South America: Situation and Challenges Regarding the Implementation of the BWC

Dr. Maria Espona

The Author is a biologist and currently pursuing her postdoctoral research at the University of Liège, focusing on biological weapons.

Summary

This brief paper focuses on the implementation of the Biological Weapons Convention (BWC) in South America, examining its strengths and weaknesses, and presenting potential avenues for cooperation and capacity-building.

Introduction

The initial objective of this paper was to conduct a comparative analysis of countries from the Global South; however, a different approach was taken, considering which countries are included under this umbrella. Although the concept of the Global South was developed in the 1960s, it gained wider use only a few years ago[1]. It sounds less discriminatory than developing vs developed countries; nevertheless, the heterogeneity of the group complicates any comprehensive analysis of all the countries that belong to it.

As mentioned earlier, this paper will analyse the situation in South America and then present some aspects to be considered as priorities for increasing capacity and enhancing BWC implementation in the region.

South American countries share a history dating back to the early days when the Spanish and Portuguese conquered the territory. After that, other countries attempted to reconquer some regions, with varying degrees of success. Additionally, following World War I and World War II, the area experienced numerous waves of European immigrants, who significantly shaped the local culture, followed by minor waves from other continents. To date, internal migration has homogenised the region, for better and worse, as it is not only the normal population that moves, but also the criminal element.

Non-proliferation commitment

Using the UNIDIR-VERTIC database[2], it was possible to compare the situation regarding the implementation of the BWC in the region through a series of indicators.

BWC Implementation

Chile is the only country in the region that has a specific law to implement the Convention, and both the law and other instruments cover the main provisions of the treaty. Most other countries, even without a law, have other legal instruments that cover the main provisions; exceptions include Uruguay, Peru, Paraguay, and Guyana, which have partial coverage. Regarding export control, the situation is more complex; only Argentina, Brazil, and Ecuador have a robust system in place regarding biological weapons (BW), while Bolivia, Paraguay, Guyana, Chile, Colombia, Venezuela, and Uruguay have only partial measures in place.

The heterogeneity in implementation and capacity regarding biosafety and biosecurity is surprising. None of the countries in the region possesses all that is required for a proper system, and the variation across different indicators is notable.

The indicators considered under this point are:

- List of controlled biological agents and toxins
- License requirement for possession or use of high-risk biological agents and toxins
- Registration requirement for individuals or facilities
- Lawful purpose requirement for activities with biological agents and toxins
- Authority to conduct audits or inspections
- Authority to revoke licenses or other approvals for non-compliance
- Offences and penalties for non-compliance
- Biosecurity requirements
- Biosafety requirements
- Background checks for personnel
- Training of personnel on biosafety/ biosecurity
- Cybersecurity measures
- Biosafety/Biosecurity Associations
- Engagement with life scientists
- Codes of conduct or ethics for life scientists
- Guidelines on dual-use research for life scientists

Additionally, due to the dynamism of these sectors, it is challenging to keep information updated, and in some cases, the included information was not accurate. Also, it is essential to consider the internal variation due to geography and how countries are organised, because in many cases, the answers reflect what happens in laboratories located in major cities, rather than in isolated areas.

Another point that poses challenges, or with an optimistic lens, an opportunity for improvement, is the one of oversight of life sciences and dual-use research: Brazil, Chile, and Colombia have something on this topic, while the rest of the countries have nothing at all, at least as a formal initiative on the record. This could be a good test case for the WHO to pilot the Global Guidance Framework for the responsible use of the life sciences[3].

Conclusions

South America has, depending on the country, a high to medium level of scientific and technological development, great universities, and professionals. This has positive implications in the scientific realm. However, the lack of homogeneity regarding measures to protect it and the limited room for exploitation with malevolent purposes leaves the region in an ambiguous situation. It is worth mentioning that there are many experts on the topics discussed in this paper who contribute not only to raising awareness, not just regionally but internationally as well, but these efforts do not always go on the record. The information presented in this paper shows that despite having a strong commitment to non-proliferation, countries in South America have weaknesses related to the implementation of measures that contribute to a safe and secure science sector, limiting the vulnerability of the life sciences sector to the maximum extent against the malignant intentions of both state and non-state actors. The disparities also extend to how biosafety, biosecurity, and the responsible use of science, as well as export controls, are enforced. Additionally, another element that does not contribute to this is how the puzzle of measures is organised (or not), leaving room for criminal organisations to profit from.

Recommendations

It is possible to view the glass as either half-full or half-empty. For the countries of the region, struggling to improve their situations regarding BW in a challenging political context means a great effort and is usually not a priority. More awareness is needed, as well as increased visibility of the incentives and opportunities that come with having a strong biosafety and biosecurity framework, among other measures. This will improve the country's reputation for potential collaborations. However, for donors and international implementers, discovering this situation means there is a place where they can invest wisely and help countries improve. Over the past few years, many donors have contributed to the region and implemented changes that are reflected in the database; however, there is still much to be done.

References:

1 House of Commons Library. (n.d.). *What is the Global South?* UK Parliament. https://commonslibrary.parliament.uk/what-is-the-global-south/.

2 UNIDIR, & VERTIC. (n.d.). *Biological Weapons Convention National Implementation Measures Database*. https://bwcimplementation.org

3 World Health Organization. (2022). *Global guidance framework for the responsible use of the life sciences: Mitigating biorisks and governing dual-use research*. World Health Organization.