From Essential of Biological Security towards an International Security Education Network

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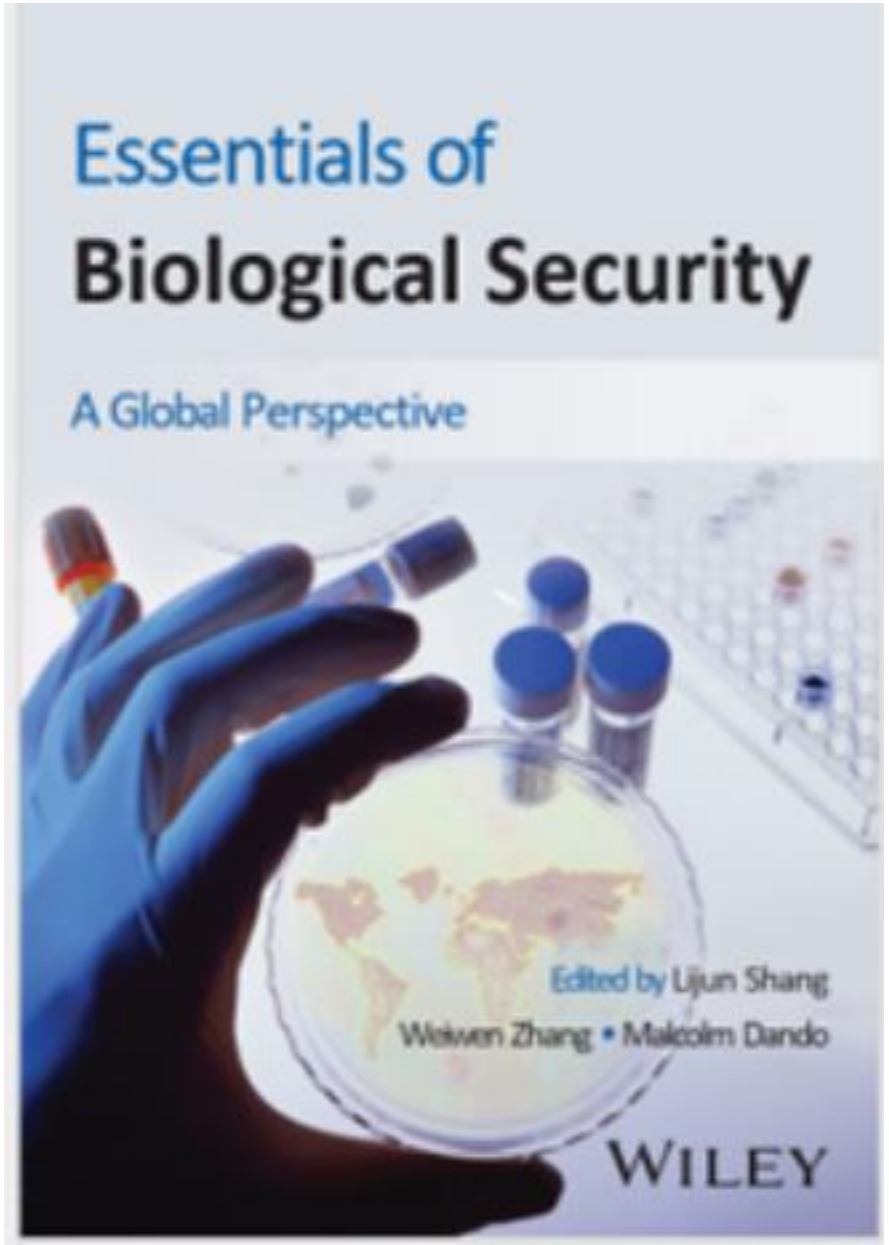


Chapter 20
the future

Essential element
Further network

Essential element

- A key component of effective management of biological risks is a sustained, flexible and well-supported approach to education of life scientists.
- Biological security education is adaptable to particular circumstances and communities worldwide, and diverse actors and stakeholders have increasingly created opportunities to educate life scientists on biosecurity issues.
- However, such efforts have so far been fragmented, with initiatives varying widely in focus, format, content and scope, and that overall biosecurity and dual-use awareness levels remain low among life and associated scientists.
- In first part of our chapter, we reiterated the need for sustained education and awareness-raising of dual-use research issues, discusses previous efforts in educating scientists presented the updated efforts so far, and summarised further thinking on how to move forward.

