Biological Weapons Convention (BWC) Universalisation Workshop for the Pacific

“The importance of BWC universalisation to health, security and the environment in small island states”

Wellington, New Zealand
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How does implementing the BWC promote and enhance biosecurity and biosafety?

- The BWC seeks to prevent the acquisition, possession and use of biological agents that have the potential to kill millions, cost billions in economic losses, and create political and economic instability, whether naturally occurring, accidental, or manmade.
- The BWC mandates States “not to transfer to any recipient whatsoever, or in any way assist, encourage or induce any State, group of States or international organizations to manufacture or otherwise acquire biological weapons.”
- The risk of a catastrophic biological event is magnified by global travel, urbanization, terrorist interest in weapons of mass destruction as well as rapid advances in technology, including risks posed by newly developed or manipulated pathogens with pandemic potential.
- For SIDS, an effective biosecurity regime seeks to reduce, among other things, biological risks posed by advances in technology and improves infectious disease surveillance.
- Despite these challenges, biosecurity remains an under-emphasized and under-financed global security priority.
Biosecurity Governance in the Caribbean: What are the essential elements?

Our overall approach to biosecurity governance is informed by our functional interpretation of what biosecurity entails, from a security and public safety perspective: The prevention of the deliberate misuse of biological pathogens and toxins with the intention to harm people, animals, plants and the environment.

Treaties & Agreements:

- The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxin Weapons and on their Destruction (Biological Weapons Convention)
- United Nations Security Council Resolution 1540
- International Health Regulations (IHR): World Health Organization (WHO)
- Global Health Security Agenda (GHSA)
Current Biotechnology Challenges Facing SIDS
What are the Vulnerabilities?

• Emerging and converging technologies present new risks to security that require new methodologies and approaches for risk mitigation.

• Computation, networking, automation, and access to data have served to exponentially increase risks relating to biotechnology.

• With advances in biotechnology there is need for commensurate improvement in approaches to biosafety and biosecurity, especially in SIDS where resources are often inadequate and vulnerability/risks are high.

• Even outside of a terrorist scenario, non-state actors with malevolent intent have long recognized that penalties associated with the deliberate release of human pathogens or toxins are significantly lower than those for the deliberate release of chemical or nuclear material.

• Given this disparity in penalties, biological pathogens may actually prove a more attractive option for individuals intent on endangering public safety.
Current Biotechnology Challenges Facing SIDS
What are the key vulnerabilities?

Small Island Developing States continue to face growing vulnerability surrounding the lack of capability in areas vital to countering biological threats. These include:

- Building needed resiliency in national laboratory systems
- Updating inventories of dangerous pathogens and toxins
- Consolidating dangerous pathogens and toxins into a minimum number of facilities
- Developing and implementing necessary biosafety and biosecurity legislation
- Developing effective national standards for containing and handling dangerous pathogens and toxins
- Using effective modern diagnostic technologies that do not require culturing
- Providing comprehensive biosafety and biosecurity training for national and private laboratories
- Instituting effective practices for safe, secure, responsible conduct
- Implementing mechanisms for linking public health, animal health, and security authorities to investigate, mitigate and attribute biological attacks
Creatively Leveraging the BWC: Promoting Environmental Biosecurity

- For CARICOM States, biosecurity as a holistic term, encompasses policy and regulation to protect agriculture, food and the environment from biological risk.

- In this regard, ministries of agriculture, science and technology and health in the Caribbean have primary responsibility for managing biosecurity, including managing biosecurity risk, to the environment.

- Leveraging the BWC implementation process to protect the environment from pests and the deliberate introduction of plant pathogens which directly affect food security and the biodiversity of our island nations is of utmost importance to SIDS.

- Effectively managing biosecurity risk to the environment is a fundamental part of a functional national biosecurity system which seeks to preserve animal, plant and human health.

- There is an urgent need for CARICOM Member States to develop and implement policies and programs that protect and conserve the environment through the conducting of risk analyses, including import risk analyses, so that goods and people arriving in the region do not pose an unacceptable biosecurity risk.
Current Biotechnology Challenges Facing SIDS
Other major areas of vulnerability

Emerging and converging technologies have significantly increased the number of vulnerabilities to national security to levels that governments and industry in SIDS are simply incapable of addressing without active support from international partners.

SIDS simply do not have the technical and financial resources required to implement mitigation strategies to address risks with a low probability of occurrence and/or low consequence.

SIDS face challenges in prioritizing potential courses of action based on defensible integrated risk assessments that consider both probability and consequence in the context of converging technologies.
Current Biotechnology Challenges Facing SIDS
If the Big Boys are Vulnerable, then what are my Chances?

Given multiple incidents highlighting significant biosecurity risk/vulnerabilities in developed health systems, such as the United States, it is understandable that SIDS view pathogen biosecurity risks with some concern:

- While cleaning a government storage room near Washington, DC in July 2014, National Institutes of Health employees located vials that contained the smallpox virus. The vials subsequently were turned over to the Centers for Disease Control and Prevention (CDC) for testing and proper handling.

- This unexpected discovery challenged the commonly held understanding that the globally eradicated pathogen was well secured in only two high-security locations – one in the United States and one in Russia.

- Subsequent reporting indicated that other unexpected pathogens also were located with the smallpox virus in the storage room.
Current Biotechnology Challenges Facing SIDS
If the Big Boys are Vulnerable, then what are my Chances?

• The US Centers for the Disease Control (CDC) in Atlanta, Georgia experienced its own incident in June 2014 when a possible exposure to live Bacillus anthracis (anthrax) occurred during its internal research operations.

