. 40065122.  
ISSN 1499-321X.

*The Ploughshares Monitor* is indexed in the Canadian Periodical Index.

Printed at Waterloo Printing, Waterloo, Ontario.  
Printed with vegetable inks on paper with recycled content.

Funded by the  
Government  
of Canada

**Canada**

## From the Director's Desk

# It's not too late to save the Iran nuclear deal



Written by Cesar Jaramillo

**D**onald Trump opposed the Joint Comprehensive Plan of Action (JCPOA or Iran nuclear deal) even before he became President of the United States. Despite his hostility, the deal survived his term in office, although not unscathed. Now new President Joe Biden is cautiously optimistic that it can be salvaged. But steps to preserve the deal must be taken immediately, before the already narrow window of opportunity fully closes.



Representatives of (from left) China, France, Germany, the European Union, Iran, Russia, the United Kingdom, and the United States announce the framework of the Iranian nuclear deal in Lausanne, Switzerland, in April 2015.

## Deal highlights

The 2015 deal between Iran and the P5 (permanent members of the UN Security Council) plus Germany and the European Union was intended to limit Iran's ability to produce a nuclear warhead, ensure strict international verification that

Iran was observing those limits, and provide Iran with sanctions relief. While Iran has long insisted that its nuclear program is only for peaceful purposes and there is no evidence to the contrary, Iran has not been fully transparent about the nature of this program.

Iran had a growing stockpile of uranium, an increasing number of centrifuges (including new-generation machines), a deeply bunkered enrichment facility, and a nearly completed research reactor. Iran contended that it had the right under the Nuclear Non-Proliferation Treaty to enrich uranium to achieve the benefits of nuclear energy. Still, the international community was right to require assurances that Iran's nuclear-related activities did not have a military dimension.

Under the JCPOA, for the first 15 years, Iran was not to enrich uranium beyond the level of

3.67 per cent purity, sufficient to produce the low-enriched uranium used in nuclear power stations, but well below weapons-grade. Iran would put more than two-thirds of its centrifuges into storage and limit enrichment capacity to a single plant.

Iran agreed to inspections of its past nuclear-related work by the International Atomic Energy Agency (IAEA), which had to certify Iranian cooperation before any sanctions relief could take place. And Iran agreed to implement the IAEA's

“Iranian officials have indicated that Iran would be prepared to return to full compliance. And so, salvaging the deal seems possible. But the thorny issue of sequencing might yet derail everyone's hopes. Both the United States and Iran are demanding that the other make the first move.

Additional Protocol agreement, which granted the nuclear watchdog virtually unrestricted access to Iran's facilities.

For their part, the other parties to the agreement maintained the critical prerogative to react swiftly and sternly to any perceived failure to comply by Iran. Sanctions could be reinstated.

The JCPOA as negotiated was seen by many—including Project Ploughshares—as a pragmatic, robust, and verifiable agreement. Despite some predictable opposition, the deal was loudly applauded by the international community for addressing legitimate concerns about Iran's nuclear program, while lowering tensions and avoiding military confrontation.

### Unilateral withdrawal

On May 8, 2018, President Trump attempted to squeeze more concessions from Iran by announcing the unilateral withdrawal of the United States from the JCPOA and the imposition of increasingly stringent U.S. economic sanctions. The

Trump administration also called on states that had eased sanctions against Iran to re-impose them.

By withdrawing from the agreement, the United States violated UN Security Council Resolution 2231, the legal framework for the nuclear deal. The resolution called on states “to take such actions as may be appropriate to support” the deal and to refrain from “actions that undermine implementation of commitments.” Unilateral withdrawal clearly undermined implementation.

Before the U.S. withdrawal, the IAEA had repeatedly and consistently certified Iran's full compliance. Since the withdrawal, however, Iran has moved away from compliance and has resumed some proscribed nuclear activities.

It is important to recognize that the incentives attached to compliance were removed BEFORE Iran stopped meeting all its obligations under the deal. The remaining parties to the agreement were unable to offset the economic and political impact of U.S. withdrawal and thus could not persuade Iran to return to compliance.

### (Re-)enter Biden

The election of Joe Biden as President of the United States has spurred hope that the Iran nuclear deal might be revived. Certainly Biden is familiar with the file; he was Barack Obama's vice-president when the JCPOA was negotiated.

The new administration has already made a successful foray into nuclear security territory. The future of the New START Treaty—a bilateral nuclear arms reduction agreement between the United States and Russia—was in doubt under Trump but was rescued soon after President Biden assumed office. Set to expire in early 2021, the treaty has been extended until 2026.

On February 18, State Department officials signalled that the United States would be ready to accept an invitation from the European Union to re-engage with all the remaining parties to the JCPOA—including Iran—in talks specifically

aimed at bringing all parties into compliance with their commitments.

Iranian officials have indicated that Iran would be prepared to return to full compliance. And so, salvaging the deal seems possible. But the thorny issue of sequencing might yet derail everyone's hopes. Both the United States and Iran are demanding that the other make the first move.

On the day that the United States announced its willingness to participate in the EU talks, Iranian Foreign Minister Mohammad Javad Zarif

tweeted that Iran would return to compliance only after the United States lifted the sanctions imposed by the Trump administration. "Remove the cause if you fear the effect," said Zarif. "We'll follow ACTION w/ action." But the Biden administration expects Iran to fully comply with the nuclear deal before it starts to lift sanctions.

Let us hope that the meetings proposed by the European Union can offer a solution to this stand-off. With good faith among the key stakeholders, a solution seems possible—if not certain. □

*Cesar Jaramillo is the Executive Director of Project Ploughshares. He can be reached at [cjaramillo@ploughshares.ca](mailto:cjaramillo@ploughshares.ca).*

## Making our case

On December 10 of last year, Project Ploughshares Executive Director Cesar Jaramillo and Researcher Kelsey Gallagher appeared before the Canadian House of Commons' Standing Committee on Foreign Affairs and International Development to speak on Canadian military exports and, in particular, military exports to Turkey that found their way to the conflict in Nagorno-Karabakh. Following are brief excerpts from their presentations.



C. Jaramillo:

*The troubling reality is that the Canadian arms industry has become alarmingly linked with disreputable regimes that are engaged in some of the world's most devastating conflicts. We are aware that this view clashes with the carefully crafted government discourse on the high standards of rigour and transparency that purportedly inform Canada's arms export decisions. But the evidence is sturdy and compelling.*

*There is a clear gap between rhetoric and practice around Canadian arms exports, and it is high time for strict Parliamentary oversight of this important aspect of Canadian foreign policy. A place to start might be the establishment of a subcommittee of this Standing Committee on Foreign Affairs and International Development to ensure compliance with domestic and international law, including Canada's obligations under the Arms Trade Treaty.*

K. Gallagher:

*Turkey's provision of WESCAM sensors to its allies is a textbook example of diversion, which is the illicit transfer of weapons systems to unauthorized users. The case of Canadian weapons being diverted to the conflict in Libya is particularly troublesome, as this also constitutes a breach of the almost decade-old UN arms embargo against that country.*

## PLOUGHSHARES AT WORK

# Working to make outer space peaceful and secure for all



An interview with Senior Researcher Dr. Jessica West

**Project Ploughshares:** Even with the pandemic, you have been extraordinarily busy. What are some of the highlights of the past year for you?