Past efforts in educating life scientists and establishing a culture of responsibility

Challenges faced by biosecurity education and awareness-raising, such as continuing lack of awareness, and low government priorities and sustainable funding

However, Interest in the life sciences as a career prospect is booming following the Covid-19 pandemic and the continuing revolution in biotechnology.

Investment in the life sciences continues to experience rapid growth and there has been a significant expansion in the number of new biological facilities under construction worldwide.

A rapidly expanding global workforce in the biological sciences creates an imperative to ensure that those embarking on a career in the life sciences, wherever they are, are taught from the earliest stages how best to identify, prevent, and mitigate issues relating to the potential misuse of the biological sciences.

Strengthening biosafety, biosecurity and the responsible conduct of the life sciences relies on cultivating and sustainably embedding a widespread culture of responsibility which is essential for ensuring that people follow safety and security procedures and that they act responsibly in new or unfamiliar scenarios. Appropriate education, training, and the promulgation of codes of conduct are key to achieving this in the biological arena. However, so far educational and awareness-raising initiatives have been sporadic and fragmented, of variable quality and content, and the overall and lasting impact has been difficult to assess.

Much more must be done to achieve consistency and cohesiveness in the quality and scope of biosecurity education and awareness-raising, ensure that efforts are sustained and sustainable, and to develop, promote and embed codes of conduct (that ideally incorporate elements of the Tianjin Biosecurity Guidelines). It is much hard and sustainable work to do.

Towards an International Biosecurity Education Network (IBSEN)

The importance of a globally relevant and continually evolving International Biosecurity Education Network is a crucial component of improving biosecurity, and previous recognition of the need for systematic and sustained education for life scientists.

In 2nd half of our chapter, we specifically analysed the structure, approach and lessons learned from the INSEN and work of the ABEO and proposed a similar structure that could be applied to the establishment of a comparative network for biosecurity education with a hope for civil society to promote and the BWC to adopt.

Comparable approaches implemented in analogous frameworks in the nuclear and chemistry fields:The work of the International Nuclear Security Education Network (INSEN) of the International Atomic Energy Agency (IAEA) and of the Advisory Board on Education and Outreach (ABEO) under the Organisation for the Prohibition of Chemical Weapons (OPCW) provide useful models and lessons for consideration in building a similar framework for biosecurity education.

Key lessons from the INSEN and ABEO for an international biosecurity educational network (IBSEN)

1 comprehensive understanding learned from related initiatives

2 A biosecurity education network must be underpinned by firm and sustained commitment from States and the future network's host body (such as the Biological and Toxin Weapons Convention).

3 Sustained financial support observed and maintained

4 Strategic vision and clear pathways are required for communication and collaboration between a network and treaty bodies/States

5 Diversity of memberships and engagement with a wide range of stakeholders encouraged

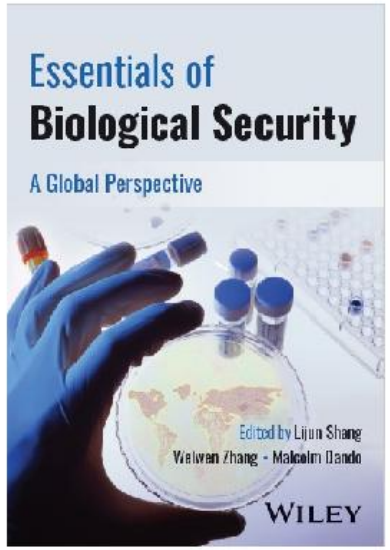
Detail works in our new grant: envolvement and shared platform

Conclusion

The decision at the 2022 Biological Weapons Convention Ninth Review Conference to establish a new “Working Group on the strengthening of the Convention” with a mandate to address issues including “Measures on national implementation of the Convention” presents a renewed opportunity to take decisive action to pioneer new biosecurity education and awareness-raising initiatives.

Founding and sustainably funding an International Biosecurity Education Network -- a concept already supported by a number of experts would be a significant step forward in heightening biological security and ensuring that life scientists have the tools and knowledge to realise their obligations to prevent and mitigate the misuse of biology.

Last but not least, the continuous and creative civil society collective inputs would enhance the biological security education and eventually catch up with the rapid advancements in science and technology.



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