

INTERVIEW

## INTERVIEW WITH MS. ANGELICA LIAO-MOROZ

*Executive Director, Non-proliferation, Disarmament & Space Division  
at Global Affairs”; Former Director of Canada’s Weapons Threat  
Reduction Program*

by Francesco Miorin

**A**s the Director of the Weapons Threat Reduction Program at Global Affairs Canada since 2018, Ms. Angelica Liao-Moroz has a nuanced understanding of the complexities of national security efforts in an increasingly intercon-

nected global environment. In this interview with F3, Ms. Liao-Moroz shares some of her experience on a wide-range of chemical, biological, radiological and nuclear (CBRN) related issues, from sustainable capacity-building programs to emerging threats.



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**THE GOVERNMENT OF CANADA IS ONE OF THE KEY DONORS WHEN IT COMES TO INTERNATIONAL ASSISTANCE ON CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR (CBRN) THREAT REDUCTION, WHAT WOULD YOU SAY ARE THE COUNTRY'S GUIDING PRINCIPLES FOR INTERNATIONAL ASSISTANCE AND COOPERATION?**

Canada is proud to be a key player in CBRN threat reduction. But we know we are not alone in this - a threat that affects one can affect us all. No one country or donor can or should go it alone, hence the importance of working in lockstep with the broader international community of governments, experts and organizations. We also very much see it as a full-fledged partnership

with those countries or regions seeking assistance, as opposed to a traditional donor-recipient relationship, which makes for greater levels of buy-in and ultimately engagement.

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**WHY IS CBRN SECURITY ASSISTANCE CONSIDERED A PRIORITY FOR THE GOVERNMENT OF CANADA? HOW HAS THIS CHANGED OVER TIME?**

By their very nature, any security incident involving a nuclear, biological or chemical weapon could potentially cripple a city, country or region. A major event could have catastrophic and long-lasting global impacts, but even the improper use of related CBRN materials can pose a risk to communities.

Canada is playing an active role in shaping a range of non-proliferation treaties and initiatives, and is a leading contributor to multilateral groupings. A central one for us is the G7-led Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (launched by Leaders at the 2002 G8 Kananaskis Summit), which as a forum is unmatched in its collective resources, networks and expertise to build capacity to counter such threats.

The Global Partnership itself was a response by the international community to the 9/11 terrorist attacks and the anthrax letter scare in the U.S. This was a major impetus for world leaders deciding to take collective action to prevent terrorists and those that





harbor them from acquiring weapons and materials of mass destruction.

From its beginning, the Global Partnership was primarily focused on helping address the legacy CBRN threats in the territories of the former Soviet Union. There was a significant collective effort focussed on helping Russia destroy its declared stockpile of chemical weapons (the largest in the world at nearly 40,000 metric tons) and the redirection of tens of thousands of former weapon scientists to peaceful pursuits. Things have evolved over time though – today, almost two decades later, the Global Partnership has 31 active members, and has moved beyond the Former Soviet

Union (FSU) – the membership delivers programming wherever CBRN threats are present across the globe. It is through the Global Partnership that Canada supports many of the CBRN initiatives in close coordination with our partners.

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***CAN YOU SHARE A SUCCESS STORY WITH US RELATED TO CANADA'S ENGAGEMENT WITH INTERNATIONAL PARTNERS IN CBRN THREAT REDUCTION?***

One success story that I am particularly proud of is all the work we have done to better connect the health and security sectors when it comes to mitigating biological threats - that is to say, the natural, ac-

cidental or malicious spread of disease. We are currently assisting more than two dozen countries to strengthen biosafety and biosecurity for pathogens of security concern (e.g. anthrax and Ebola), enhance surveillance and diagnostic capabilities and improve capacities to mitigate all manner of biological threats. We are also spearheading efforts to develop sustainable biosecurity solutions for low-resource countries (including through a “Grand Challenge” to be launched in 2021) as well as a new Global Partnership Signature Initiative to Mitigate Biological Threats in Africa.

Certainly, there's a lot left to do—but we've made significant

strides in the two decades that we've been advocating and steering this collaboration. Through our work on global health security, our program has developed strong ties and partnerships with international organizations such as the World Health Organization (WHO), the World Organization for Animal Health (OIE) and the

supported in the international response to the ongoing COVID-19 pandemic. This includes the biological containment laboratories that we've previously provided to the Caribbean, Ghana, Jordan, Nigeria, and South Africa – these labs are now on the frontlines of testing for COVID-19.

to a quick injection of funding, expertise or equipment. That's probably the exception though – most of our capacity-building efforts require sustained engagement. We are looking to build capacity that will endure well beyond our funding and will have the greatest impact in mitigating CBRN threats.



