Project 2: Promotion of Science and Technology in the Context of the BWC

“Regional S &T Workshop on the BWC for Asia

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Panel Discussion of the Implementation of the EU Council Decision 2016/51 in Support of the BWC
Biological Weapons Convention Meeting of State Parties
United Nations Office at Geneva, 5 December 2018
Room Xviii, Palais des Nation
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<th>Position and Affiliation</th>
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Areas covered during workshop

- EU Council Decision 2016/51: an important tool to strengthen the implementation of the BWC
- S&T developments in the life sciences relevant to the BWC
- BWC relevant S&T developments in Asia
- Regulatory frameworks to prevent the misuse of Science and Technology
- Governance of S&T, development of codes of conduct: roles of stakeholder communities in academia, industry and civil society
- Biosafety and biosecurity education in the Philippines and in the South-East Asia region
- Responding to epidemics
- Activities and assistance opportunities offered by international organisations and platforms
Highly-interactive discussions followed the opening ceremony, including a break-out group session that focused on identifying the main areas of work in the region under the provisions of each BWC article.

Discussions centered on the rapid advances in the life sciences and the risks and benefits these pose under the BWC, particularly developments in gene-editing, CRISPR, and other related biotechnologies that may make the production of and access to bioweapons more accessible.

This was also linked to the disconnect that frequently exists between policy decision-makers, and scientists and technological communities in the region.
## Participants to the 5th Workshop on Science and Technology in Support of the BWC

<table>
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<th>Fifteen States Parties</th>
<th>Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, the Republic of the Philippines, the Republic of Korea, Sri Lanka, Thailand and Vietnam</th>
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<td>Organizations and Expert Groups</td>
<td>Asia Pacific Biosafety Association, Association of Academies and Societies of Sciences in Asia, the Biorisk Association of Singapore,, International Centre for Diarrheal Disease Research, US NASEM, Young Scientists Network/Academy of Sciences of Malaysia, Experts from the Philippines representing various organization and institutional affiliations EU delegation, UNICRI, the Group of Experts established pursuant to United Nations Security Council resolution 1540 among others</td>
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Questions sent to participants in advance of the workshop

1. List recent trends in science and technology in academic or industrial settings? How do they differ among the countries represented in your group?

2. What are key government programs that promote science and technology, biosafety or biosecurity in your country or region?

3. What are some examples of regional and/or international scientific collaborations that are taking place across the region, e.g. public health, biofuels development, etc.?

4. What are the significant programs in biosurveillance in your country or region?

5. Is information about the BWC included in STEM (science, technology, engineering, mathematics) curricula in your country at any stage in their education?
Interactive Sessions

Part one: examining regional activities

Discuss the modified questions from previously sent set of Qs
Write out activities on sticky notes with country in lower right corner
Prepare a short verbal summary of the group discussion for the next session

Part two: relating our data directly to the articles of the BWC (30 min)

Review 13 articles of the BWC
Relate your list of activities to the articles by writing the activity on a sticky note and applying it under the article to which you think it is relevant
Question to the participants

How do regional activities related to science, technology, biosafety, biosecurity and education relate to the 13 Articles of the BWC?
The 13 Articles of the BWC

- Article I: Never under any circumstances to acquire or retain biological weapons; means of delivery.
- Article II: To destroy or divert to peaceful purposes biological weapons and associated resources prior to joining.
- Article III: Not to transfer, or in any way assist, encourage or induce anyone else to acquire or retain biological weapons.
- Article IV: Measures to prohibit and prevent development of biological weapons.
- Article V: To consult bilaterally and multilaterally to solve any problems with the objectives of the BWC.
- Article VI: To request the UN Security Council to investigate alleged breaches of the BWC.
- Article VII: To assist States which have been exposed to a danger as a result of a violation of the BWC.
- Article VIII: Honor the Geneva protocol (1925)
- Article IX: Support prohibition of Chemical Weapons
- Article X: Encourage cooperation/exchange and the peaceful uses of biological science and technology.
- Article XI: Right to propose amendments
- Article XII: Review conferences every 5 years
- Article XIII: Unlimited duration; right to withdraw
Responses of the delegates to specific actions in relation to the Articles of the BWC
Article III
Not to transfer, or in any way assist, encourage or induce anyone else to acquire or retain biological weapons.

- Border controls
- Lab containment of polio
- Material Transfer Agreements
- Medical Biotech programs
- Biosafety and Biosecurity training
- Pathogen and Animal Toxin Act
- Bird Flu control
- Biosurveillance
ARTICLE IV
Measures to prohibit and prevent development of biological weapons.