**Jessica West:** A big highlight was being awarded a grant to do policy research by the Mobilizing Insights in National Defence (MINDS) program of the Canadian Department of National Defence just before the pandemic set in. The goal of this work is to help advance what DND refers to as international “norms of responsible behaviour” in outer space, a longstanding policy objective that has stalled.

I worked with Gilles Doucet to create a map of existing international obligations and best practices in outer space, as a way to better understand where we are today. The map will work as a guide to inform the evolution of norms for military and security actors.

**PP:** Gilles Doucet is not a name that most Monitor readers will recognize. How did you come to work with him on this project?

**JW:** Gilles and I met through the Space Security Index, which Project Ploughshares led for 16 years. Gilles is a Canadian technical expert who spent many years working for the Department of National Defence. We have complementary skill

sets that worked well together on this project.

**PP:** I’ll just mention that two reports from the norms project have been published and summaries of them are in this issue of the *Monitor*.

Did anything about this work surprise you?

**JW:** I’m part of the global refrain that calls for more governance, more rules, more protections. I was really encouraged to find an extensive array of documentation linked to space-related activities and behaviours—a good foundation to build on. Many of these practices—such as disclosure, notification, and consultation—can and should inform military activities, to avoid misunderstandings and other mishaps that can accelerate tensions and lead to unintentional conflict in space. But many of the mechanisms to implement these practices are missing. Filling this gap should be a priority of the international community.

**PP:** Are you planning on further projects with Gilles?

**JW:** Yes. Our priority this year—we hope with additional funding from the MINDS program—is to learn how to advance arms control and other formal restrictions on military activities in space.



A key objective of international norms at the diplomatic level is to form a base for more formal arms control measures.

There are many obstacles to this process, but Gilles and I believe that we can learn from the limited history of arms control in space, as well as the experiences in other domains of activity, to chart a productive path forward.

**PP:** You mentioned the Space Security Index earlier. Many *Monitor* readers will be familiar with this international project, which you directed with international partners. Can you update us on SSI?

**JW:** Certainly. SSI has changed a lot. After 16 years of producing a large, comprehensive report on almost all space activity, we transitioned this last year to an online portal that breaks information down into a series of fact sheets and issue guides, all very accessible to a general audience.

Space activities have increased tremendously since the first report was published. Today there are almost 3,500 operational satellites in orbit, registered to more than 70 countries. Roughly 20 states have military or dual-use space programs. The commercial space sector has exploded with companies such as SpaceX pioneering new services like reusable launch vehicles and space-based internet. It became impossible for us, with limited resources, to produce a comprehensive volume of updated information each year.

But there is now a strong international community of civil society, academic, and state-based organizations that study and champion the security of outer space. And we at Ploughshares will continue to participate, in a way that makes best use of our expertise and resources.

**PP:** How does a focus on outer space fit in with the other thematic areas that Ploughshares covers?

**JW:** Ploughshares is mandated to prevent conflict and promote peace.

Militaries communicate, navigate, surveil, identify targets, and strike or use force on Earth with the aid of space assets. Even the command and control of nuclear weapons systems runs through space. Consequently, these capabilities are highly valuable and highly vulnerable targets of warfighting.

Space is also central to the burgeoning development of drones, artificial intelligence, and surveillance. Much of the ‘big data’ that feeds these systems is space-based data, derived from satellites, and the role of space in these processes continues to grow.

Recently, a lot of outer-space activity has been related to weapons systems and warfighting in space. Violent activity in space is a real possibility, with few rules to prevent it or to limit damage.

It’s no exaggeration to say that space is at the very centre of current and future warfare. And that means that it must also be at the centre of our focus on peace.

But space is not just about weapons and warfare.

The ability to closely monitor and track objects on Earth is essential to many processes of peace, including verification for arms control agreements, and the ability to identify and monitor military installations, to track arms, and to document and, we hope, guard against mass human rights abuses. For example, Ploughshares researcher Kelsey Gallagher and former Ploughshares Executive Director Ernie Regehr are examining commercial satellite images to identify and document military bases in the Arctic.

**PP:** That sounds like a huge file! How do you cope!?

**JW:** Well, there are many talented, dedicated researchers and analysts working on outer space.

I work with colleagues from nongovernmental organizations, United Nations agencies, and academic institutions, in Canada and abroad. I have been very fortunate to be able to attend and present my work at critical meetings of the UN Committee on the Peaceful Uses of Outer Space, as well as the UN First Committee for Disarmament and International Security. Working collaboratively allows us all to make progress over a range of related concerns.

And I choose my projects carefully. In the coming year, I plan to focus on:

- Thinking creatively about pathways to formal arms control in space;
- Identifying the humanitarian and civilian risks to conflict in space, and ways to limit them;
- Promoting an ethos of peace in space, which is

needed as humans embark on a new era of exploration and settlement, including Canadian participation in the U.S. Artemis Program to create a permanent human presence on the Moon.

Above all, I think that it is important to question what it means to be secure, and to promote other values along with security, such as protection, peace, and caring for one another and the environment. □



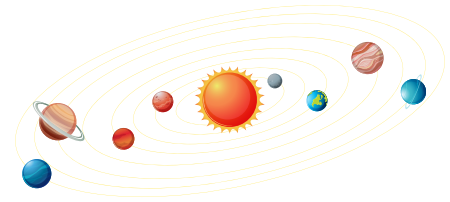
Jessica West

*Jessica West is a Senior Researcher at Project Ploughshares. She can be reached at [jwest@ploughshares.ca](mailto:jwest@ploughshares.ca).*



## PLOUGHSHARES REPORTS

# From safety to security: Research on outer space



What follows are summaries of two recent reports by Ploughshares Senior Researcher Jessica West and project partner Gilles Doucet. Both products come out of a project funded by the Mobilizing Insights in Defence and Security (MINDS) program of the Canadian Department of National Defence that furthers an objective found in Canada's national defence policy, "Strong, Secure, Engaged," to "provide leadership in shaping international norms for responsible behaviour in space."

The "From Safety to Security" project does this by generating information and insight into how existing and emerging norms of safety and sustainability in outer space—developed mostly in the civil and commercial sectors—can inform norms related to space-based military capabilities and activities, enhancing security in the space environment.