Part of the solution, I think, is to embrace innovation. A great example of this are those biological containment facilities I mentioned earlier. The current “state of the art” in the design and operation of these facilities has been designed for developed countries with ample resources – it is just not feasible to drop them into a lot of these countries where the need is highest. A lot of the most dangerous diseases that we're worried about from a security perspective, such as Ebola or anthrax, are endemic in a number of countries with fairly low levels of infrastructure and resources. So we – by which I mean not just Canada, but other Global Partnership members and international organizations like the WHO and OIE – are working to move away from a “one size fits all” approach and to identify innovative solutions for laboratories to be operated in low-resource environments. For example, we have incorporated solar power into labs we have provided in Nigeria and Sierra Leone. I think we are still in the early stages

International Criminal Police Organization (INTERPOL); with other countries and regional partners such as the Association of South East Asian Nations (ASEAN), the Africa Centres for Disease Control and Prevention (Africa CDC), the Caribbean Community (CARICOM) and the Caribbean Public Health Agency). These strong collaborations lead to coordinated programming to ensure that our efforts are targeted and of maximum impact.

We are seeing the impact of many of the initiatives we have

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***FROM CAPACITY-BUILDING MEASURES TO THE ENVIRONMENT, SUSTAINABILITY HAS BECOME A MAJOR CONCERN FOR DONORS AND INTERNATIONAL ORGANIZATIONS ALIKE. HOW DOES GLOBAL AFFAIRS CANADA APPROACH THIS ISSUE?***

Definitely – sustainability is certainly a preoccupation for Canada's Weapons Threat Reduction Program (WTRP). It does come in different flavours or shades though – some of the capacity-building work that we do lends itself

of this approach though, and we have joined the OIE and the United Kingdom to launch a new “Grand Challenge for Sustainable Laboratories”, which aims to develop innovative new technological and operational laboratory solutions that can be sustained in low-resource environments.

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**ONE OF THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS TARGETS GENDER EQUALITY. WHAT IS GLOBAL AFFAIRS CANADA’S APPROACH TO PROMOTING GENDER EQUALITY THROUGHOUT ITS WORK, ESPECIALLY IN A TRADITIONALLY MALE-DOMINATED AREA SUCH AS THE SECURITY SECTOR? HAVE YOU WITNESSED ANY CHANGE OF DIRECTION IN THIS REGARD?**

Meaningful change comes slowly – particularly in a traditionally male-dominated field like the security sector. But make no mistake, we are making inroads. Guided by Canada’s Feminist International Assistance Policy, we are applying a feminist lens to all our policies and programming. One way we are doing this is by providing financial support to the IAEA’s Marie Skłodowska-Curie Fellowship Programme and to CRDF Global’s “WomenAdvance: Chemical Security” program – both aim to increase meaningful participation and create greater opportunities for women in these fields. A lot of the chal-

lenges we see have their roots well beyond the mandate of programs such as ours, and a full solution requires concerted action on a societal level. But I do believe we are helping to move the needle – we are definitely on the right path to promoting women leaders and more diverse voices in this field, which will be stronger for it.

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**WHAT ARE THE MOST NOTABLE CHALLENGES THAT YOUR ORGANIZATION FACES IN PROVIDING ASSISTANCE?**

With finite resources (even for a country like Canada), ensuring that all international assistance is high-impact and value-added is crucial. That being said, we do face a number of challenges when providing assistance to countries. For example, a lot of the peace and security programming that Global Affairs Canada delivers is in countries with multiple and interconnected challenges – economic hardship, impacts of climate change, political instability, and so forth. This means there are often a number of parallel programs and organizations working in the same space, which raises the risk of duplication and the wasting of scarce resources. To help mitigate these risks, we continuously collaborate with our implementation partners, other countries working in the region, and with the beneficiary country

itself to ensure that activities are aligned with development, trade and humanitarian work being conducted.

Additionally, we strive to ensure that any capacity we build in-country related to CBRN threat reduction is sustainable – we have to keep in mind that not all countries have access to the same level of resources. To better ensure the sustainability of our capacity-building projects over the longer term, we work closely on the ground with the stakeholder organizations to make sure they are well-positioned to assume full control and ‘ownership’ of the project’s outcomes (and by ‘ownership’, I mean more than just a formal handover ceremony and transfer of title – the goal is for the beneficiary to truly step up and assume full responsibility, whether through the ongoing allocation of financial and human resources, or the consistent application of political will).

Lastly, one of the biggest challenges our program faces when providing international assistance is the ability to measure and evaluate results. Our core mandate is to prevent the proliferation of Weapons of Mass Destruction (WMDs) and related materials by terrorists or states of proliferation concern – it is a high-impact but generally low-probability scenario (especially when compared



to the proliferation risks from conventional weapons). It therefore can be difficult to demonstrate value for money and show the public the work we do on the ground to help counter WMD threats. We're working hard with our partners to identify and track relevant performance indicators that will demonstrate an increase in the level of performance by our beneficiaries specifically as it relates to WMDs proliferation, and also as applicable to other global frameworks such as the UN's Sustainable Development Goals (SDGs).