- Create a Biosafety framework
- Awareness Program on Biosafety and Biosecurity
- National Action Plan for Health Security
- Outbreak Investigations
- National CBRNE Response Plan
Article VII

Epidemic Response Plan (regional)

Regional Laboratories for molecular and serological diagnosis

Disease surveillance and response units

Disease-specific vertical programs

Diagnostic Lab networks
Article IX

CBRNE National Action Plan

Hazmat Teams

Draft bill for CWC

Hazardous Substance Act

Law on Science, Technology and Innovation
Article X

National Biotechnology Week

EU-CBRN Centres of Excellence

Emerging Infectious Disease lab networks

One Health Programs

BWC in STEM curricula

Scholarship and exchange programs

National Biotechnology Policy
Article XII
review conference every 5 years

Participation in MSP, MX

Attend Review Conferences
Results of the Interactive Workshops

Most of the actions items of the participants were on:

- **Article III**: Not to transfer, or in any way assist, encourage or induce anyone else to acquire or retain biological weapons.

- **Article IV**: Measures to prohibit and prevent development of biological weapons.

- **Article X**: Encourage cooperation/exchange and the peaceful uses of biological science and technology.

All activities had a home in the articles because the BWC was so carefully crafted almost 50 years ago – before cloning and gene editing!!
DISCLAIMER: As of today, the Draft Conclusions on Regional Science and Technology Workshop on the Biological Weapons Convention for Asia awaits finalization following comments from all participants.
Advances in science and technology pose benefits but also risks in the fields of biosafety and biosecurity. Recent advances could facilitate the development of biological weapons; for instance, CRISPR is a watershed event in biotech progress because it makes producing bioweapons more accessible. It is not clear to scientists and academicians whether the international community fully understands the risks associated with these advances.

Regulated Safety VS Managed Safety = to what extent is advisable to impose rules on scientific research and production? When does this hinder positive developments?
Continued education and outreach on S&T is imperative, as well as including this in educational curricula at many levels, including secondary education levels, as well as to raise awareness and divulge/diffuse information amongst the general public.

Awareness-raising at the community level and in local languages on topics such as dual-use research, biosafety, and biosecurity is crucial. In many cases, the nuances of the terminology are lost in translation and there is a need to elaborate on the concepts.

To address possible misuse of dual-use research and materials, China, with support from Pakistan, has proposed formulating a voluntary code of conduct for scientists and researchers.
South-South cooperation is important to work on similar issues of concern in the biosafety and biosecurity areas. ASEAN as a region is well integrated with an existing solid network of scientists. Pakistan has also established this type of collaboration with Iran through a memorandum of understanding.

Preparedness is the best way towards prevention for potential bio risks, ability to handle outbreak of infectious diseases and the emergence of epidemics. Efforts should be made to capitalize on acquired experience in these preparations.
At the regional level, monitoring and/or controlling the activities of BWC States-not-Party remains a challenge. Collective/regional security is a part of national security, with the latter as a pre-requisite.

Within the BWC there are regional divisions related to States Parties obligations under the Convention. During the last Review Conference there were issues raised such as the Australia Group List and how it could be expanded to include more States Parties. The Non-Aligned Movement voice out that sometimes, under the pretext of bioterrorism, some countries are deprived of the technology. If the Australia Group was expanded, developing countries could benefit more
Draft

Conclusions directed towards the BWC

There is not always a strong connection between BWC discussions at the multilateral level and the research and work of scientists and academicians in the field of life and biosciences.

The BWC remains relevant to this date. However, there are still challenges to convey the relevance of the Convention to the everyday activities and research of life sciences practitioners.
The Importance of Education for Effective Biosecurity

During the Workshop participants stressed the importance of biosecurity education and recognized that a gap exist in this area especially in relation to the development in science and technology relevant to the BWC.
Biosecurity is a shared collective responsibility

**HEALTH SECTOR**
- Human
- Animal
- Environment

**ACADEME and Life Sciences**
- Pharmaceutical Industries
- Relevant Professional Organizations

**DEFENSE and Security SECTOR**
- Community Organizations and Civil Society
- International Partners
- Other Pertinent Stakeholders

Note: Modified from the Biosecurity Framework and Blueprint to engage partners presented by IR Makalinao during the Inaugural Symposium of the Philippine Biosafety and Biosecurity Association held in Makati City in March 2009.
Target Audience for Biosecurity Awareness Raising Towards a Platform for Common Understanding to CREATE Policies and a Framework for ACTION

“Tailoring educational resources to our local needs should be given through hand on exercise; table top exercises, site visits (to institutions that are already good at mitigating emergency situation.”

Source: Makalinao IR and Lim J, Proceedings from EU CBRN COE Project 18 RWM for SEA Dec 2015
Developing Capabilities for Biosecurity Education

**NEEDED CAPABILITIES**

**PEOPLE**
(training, awareness raising, personnel evaluation)

**LEADERSHIP**
(Political Support, overall vision)

**POLICY AND STRATEGY**
(Legal framework, National Coordination, Allocation of responsibilities and planning)

**PARTNERSHIPS**
(International Cooperation, Outreach to Non-governmental stakeholders)

**RESOURCES**
(Guidelines, Codes of Conduct, Information, Intelligence, Threat and Risk Assessment, Facilities, Equipment Medical Supplies)

**PROCESSES**
(Standardized practices, protocols and operations review)

Adopted and Revised from EU CBRN UNICRI PRESENTATION
Protecting our Common Future

Taking Action for the Full BWC Implementation Thru Education, Regulation and Outreach