Research was conducted in 2020 and included a survey of global experts and a series of regional workshops. The report of survey results, *From Safety to Security: Reducing the Threat Environment through the Responsible Use of Outer Space*, was published in July 2020. The workshop report, *From Safety to Security: Extending Norms in Outer Space*, was published in January 2021. Both reports can be found at [www.Ploughshares.ca](http://www.Ploughshares.ca).



REPORT #1: From Safety to Security: Reducing the Threat Environment through the Responsible Use of Outer Space

Global space experts were invited to participate in a survey that was open from May 15 to June 10. In all, 102 individuals from 15 countries completed the survey. Responses point to a chasm between current and developing military and security practice, on the one side, and established safety and sustainability norms of activity in space, on the other.

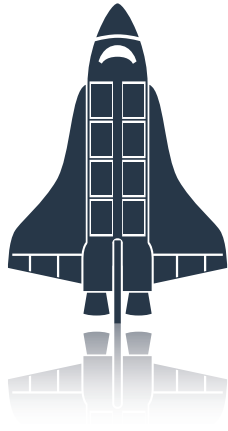
Specifically, respondents indicated that safety and sustainability norms have a positive impact on the outer-space security environment. While these norms have not been fully adopted by military actors, security in space is not possible in the absence of safety and sustainability measures. At the same time, however, participants repeatedly claimed that military activities in space were a threat to both safety and sustainability.

Seventy-seven per cent of survey respondents indicated that they think that there are norms or practices specific to security that influence military or defence activities in space. These norms provide value, by reducing the number of mishaps and misperceptions, as well as the risk of conflict escalation. However, responses conveyed the sense that the values and practices that influence military security in outer space are shifting and in some cases new capabilities are challenging historical perspectives.

Specific examples include non-consensual rendezvous and proximity operations (RPO), anti-satellite (ASAT) testing, the potential weaponization/use of force, and potential tensions arising

from competition during lunar activities and resource extraction. Participants also identified the emergence of a striking range of military activities of concern, linked to a broadening range of actions seen to be permissible.

Survey participants indicated that a present opportunity exists to extend norms of best practices rooted in safety and sustainability into the domain of security. But a key message is that states must make a major contribution to improving the collective safety and sustainability, as well as security, of the space environment. Some state or group of states must be prepared to lead, in partnership with commercial and civil-society stakeholders.



#### REPORT #2: From Safety to Security: Extending Norms in Outer Space

In November 2020, global space experts were invited to participate in a series of regional online workshops to identify priorities and possible next steps in the development of norms related to space-based military capabilities and activities.

The From Safety to Security project was based on the premise that security-related norms of behaviour in outer space are directly linked to—and can build upon—established and emerging safety and sustainability practices. Although some participants disagreed with this approach, the discussions identified close linkages, including many shared practices that can help to reduce misperceptions and conflict escalation. Moreover, safety and sustainability are linked to existing shared values and perceived benefits and rooted in more objective and inclusive language.

The workshop discussions reinforced an appreciation of norms as social and value-laden, served

to distinguish norms from other types of rules, and emphasized the importance of moral obligation in motivating behaviour. These factors have implications for advancing a normative approach to enhanced security in outer space.

A key takeaway from the workshops is that shared values and benefits are essential to effective norms of behaviour. Any efforts to develop new norms of behaviour in space must first reflect a shared understanding of collective values and purpose. Identifying and building on shared values create a foundation for promoting norms that are both inclusive and fair, but these values must be incorporated into the entire norm process, including the goals and benefits of normative development.

The desire to advance normative approaches to security in space is not new, but has not met with much recent success. The intent of the workshops was to identify viable paths to advance this agenda. In addition to considering process, participants prioritized potential threats as well as opportunities for mitigating security risks in space.

Most commonly flagged as priorities were the production of space debris, anti-satellite weapons (ASATs) and their testing, the potential weaponization of outer space, and the conducting of non-cooperative rendezvous and proximity operations (RPO) and other close-proximity operations (CPO).

The operating environment itself—with the prevalence of secrecy and overall lack of transparency, trust, and dialogue—was seen to be a key contributor to the potential for conflict and conflict escalation. Many of the mechanisms—core tools and processes—to propagate, practise, and promote norms of behaviour are missing.

Workshop participants viewed debris prevention and mitigation as an urgent priority. Others were developing the technical means to better enable good practice in outer space, notably through modes of communication and data sharing at an operational level; and building likemindedness, through a shared conceptual approach and common definitions.

Ultimately, strong norms need effective leaders who can explain how certain necessary actions are clearly linked to accepted values and standards. Additionally, leadership must include consistent practice of the norms that are being espoused. □

## The World Food Programme wins 2020 Nobel Peace Prize

In announcing the award, the Norwegian Nobel Committee stated:

“In the face of the [coronavirus] pandemic, the World Food Programme has demonstrated an impressive ability to intensify its efforts. As the organisation itself has stated, ‘Until the day we have a medical vaccine, food is the best vaccine against chaos.’”

The Norwegian Nobel Committee wishes to emphasise that providing assistance to increase food security not only prevents hunger, but can also help to improve prospects for stability and peace.”

In accepting the award, WFP Executive Director David Beasley said, “We believe food is the pathway to peace.” He went on to say:

“Imagine every woman, man, girl and boy we share this planet with is our equal...and if we would just love them as such. Imagine what that would do to war, to conflict, to racism, to division, and to discrimination of every kind. “

Project Ploughshares congratulates the World Food Programme, a fellow traveller on the “pathway to peace.”



## MASTER OF PEACE AND CONFLICT STUDIES

AT THE UNIVERSITY OF WATERLOO

The Master of Peace and Conflict Studies (MPACS) is a vibrant, interdisciplinary academic program that empowers students with knowledge and skills to contribute to nonviolent peacebuilding.

Combining rigorous interdisciplinary scholarship with practical application, the MPACS program provides students with tools to understand conflict and contribute to peaceful transformation.

Be part of a unique community-focused learning environment at Grebel, while benefiting from the reputation and resources of the University of Waterloo, one of Canada’s premier universities.

