

Meeting of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

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Review of science and technology developments relevant to the Convention, including for the enhanced implementation of all articles of the Convention as well as the identification of potential benefits and risks of new science and technology developments relevant to the Convention, with a particular attention to positive implications

Managing Biosafety and Biosecurity Risks: The Importance of Codes of Conduct and a BTWC Science and Technology Advisory Process

Submitted by Switzerland

I. Introduction

1. The Biological and Toxin Weapons Convention (BTWC) continues to face a significant acceleration of relevant developments in science and technology, including in light of the multifaceted challenges related to the Covid-19 pandemic. In the current intersessional period, a number of States Parties have taken a systematic approach to the Meeting of Experts 2 (MX2) by discussing scientific and technological advances with a view to identify potential benefits and concerns in 2018, and approaches to assessing benefits and risks in 2019. This present Working Paper explores two important aspects of the subsequent dimension of biosafety and biosecurity risk management: codes of conduct and science and technology advice.

II. Managing Biosafety and Biosecurity Risks

2. Growing concerns about the risk of misuse in the life sciences have resulted in more than a decade of discussions within the BTWC on the issues of biosafety, biosecurity and the dual use problem in life science research. Over the past couple of years, an increasing number of States Parties have addressed these challenges on the national level, which led to a multitude of approaches to biosecurity and the governance of the dual use problem.



3. MX2 discussions in past years have demonstrated the importance of finding adequate ways to cope with advances in science and technology of relevance to the Convention by minimizing the risks of misuse while not hindering beneficial applications. Recent discussions have highlighted two aspects in particular that significantly contribute to maximizing benefits while minimizing risks and thus represent important contributions to prevent misuse:

- (a) Codes of conduct in support of robust biosafety and biosecurity systems, and
- (b) A thorough science and technology advisory process within the BTWC that assesses benefits and risks and identifies potential options for risk mitigation and timely action.

A. Codes of Conduct

4. Since a growing number of States Parties have systems in place, tailored to their specific circumstances and legislation, it is evident that there is no one-size-fits-all model for addressing biosecurity and the dual use problem. Any approach on the international level will thus be of most benefit to all, if this reality is taken into account.

5. Discussions on a voluntary model code of conduct reflected on this question, including those on the Tianjin Biosecurity Guidelines for Codes of Conduct for Scientists (<https://bit.ly/3ijlJBo>) that have recently been endorsed by the Interacademy Partnership (IAP), which represents the unified voice of more than 140 academies worldwide (<https://bit.ly/3zfkIRW>). As outlined by the IAP, the Tianjin Biosecurity Guidelines are "designed to be fundamental and inherently adaptable to diverse contexts and thus may be used to develop new or enhance, supplement and update existing codes of conduct to fill the gaps in biosecurity governance at national and institutional levels" (<https://bit.ly/2WaUD85>). The Tianjin Biosecurity Guidelines call for the promotion of a culture of responsibility in the life sciences, which requires awareness of the dual use problem at all stages of research throughout the lifetime of a project and scientists have to assume this as a continuous task. Such guidelines could prove very useful for the further establishment of robust biosafety, biosecurity and dual-use frameworks on national and institutional levels worldwide, since they are broadly applicable and contain the necessary flexibility and adaptability.

6. Endorsement of the Tianjin Biosecurity Guidelines by States Parties at the Ninth Review Conference would further promote the impact and usefulness of such guidelines. The Tianjin Biosecurity Guidelines in the field of the life sciences would constructively complement the Hague Ethical Guidelines (<https://bit.ly/3xV9TUF>) in the field of chemistry and support the role of biorisk management standards like the recently established ISO 35001:2019 "Biorisk management for laboratories and other related organisations" (<https://bit.ly/37nlhf7>).

B. Science and Technology Advisory Process

7. To stay abreast of advances in science and technology of relevance to the Convention, the establishment of a dedicated science and technology advisory process has been considered by States Parties for a number of years. Numerous Working Papers by several States Parties, including by Switzerland (e.g. <https://bit.ly/3Ba5yik>), stressed the importance of establishing such an instrument. Agreement at the Ninth Review Conference on the establishment of a science and technology advisory process would significantly increase the assessment capabilities within the BTWC and thus support efforts in managing risks associated with the potential misuse of the life sciences.

8. Scientific and technological developments underpin all operational articles of the Convention, and ensuring that the BTWC keeps pace with these developments is essential to meet many of the challenges that it faces, including managing any risks of misuse. Since scientific and technological developments are highly technical in nature, this should also be the case for the process through which they are identified, and their potential implications assessed. Such a science and technology advisory process should therefore be dedicated, specialized (i.e. technical and independent), structured, and systematic.

9. Discussions over the last couple of years indicated commonalities of views on many aspects of such a process, or at least a considerable degree of political flexibility. One of the most contested aspects concerns the composition of and participation in such an advisory process. The seemingly irreconcilable calls for inclusiveness ("open to all") and manageability ("limited membership"), however, are not necessarily mutually exclusive and underline the potential value of exploring "hybrid" approaches that have emerged in recent discussions (e.g. UNIDIR (<https://bit.ly/3hGfOHI>), Federation of American Scientists (<https://bit.ly/3svcp1V>)). These alternative models move away from a binary perspective and present options for striking the right balance between inclusiveness and manageability of a science and technology advisory process through functional structures and the goal-oriented allotment of experts to specific tasks.

10. Since the breadth of topics to be covered by an advisory process is broad with each subtopic requiring specific expertise, it will be necessary for any approach with a limited membership to foresee the establishment of some form of temporary working groups (TWG) dedicated to specific topics and tasks, and composed of additional subject matter experts. In order to adequately address all issues raised by States Parties, several TWGs seem inevitable from a technical and scientific point of view, thus significantly increasing the required number of experts participating in such an advisory process. It is therefore reasonable to assume that total numbers of experts involved in an advisory process with limited membership will be comparable to inclusive approaches open to all States Parties, thus highlighting the importance of adequate organizational structuring, irrespective of the approach taken.

III. Recommendations

11. As regards Codes of Conduct, Switzerland suggests that the Ninth Review Conference agrees on:

- (a) Recognizing the value of guidelines and standards of conduct in the life sciences for strengthening biosafety and biosecurity, and
- (b) Endorsing the Tianjin Biosecurity Guidelines for Codes of Conduct for Scientists.

12. Developments in science and technology in the life sciences play a pivotal role for the effectiveness and continued relevance of the BTWC. In order to keep up with the pace of advances in science and technology, States Parties should agree on the establishment of a dedicated science and technology advisory process within the BTWC. This will require constructive consideration of the various approaches and finding the right balance between inclusiveness and manageability.