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***HOW HAS THE COVID-19 PANDEMIC AFFECTED THE WORK OF YOUR ORGANIZATION AND OF YOUR PARTNERS? WHAT LESSONS HAVE YOU LEARNED?***

As the events of 2020 have made abundantly clear, an increased focus on strengthening global health security is long overdue. We as societies tend to have fairly short attention spans, and we seem to find ourselves reacting to crises far more than we do working to prevent them. COVID-19 is just the latest example – a virus previously unknown to science has reminded us all that disease can bring the world to

a virtual standstill – crippling economies, undermining global security and causing untold human suffering and loss of life. The pandemic has underscored that more collective work is needed to build capacity to prevent, detect and respond to all manner of infectious disease threats, whether natural, accidental or deliberate in origin.

One of the keys to success is collaboration at the health-security interface – that area where the interests of the public and animal health communities overlap with those of the international security sector.

For the past decade, we have been working with international health partners such as the WHO and OIE to highlight the importance of health-security cooperation, and to build sustainable capacity. This includes support for the WHO to establish a new Health Security Interface Secretariat, and a first-of-its-kind collaboration with OIE, FAO and INTERPOL to build resilience against agro-terrorism and agro-crime by strengthening multi-sectoral capacity and fostering regional and international cooperation.

So there's different stakeholders approaching the same problem but from different perspectives. But ultimately, biological threat reduction and pandemic preparedness require the investment and engagement of a broad group of stakeholders, including from the security sector. And we think this perspective is gradually taking root.

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**IN YOUR OPINION, WHAT ROLE DOES THE UN PLAY IN PROMOTING CBRN THREAT REDUCTION?**

We hear a lot about what an interconnected world we live in, and certainly the pandemic has brought that home! It's undoubtedly true in the world of CBRN as well – a threat that affects one can affect us all. So it's no surprise that the UN is a prime forum to collective-

ly address these threats.

For example, UN Security Council Resolution 1540 requires all member states to prevent non-state actors from acquiring, using or trafficking nuclear, chemical and biological weapons and materials. This means that states must adopt and enforce appropriate laws and controls, and report back to the UN on their progress. UNSCR 1540 also helps facilitate assistance to states so they can fulfill their obligations.

In addition, the UN General Assembly offers an inclusive forum to raise awareness and address CBRN threats. Specifically, the First Committee on disarmament and international security adopts a range of resolutions on such threats every year.

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**OVER THE PAST FEW YEARS, CYBER-ATTACKS AGAINST CBRN FACILITIES HAVE INCREASED SUBSTANTIALLY. CAN YOU TELL US MORE ABOUT GLOBAL AFFAIRS CANADA'S PERSPECTIVES ON THE RISK AND HOW IT COULD BE ADDRESSED THROUGH INTERNATIONAL COOPERATION?**

Indeed, malicious cyber activities are increasingly targeting critical infrastructure – we've just seen the news today about a critical oil pipeline in the U.S. being shut down due to a ransomware attack. Canada's Communications Security Establishment's [National Cyber Threat Assessment 2020](#) says that "state-sponsored



actors are very likely attempting to develop cyber capabilities to disrupt Canadian critical infrastructure, such as the supply of electricity, to further their goals."

It's very much an emerging issue, and I think a lot of us in the international community are



still working to get our hands fully around the challenge. There are already several cyberspace 'norms of state behaviour' endorsed by the UN General Assembly that address malicious cyber activities targeting critical infrastructure. Canada is working with our likeminded partners and allies at the UN and other organizations to promote adherence to a framework of responsible state behaviour in cyberspace. This includes norms of state behaviour and the applicability of international law in cyberspace, as well as calling on all actors not to use cyber means to harm civilians or target critical infrastructure. We're also becoming more fully aware of the need to integrate cybersecurity considerations into our programming activities, particularly for those projects that focus on key infrastructure like nuclear power plants.

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**WHAT ARE OTHER EMERGING RISKS AND THREATS TO BE ADDRESSED BY THE INTERNATIONAL COMMUNITY IN THE AREA OF CBRN SECURITY?**

The introduction of novel technologies present both challenges and opportunities. For example, innovations related to artificial intelligence, 3-D printing, drone technology and advanced nuclear re-

actors can be capitalized for nuclear energy and nuclear applications. However, they can also be double-edged and introduce new threats that could compromise safe and secure operations. Canada is working with partners such as the IAEA, INTERPOL and the World Institute for Nuclear Security to continue addressing these challenges.

There is also the real potential that the misuse of synthetic biology will give rise to new threats – this too requires continued attention. States, through multilateral export control regimes, must also maintain close coordination on safety measures and controls, without unduly stifling legitimate trade.

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**IF YOU WERE TO CHOOSE ONE, WHAT MESSAGE WOULD YOU LIKE TO PASS TO CANADA'S PARTNERS?**

The threat posed by weapons and materials of mass destruction is complex and continues to evolve with the pace of technology, so we cannot be complacent. Collectively, this means we need to be vigilant, adaptable, and get ahead of emerging threats. No one country – however big, active or resourceful – can go it alone.