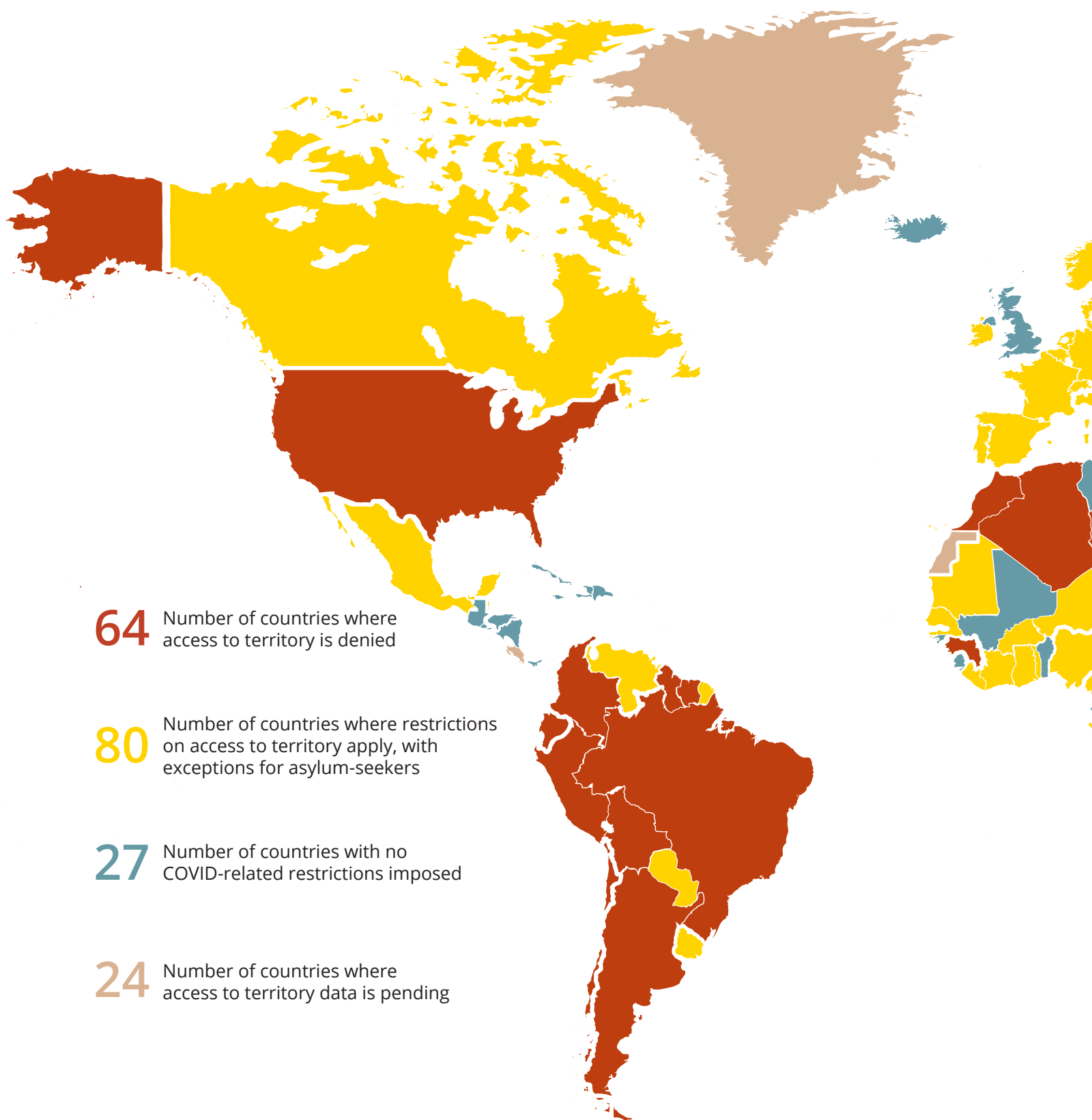
**APPLY TODAY | [UWATERLOO.CA/MPACS](https://uwaterloo.ca/mpacs)**



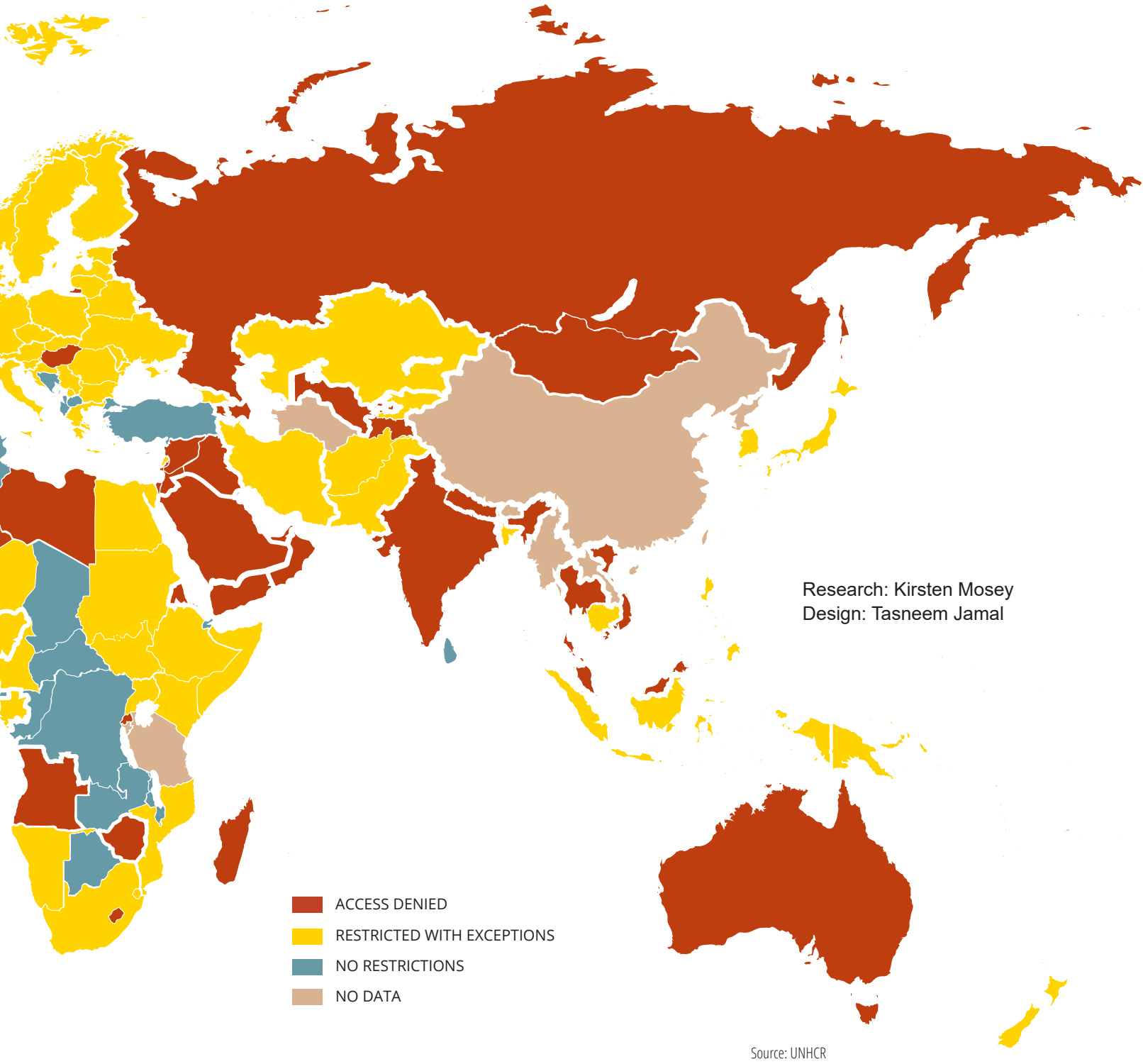
**Conrad Grebel**  
University College

# Border closures enacted in response to COVID-19

(as of January 2021)



In an attempt to curtail the spread of COVID-19, many countries have enacted temporary border measures and, in some cases, closures. Still, asylum-seekers have a right to seek international protection at state borders and must not be returned to a country where they face persecution or danger. Therefore, countries need to ensure a balance between public health protections and the rights of asylum-seekers.