• Reports found that anthrax samples distributed to other research facilities were not properly deactivated before distribution to those locations – a violation of existing biosecurity and biosafety operating procedures.

• Another disclosure in July 2014 by the CDC revealed that a relatively benign sample of the H9N2 influenza virus was reportedly contaminated with the more serious H5N1 influenza virus before transfer to another facility.

• The U.S. Department of Agriculture reportedly identified the error after receiving the sample in May 2014 and advised the CDC.
Inclusive of biological agents/materials, UNSCR 1540 seeks to prevent the development, acquisition, trafficking, or use of weapons of mass destruction (WMD), their means of delivery, and related materials equipment and technology.

- By, or to, Non-State actors
- By, or to, State actors
United Nations Security Council Resolution 1540
Fundamental pillar of Biosecurity Governance

2. Decides also that all States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them;

- Mandates from Operative Paragraph 2 of Resolution 1540 is key to biosecurity governance and supports the full implementation of the Biological and Toxin Weapons Convention (BWC)
- UNSCR 1540 implementation activities have always been regarded as a corollary to ongoing efforts in CARICOM Member States to implement the BWC
Operative Paragraph 8 of Resolution 1540 is very clear about Member States responsibilities in fully meeting their obligations under the key multilateral nonproliferation treaties, effectively making the case that any progress in assuming mandates under the Biological and Toxin Weapons Convention (BWC), for example, also furthers the assumption of responsibilities with respect to UNSCR 1540.
Promoting Bio-Security & Bio-Safety
Ongoing Collaboration with the Global Partnership program

Since 2015 the Government of Canada, under the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, has funded non-proliferation and disarmament activity in the region through the NPCI/1540 Programme to the tune of over CDN$1.1 million. This support has enabled the CARICOM Programme to:

- Acquaint CARICOM Member States with key aspects of the Biological Weapons Convention and the BWC Cooperation and Assistance Database
- Highlight the need for Member States to develop effective biosafety and biosecurity governance systems
- Promote the BWC Sponsorship programme
- Promote universalization of the BWC within the region with particular focus on the Republic of Haiti
- Encourage CARICOM Member States to strengthen response and surveillance capacities by leveraging assistance and support mechanisms, including laboratory services
Since August 2017, the CARICOM 1540 Programme has been deepening its collaboration with the OIE to:

- Foster biothreat reduction activities in the region and to minimize/mitigate biological risks that are both related to the accidental or deliberate release of animal pathogens or biological toxins

- With the advent of globalization and the increasingly speedy movement of goods and commodities - including live animals - there is a growing concern about zoonotic diseases and their potential impact

- There is an increasing encroachment on and destruction of natural habitats and has been further compounded by climate change, as well as other ecological changes

- Our cooperation focuses on the current threat that weaponized infectious diseases and biological toxins can pose to both humans and animals and the need for security policy personnel and practitioners to view biological threats more seriously

- Our aim is to build multi-sectoral synergies to promote the prevention, preparedness and response to biological threats.
Implementing UNSCR 1540, the IHR and GHSA: Additional Challenges, New Opportunities

The CARICOM 1540 Programme also is responsible for facilitating the implementation of the Global Health Security Agenda (GHSA) by focusing biological proliferation threats which are germane to UNSCR 1540 and the Biological and Toxin Weapons Convention (BWC)

Bio-safety and bio-security mandates under the International Health Regulations (IHR) are also now given significant focus along with objectives under the GHSA to fulfil Operative Paragraph 8 (c) of Resolution 1540

With the appointment of the CARICOM Regional 1540 Coordinator to the Regional Coordinating Mechanism on Health Security (RCMHS) in May 2017, the 1540 Programme is now increasing collaboration with the Caribbean Public Health Agency (CARPHA) to focus on the overlapping/cross-cutting non-proliferation mandates stemming from 1540/BWC and to use action under GHSA to further these obligations.
Implementing UNSCR 1540 & the IHR and GHSA: Additional Challenges, New Opportunities

The focus is on three (3) thematic areas drawing from UNSCR 1540, the Global Health Security Agenda (GHSA) Caribbean Roadmap adopted in December 2016 in Miami, Florida and the International Health Regulations (IHR). These include:

- Furthering the full implementation of Operative Paragraphs 1-3 of Resolution 1540 by focusing on: prohibiting the development production, acquisition, transfer, stockpiling, and use of biological and toxin weapons (BWC)
- Strengthening regional and national capacity to prevent, detect, and respond to infectious disease threats, whether naturally occurring, deliberate, or accidental (GHSA)
- Preventing, protecting against, controlling, and provide a public health response to the international spread of disease (IHR)

Promoting regional biosafety/biosecurity and linking public health with law enforcement and multi-sectoral rapid response is key in fulfillment of Operative Paragraph 3(c) of Resolution 1540
Core Objectives & the Way Forward: Additional Challenges, New Opportunities

The CARICOM 1540 Programme is actively partnering with the Caribbean Public Health Agency (CARPHA) to assist Member States in:

- Developing national frameworks for pathogen biosafety and biosecurity using an all-of-government approach in keeping with the requirements of (WHO-IHR Core Capacity 8.2, WHO JEE Prevent 6.1 indicators, and GHSA Action Package Prevent 3)

- Providing access to expert resources through the guided use of the Canadian Analytical Approach for the Development of a National Biosafety and Biosecurity System

- Providing guidance on the use of the Canadian Analytical Approach and other international guidance documents towards the development of national regulatory requirements for pathogen biosafety and biosecurity

- Developing national policies for biosafety and biosecurity in tandem with the public health and security sectors
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