In conversation  
with Amy Randell

## The devastating impact of COVID-19 on refugees



Written by Kirsten Mosey

**I**n 2016, Kirsten Mosey volunteered at Camp Moria on the island of Lesbos, Greece—once Europe’s largest refugee camp. Designed to house between 2,000 and 3,000 people, the former military/detention centre held approximately 20,000 refugees at its peak.

Recently, Kirsten met virtually with Amy Randell, who first went to Lesbos in September 2019 as a volunteer with the German and Greek agency All4Aid.

**Kirsten Mosey:** What was Camp Moria like in March 2020 when COVID-19 began to spread globally? How was your work affected?

**Amy Randell:** The COVID-19 outbreak followed a lot of violence. January and February were business as usual, and then things started to get really tense. We received a lot of backlash from the local community. It got to the point that our organization (All4Aid) evacuated our team off the island at the beginning of March.

At that time, COVID-19 cases were rising

in Asia, but hadn’t really reached Europe. After evacuating, I left the island for what was supposed to be a brief trip to Germany to visit family and ended up getting stuck there for a few months due to border closures. Some friends were still here, and colleagues were able to return sooner than I was, but the island was completely shut down, and NGOs [nongovernmental organizations] couldn’t do very much.

The initial lockdown on the island lasted about two weeks, and then our team was able to resume work at our centre, which was right across from Camp Moria. We had to stop our educational programs—we couldn’t have big groups—but we could still have people do laundry and shower because we were within the police perimeter.

Once Greece opened back up in the spring, locals and people outside the camp were able to move freely and I was able to get back to the island. But the camp remained on a strict lockdown for many, many months and that became a big issue with camp residents.

**KM:** What did your programs look like then?

**AR:** We slowly restarted some of our programs in the centre. Then in the spring and summer we were able to have more people come in to do laundry and shower. Pre-COVID, we had camp residents work with us as seamstresses, and in the spring they started making masks and medical gowns. We worked with Médecins Sans Frontières (MSF) and other NGOs to focus more on COVID-19. In August, we began making plans to reopen our school and educational centre. But the camp burned down a few weeks later.

**KM:** Tell me about the fires in September.

**AR:** Camp Moria was still, as far as I remember, in a strict lockdown.

**KM:** Meaning camp residents weren't able to go

into the town at all?

**AR:** Yes. Residents were only allowed to leave if they had a doctor's appointment or for a specific reason. There are many great, supportive people on Lesbos, but a portion of the population, perhaps understandably, felt that the camp would become a hotbed for COVID-19. The residents lived in such tight quarters; they didn't have access to proper hygiene; there was no proper sanitation.

Camp residents were already so frustrated with their situation after being on lockdown for months. And then a few cases of COVID-19 showed up in the camp. A relatively healthy young man died and people became very afraid. There were rumours that isolation would be enforced throughout the camp. People were at a breaking point. The actual fires and what happened are still disputed.

## "A time bomb that finally exploded"

On the night of September 8, 2020, a fire engulfed much of the Moria refugee camp, located on the Greek island of Lesbos. Vast stretches of the camp and an adjacent spillover site were destroyed.

According to a Red Cross report, the camp, the biggest of its kind in Europe, was at more than four times capacity. Nearly 11,000 people were forced to flee. Access to the nearby port town of Mytilene was cordoned off, leaving many refugees and asylum seekers to sleep in nearby fields and on streets.

Aid groups had long criticized the cramped and unsanitary living conditions at Moria, which made physical distancing and basic hygiene measures impossible to implement.

Marco Sandrone, Lesbos project coordinator for Médecins Sans Frontières, told the BBC that it was difficult to say what had caused the blaze, with several different fires and protests erupting in the camp.

"It's a time bomb that finally exploded," he said, adding that people had been kept in "inhumane conditions" at the site for years.



Moria refugee camp in Greece, pictured here before the fire, was designed to house between 2,000 and 3,000 people.  
*Amy Randell*

**KM:** What was left of Camp Moria after the fires?

**AR:** It was a while before we could go back. All the camp residents were sleeping on the streets for a week or two and the roads were completely blocked. The island was placed back on lockdown, so we couldn't leave our houses.

When we got back to the centre, we discovered



We have so much space in Canada, and these people need homes and can contribute to society, and I know we could do more. I know it's a lot more complicated than that, but sometimes it feels black-and-white to me.

that the camp was absolutely devastated. The only things left standing were the metal Isoboxes. All the trees had burned down. It was so shocking that I feel like I'll remember it forever.

First, we worried for our friends and the people we knew. But after that, it really hit us that this was a huge deal with long-lasting impacts. Moria was always supposed to be a short-term transition centre, but this sudden event was a big moment of change.

**KM:** After the fires, there was media attention and calls for "No More Morias!" Then many people moved into the new camp (Mavrovouni), which is now nicknamed Moria 2.0. What is the new camp like?

**AR:** It's a more traditional refugee camp with UN tents, unlike Moria before the fires. The new camp is much more blocked off. Two main gates are the only way in and out. The whole camp is patrolled by police; anyone who wants in must be granted specific access.

In the old camp, there were limits on who was allowed within the actual walls, but many people lived outside the camp in the jungle and we were able to provide services to them.

In the new camp, vital services—housing, first response, food delivery—had clearance early on, but it was difficult for All4Aid to get access and we didn't get in until November.

**KM:** Are the police willing to work with you?

**AR:** Once our organization got the camp director onboard, we had to convince the police that our services—providing space for showers and laundry—are essential. Our leaders worked for weeks to get access.

**KM:** You mentioned that distributing basic necessities like food is allowed in the camp. Is there any schooling or recreation for kids?

**AR:** We used to hand out tickets in Moria so that people could do laundry and shower. With COVID-19, we and a lot of other NGOs lost that access. Only about five or six NGOs have regular access inside Moria 2.0 to distribute things like heaters and sleeping bags. EuroRelief has started doing educational programs. But there are no laundry or shower facilities—only cold shower buckets. And no bathrooms, only outhouses.

**KM:** Can residents access clean water for handwashing?

**AR:** People get water from an area where there are pipes. I know of an NGO that does some water work inside the camp—or did until recently. But water is very limited.

**KM:** Are there any COVID-19 testing services, a COVID-19 clinic, or basic healthcare providers in the camp?

**AR:** MSF has a clinic outside the camp where residents can go and some medical teams are allowed in the camp. There is a COVID-19 testing centre and isolation area just past the entrance. People with symptoms can get tested and are kept in a more isolated area. That's also



where new arrivals tend to stay.

**KM:** Are there many new arrivals? Transfers off the island?

**AR:** More people typically come via boat in nicer weather. COVID-19 has certainly slowed traffic. For a short time after Moria burned down, a lot of people came to the island because it seemed like a good opportunity to get to the mainland faster, with quite a few transfers to mainland Greece, Germany, and the rest of Europe. In particular, people who had received a decision on their asylum claims were able to be transferred out.

In recent months, I've only heard of the arrival of a handful of boats. Winter on the island is very windy and the water can be very rough. And then there's COVID-19. But it can be hard to know what's really happening.

**KM:** As a Canadian, what do you feel about Canada's role in helping refugees?

**AR:** I've become more interested in finding out what's happening in Canada in terms of resettlement.

People still get excited when I say that I'm Canadian; our reputation is definitely still positive. But the fires really frustrated me.

People in Moria were sleeping on the streets. And I kept wondering where the rest of humanity was. Not just Canada, but the world.

We have so much space in Canada, and these people need homes and can contribute to society, and I know we could do more. I know it's a lot more complicated than that, but sometimes it feels black-and-white to me.

I'm proud of many features of the Canadian resettlement program, but I feel that there's more to do. People have a lot of fears about refugees, but I've never seen a group of people more able to make things happen, all by themselves. How is that not valuable for us in Canada? These people aren't just numbers, they're my friends. We should all have that perspective: refugees are people.

**KM:** What do you want the international community to know about Lesbos and the situation there?

**AR:** I just want people to know about it. I want people to know and care.

When the fires happened, people were talking about it. So many people I hadn't spoken to in years reached out to me, and I used that opportunity to tell them about the situation. I definitely get very passionate about it, as one should, I think. □



Amy Randell visits Moria refugee camp in Lesbos, Greece, after a fire devastated it in September of last year.

*Kirsten Mosey is a research assistant with Project Ploughshares and the Kindred Credit Union Centre for Peace Advancement. She can be reached at [kbmosey@ploughshares.ca](mailto:kbmosey@ploughshares.ca).*

## Artificial Intelligence

# We need to restart talks on regulating autonomous weapons—now

Written by Branka Marijan

To no one's surprise, United Nations discussions on the regulation of autonomous weapons have stalled. Last year, the global pandemic caused delays, with only one week of discussions—partly in Geneva, Switzerland and partly virtual—taking place from September 21-25. November's annual meeting of the Convention on Certain Conventional Weapons (CCW), at which the 2021 schedule for discussions on autonomous weapons would have been set, was cancelled.

Now questions are arising about how to reenergize the discussion. Could some other multilateral forum serve to steer the global community toward negotiations of a legal instrument that regulates autonomous weapons? Or will the world watch as militaries adopt more autonomous systems, unfettered by effective controls?

### The problematic push for autonomous weapons

Some countries are actively striving for greater autonomy in their weapons systems.

According to a recent *Washington Post Magazine* article, then assistant secretary of the Air Force for acquisition Will Roper “said that because of the way AI [artificial intelligence] capabilities are accelerating, being behind means

the United States might never catch up, which is why he's pushing to move fast and get AI out into combat.” The United States is concerned that China, in particular, is leading in the race to develop more autonomous weapons.

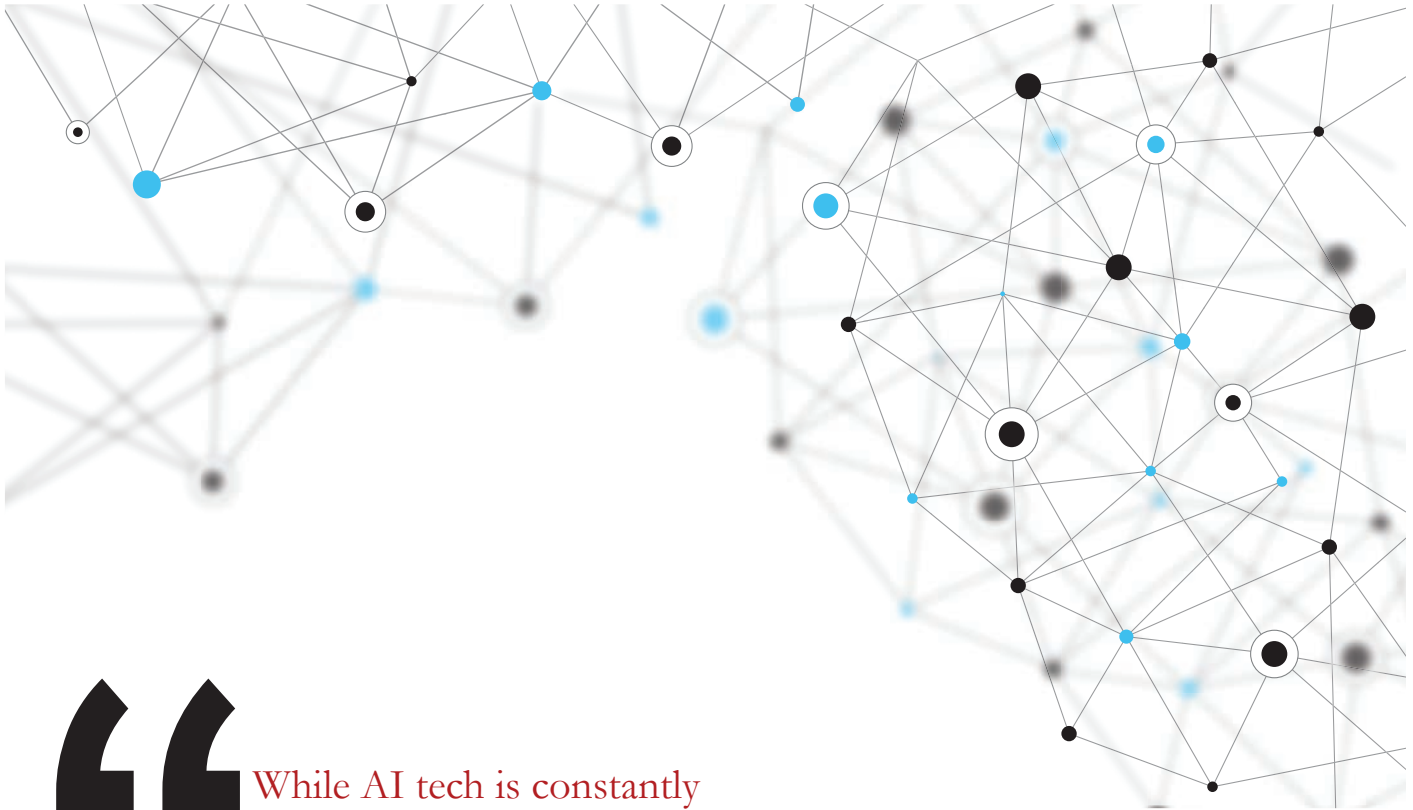
China's focus on technological advancement is at the core of its geopolitical goal to integrate civilian and military spheres. The United States and its allies fear this drive to military-civil tech fusion, although experts such as Elsa B. Kania and Lorand Laskai note that such integration in China is far from complete and more of an aspiration at present.

Countries including Australia, the United Kingdom, and South Korea are also in the market for systems such as loitering munitions or kamikaze drones that appear to be functioning with increasing autonomy.

But, while AI tech is constantly improving, it can still be described as brittle, biased, and immature. Largely the product of civilian industries, in any rapidly changing combat situation, this tech is unreliable and could put lives at risk. For example, a failure of facial recognition technology could be tragic if the system was involved in choosing a strike target.

For these and other reasons, many states support a partial or total ban on autonomous weapons systems. But opposition also exists. China





“While AI tech is constantly improving, it can still be described as brittle, biased, and immature. Largely the product of civilian industries, in any rapidly changing combat situation, this tech is unreliable and could put lives at risk.

has publicly supported a ban on offensive autonomous weapons, but does not support a universal ban on all fully autonomous weapons. For the past six years, Russia has been the most vocal in opposing efforts to ban weapons that are capable of selecting and engaging targets without human control.

#### Getting talks on regulation back on track

Some countries continue to see the Convention on Certain Conventional Weapons as the most appropriate forum for discussions on the regulation of autonomous weapons. But civil-society organizations and states that want a ban on these weapons fear ongoing delays, at least partly because of the CCW's consensus-based model

of operations. In the past, the need for unanimity has led to the inability to resolve even basic questions on how long meetings should last. Looking at the last six years of discussion, these groups fear that consensus on banning autonomous weapons will never be reached. So far, no regulation of autonomous weapons has come out of the CCW.

Other analysts value the CCW as an incubator that allows countries the time and space to better understand the complexities around regulating or banning autonomous military tech. Researcher Neil C. Renic at the University of Hamburg points out that CCW talks have addressed technological, legal, and ethical concerns relating to autonomous systems and their use in warfare. He believes that these discussions have contributed to growing support for a ban or regulation.

However, Renic also notes that the CCW's deficiencies have pushed civil-society organizations and states that support a ban to consider different venues to achieve regulation.

For example, the process could be taken outside the UN system. This was done to achieve a



November's annual meeting of the Convention on Certain Conventional Weapons (CCW), at which the 2021 schedule for discussions on autonomous weapons would have been set, was cancelled. *Jean-Marc Ferré/UN*

ban on landmines. Or the issue could go through the UN General Assembly. Both of these options would present challenges in a divided and tense global political environment.

The push for regulation would have to be championed by committed states such as Austria, Brazil, and perhaps Belgium, whose parliament passed a resolution supporting a ban on autonomous weapons. Also needed would be the support of key international institutions and civil-society organizations, such as the International Committee of the Red Cross. These champions would need to engage with the main advocates for autonomous weapons, such as the United States, Australia, and Russia.

### What role for Canada?

During the years of discussion, Canada has been more observer than participant. However, a mandate to support efforts to ensure a ban on autonomous weapons was given to then Canadian

Foreign Minister François-Philippe Champagne and remains in place for current Foreign Minister Marc Garneau. Garneau, a former astronaut, certainly understands technological advancements and the need for reliable tech.

Canada, with likeminded states, could revitalize the stalled talks on autonomous weapons at the CCW or champion the cause in other multi-lateral venues. Showing leadership and engagement on this topic would be useful in building a broader diplomatic strategy on technological developments.

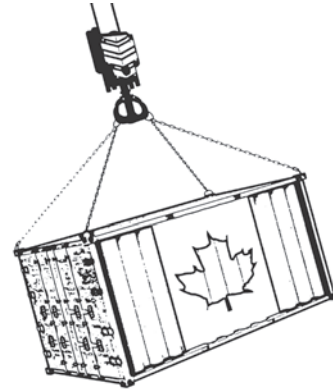
The current hiatus in the process to regulate autonomous weapons should be seen as an opportunity to consider how best to create technological policies that are human-centric and do not treat civilian lives as mere objects or data points.

But the international community must move quickly. The drive to create autonomous military technologies is strong and gaining momentum. The drive to control these systems must be just as focused and just as nimble. □

*Branka Marijan is a Senior Researcher at Project Ploughshares. She can be reached at [bmarijan@ploughshares.ca](mailto:bmarijan@ploughshares.ca).*

## Top 10

# Selling Canadian military goods



Written by Kelsey Gallagher

**T**he Canadian Commercial Corporation (CCC), an independently operated Crown corporation, arranges contracts between Canadian manufacturers and foreign governments. Between 60 and 70 per cent of these contracts involve military goods, making the CCC Canada's largest arms broker. It is worth noting that, under the 1956 Canada-United States Defence Production Sharing Agreement, all prime contracts for Canadian weapons to the United States valued in excess of 250,000 USD must go through the CCC.

The information that follows is on the 10 Ca-

nadian military suppliers that were awarded the most in CCC-brokered prime contracts in FY2020, a 12-month period that ended March 31, 2020. Data was obtained through Access to Information and Privacy requests to the CCC. If the supplier was awarded more than one prime contract, the total value for all contracts is given. Values for one contract to Mexico and another to Montenegro were redacted by the CCC in the data provided and were therefore omitted in our analysis.

The resulting list contains only contracts to the United States, worth in total more than 876-million CAD.

## 1 General Dynamics Ordnance and Tactical Systems-Canada (GD-OTS Canada)

U.S. contracts in FY2020: \$219,170,676.47

Category of contracts: "Defence"

GD-OTS Canada, a division of U.S. giant General Dynamics Corporation, is a major manufacturer and exporter of munitions. Its products range from smaller calibre rifle rounds to larger artillery and tank shells.

GD-OTS Canada produces the widely used 5.56×45mm cartridge, a standard rifle round for NATO-member countries; the M-67 hand grenade; and the 155mm High Explosive M10 cartridge used in the U.S. M777 howitzer. GD-OTS Canada also manufactures artillery fuses, energetic materials (e.g., propellants) for use in munitions, and "Simunition" non-lethal training rounds for U.S. law enforcement. ♦

## 2 L3Harris WESCAM Inc.

U.S. contracts in FY2020: \$129,211,361.39

Category of contracts: "Aerospace" and "ICT [information and communication technologies] & Security"

L3Harris WESCAM is a world-leading manufacturer of electro-optical/infra-red (EO/IR) imaging sensors, typically fitted to aircraft, but now also often found on ground and maritime vehicles. The sensors are used to surveil, detect, and, in some instances, direct fire on targets.

L3Harris WESCAM manufactures a variety of EO/IR sensors with an extensive range of capabilities. The growing use of unmanned aerial vehicles (UAVs) has fueled an increase in WESCAM sales.

L3Harris WESCAM sensors are used on many U.S. helicopters and gunships, light attack aircraft, UAVs, surveillance aircraft, precision strike

aircraft, and ground vehicles. Notable are the AC-130J GHOSTRIDER and C-130 Hercules aircraft, the Sikorsky UH-60 utility Black Hawk helicopter, and the AAI RQ-7 Shadow UAV. ♦

**3** General Dynamics Land Systems-Canada (GDLS-C)  
 U.S. contracts in FY2020: \$74,986,789.60  
 Category of contracts: "Advanced Manufactured Goods" and "Defence"

GDLS-C has been manufacturing light armoured vehicles (LAVs) for decades. The company also offers sub-system integration, training, upgrades, and repairs.

GDLS-C is a major producer of the Stryker family of eight-wheeled armoured vehicles, based on the Canadian-designed LAV III platform. The Stryker has been called the backbone of the U.S. Army, which has been supplied with hundreds of these Canadian vehicles since 2002. Many of these vehicles have been deployed in U.S. military interventions in Afghanistan and Iraq. ♦



**4** Ultra Electronics Tactical Communication Systems Inc. (Ultra Electronics TCS)  
 U.S. contract in FY2020: \$70,433,084.33  
 Category of contract: "ICT & Security"

Ultra Electronics TCS is a subsidiary of British Ultra Electronics Holdings, which manufactures a wide array of defence-related materiel. Ultra Electronics TCS primarily manufactures radio and communications equipment. Exports to the U.S. military include the AN/GRC-245 High Capacity Line-of-Sight radio systems and, more recently, the Orion X500 radio. ♦

**5** Coulson Aircrane Ltd.  
 U.S. contract in FY2020: \$48,824,599.31  
 Category of contracts: "Aerospace"

Beginning in foresting, the Coulson group of companies is now a world leader in outfitting aircraft to fight fires.

The 2020 contract with the U.S. Air Force was to install Retardant Aerial Delivery System (RADS)-XXL Firefighting Systems on C-130H aircraft for use by the California Department of Forestry and Fire Protection. ♦

**6** Emergent BioSolutions Canada Inc.  
 U.S. contract in FY2020: \$30,650,488.62  
 Category of contract: "Health"

Emergent BioSolutions Canada, a subsidiary of U.S. Emergent BioSolutions Inc., is a pharmaceutical company that produces medical applications to combat infectious diseases and chemical agents. For several years, Emergent BioSolutions Canada has supplied the U.S. military with pharmaceuticals, including the Canadian-engineered Reactive Skin Decontamination Lotion Kit used to counter the effects of chemical warfare. ♦

**7** EMS Technologies Canada Ltd.  
 U.S. contract in FY2020: \$30,453,383.84  
 Category of contract: "Aerospace"

EMS Technologies Canada Ltd., a subsidiary of Honeywell, specializes in satellite communication networks and avionics. A long-time supplier of the U.S. military, it has supplied Inmarsat satellite communication systems for U.S. aircraft and performed avionics upgrades to the U.S. E-3 707 early warning aircraft fleet. ♦



8

Indal Technologies Inc.

U.S. contracts in FY2020: \$27,667,237.64

Category of contracts: "Aerospace", "Defence," and "ICT &amp; Security"

A business unit of Curtiss-Wright Defense Solutions, Indal Technologies manufactures support systems for maritime aviation. Since at least 1984, it has supplied the U.S. Navy with Recovery, Assist, Secure & Traverse (RAST) systems that stabilize helicopters landing on ship decks and with deck handling equipment, actuating systems, acoustic sensors, and cargo and hangar doors. ♦

9

Canadian Helicopters Ltd.

U.S. contract in FY2020: \$26,324,166.25

Category of contract: "Aerospace"

Canadian Helicopters, a division of HNZ Group, provides commercial and transportation services related to oil and gas production, military support, mineral exploration, hydro/utilities, forest

management, construction, air ambulance, and search & rescue. From 2009 to 2014, it provided Bell 212 and Sikorsky S61N helicopters to transport U.S. military personnel and supplies to bases in Afghanistan. ♦

10

General Dynamics Mission Systems-Canada (GDMS-C)

U.S. contracts in FY2020: \$24,988,578.73

Category of contracts: "Defence" and "ICT &amp; Security"

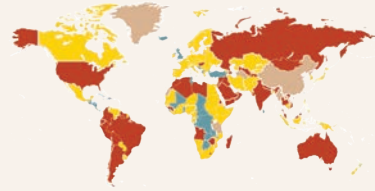
GDMS-C provides an array of electronic subsystems, including communications and network devices, sonars and sensors, and "fire control" computing systems for military sea, land, and air applications.

Like its sister subsidiaries, GDMS-C supplies many weapons systems to the U.S. military. The Digital Fire Control System, for example, helps to control and fire large-barreled weaponry; it is used in the U.S. M777 155mm Howitzer, the Stryker Mobile Gun System, and the M142 High Mobility Artillery Rocket System. □

Research Assistant Benjamin Toubol contributed to this article.

Kelsey Gallagher is a Researcher at Project Ploughshares. He can be reached at [kgallagher@ploughshares.ca](mailto:kgallagher@ploughshares.ca).

# Need another reason to support Project Ploughshares?



We are mentoring the **next generation of peace researchers in Canada**. Some of the best and brightest.

**Kirsten Mosey is our research intern for the winter term**, thanks to our partnership with the Centre for Peace Advancement at Conrad Grebel University College.

Kirsten is currently pursuing a bachelor's degree in Political Science and Business, with a particular focus and interest in foreign policy and migration. In 2020, she was named one of 10 Youth Champions for Disarmament by the United Nations. The United Nations Office for Disarmament Affairs (UNODA) selected Kirsten, the only representative from North America, out of 6,500 applications.



**Check out Kirsten's Q&A on page 14 of this issue.**



To donate visit [www.ploughshares.ca](http://www.ploughshares.ca) or call 519-888-6541; toll free: 1-888-907-3223