

**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**

8 October 2019

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**2019 Meeting**

Geneva, 3-6 December 2019

**Meeting of Experts on Review of developments in the field of science and technology related to the Convention  
Geneva, 31 July and 2 August 2019**

Item 8 of the Agenda

**Adoption of the factual report reflecting the deliberations of the meeting, including possible outcomes**

**Report of the 2019 Meeting of Experts on review  
of developments in the field of science and  
technology related to the Convention\***

**I. Introduction**

1. At the Eighth Review Conference 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 ([BWC/CONF.VIII/4](#)), States Parties decided to hold annual meetings and that the first such meeting, in December 2017, would seek to make progress on issues of substance and process for the period before the next Review Conference, with a view to reaching consensus on an intersessional process.
2. At the Meeting of States Parties in December 2017, States Parties reached consensus on the following:
  - “(a) Reaffirming previous intersessional programmes from 2003-2015 and retaining the previous structures: annual Meetings of States Parties preceded by annual Meetings of Experts.
  - (b) The purpose of the intersessional programme is to discuss, and promote common understanding and effective action on those issues identified for inclusion in the intersessional programme.
  - (c) Recognising the need to balance an ambition to improve the intersessional programme within the constraints — both financial and human resources — facing States Parties, twelve days are allocated to the intersessional programme each year from 2018- 2020. The work in the intersessional period will be guided by the aim of strengthening the implementation of all articles of the Convention in order to better respond to current challenges. The Meetings of Experts for eight days will be held back to back and at least three months before the annual Meetings of States Parties of four days each. Maximum use would be made of the Sponsorship Programme funded by voluntary contributions in order to facilitate participation of developing States Parties in the meetings of the intersessional programme.

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\* Any entry listed in this document does not imply the expression of any opinion regarding, and is without prejudice to, the legal status of any country or territory or of its authorities.



(d) The meetings of the MSP will be chaired by a representative of the EEG in 2018, a representative of the Western Group in 2019 and a representative of the Group of Non-Aligned Movement and Other States in 2020. The annual Chair will be supported by two annual vice-chairs, one from each of the other two regional groups. In addition to the reports of the Meetings of Experts, the Meetings of States Parties will consider the annual reports of the ISU and progress on universality. The Meetings of Experts will be chaired in 2018 by [the Group of the Non-Aligned Movement and Other States Parties to the BWC] (MX 1 and MX 2) and the Western Group (MX 3 and MX4), in 2019 by EEG (MX1 and MX 2) and NAM (MX 3 and MX 4), and in 2020 by Western Group (MX 1 and MX 2) and by EEG (MX 3 and MX 4); MX 5 will be chaired by the regional group chairing the MSP.

	<i>MSP</i>	<i>MX 1</i>	<i>MX 2</i>	<i>MX 3</i>	<i>MX 4</i>	<i>MX 5</i>
2018	EEG	NAM	NAM	WG	WG	EEG
2019	WG	EEG	EEG	NAM	NAM	WG
2020	NAM	WG	WG	EEG	EEG	NAM

All meetings will be subject mutatis mutandis to the rules of procedure of the Eighth Review Conference.

(e) The Meetings of Experts would be open-ended and will consider the following topics:

[...]

**MX2 (2 days): Review of developments in the field of science and technology related to the Convention:**

- 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;
- Biological risk assessment and management;
- Development of a voluntary model code of conduct for biological scientists and all relevant personnel, and biosecurity education, by drawing on the work already done on this issue in the context of the Convention, adaptable to national requirements;
- In 2018, the MX2 will address the specific topic of genome editing, taking into consideration, as appropriate, the issues identified above;
- Any other science and technology developments of relevance to the Convention and also to the activities of relevant multilateral organizations such as the WHO, OIE, FAO, IPPC and OPCW.

[...]

(f) Each Meeting of Experts will prepare for the consideration of the annual Meeting of States Parties a factual report reflecting its deliberations, including possible outcomes. All meetings, both of Experts and of States Parties will reach any conclusions or results by consensus. The Meeting of States Parties will be responsible for managing the intersessional programme, including taking necessary measures with respect to budgetary and financial matters by consensus with a view to ensuring the proper implementation of the intersessional programme. The Ninth Review Conference will consider the work and outcomes it receives from the Meetings of States Parties and the Meetings of Experts and decide by consensus on any inputs from the intersessional programme and on any further action.”

3. By resolution [73/87](#), adopted without a vote on 5 December 2018, the General Assembly, *inter alia*, requested the Secretary-General to continue to render the necessary assistance to the depositary Governments of the Convention and to continue to provide such services as may be required for the conduct and the implementation of the decisions and recommendations of the review conferences.

## II. Organization of the Meeting of Experts

4. In accordance with the decisions of the Eighth Review Conference and the 2017 Meeting of States Parties, the 2019 Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention was convened at the Palais des Nations in Geneva on 31 July and 2 August 2019, chaired by Mr. Yury Nikolaichik of Belarus.

5. The Meeting of Experts adopted its agenda ([BWC/MSP/2019/MX.2/1](#)) as proposed by the Chair.

6. Following a suggestion by the Chair, the Meeting of Experts adopted as its rules of procedure, *mutatis mutandis*, the rules of procedure of the Eighth Review Conference, as contained in document [BWC/CONF.VIII/2](#).

7. Mr. Daniel Feakes, Chief, Implementation Support Unit, Office for Disarmament Affairs, Geneva, served as Secretary of the Meeting of Experts. Mr. Hermann Lampalzer, Political Affairs Officer, Implementation Support Unit, served as Deputy Secretary and Ms. Ngoc Phuong van der Blij, Political Affairs Officer, also served in the secretariat.

## III. Participation at the Meeting of Experts

8. Ninety-six delegations participated in the Meeting of Experts as follows: Afghanistan; Algeria; Angola; Argentina; Armenia; Australia; Austria; Belarus; Belgium; Bolivia (Plurinational State of); Botswana; Brazil; Bulgaria; Burkina Faso; Canada; Chile; China; Colombia; Costa Rica; Côte d'Ivoire; Cuba; Cyprus; Czech Republic; Denmark; Dominican Republic; Ecuador; El Salvador; Estonia; Ethiopia; Finland; France; Georgia; Germany; Greece; Guatemala; Holy See; Honduras; Hungary; India; Indonesia; Iran (Islamic Republic of); Iraq; Ireland; Italy; Japan; Jordan; Kazakhstan; Kenya; Kyrgyzstan; Lao (People's Democratic Republic); Latvia; Lebanon; Libya; Malaysia; Mali; Mexico; Montenegro; Morocco; Mozambique; Myanmar; Nepal; Netherlands; Nigeria; North Macedonia; Pakistan; Peru; Philippines; Poland; Portugal; Qatar; Republic of Korea; Romania; Russian Federation; Saudi Arabia; Senegal; Serbia; Slovakia; South Africa; Spain; Sri Lanka; State of Palestine; Sweden; Switzerland; Tajikistan; Thailand; Trinidad and Tobago; Turkey; Uganda; Ukraine; United Arab Emirates; United Kingdom of Great Britain and Northern Ireland; United States of America; Uruguay; Venezuela (Bolivarian Republic of); Yemen; and Zimbabwe.

9. In addition, three States that had signed the Convention but had not yet ratified it participated in the Meeting of Experts without taking part in the making of decisions, as provided for in rule 44, paragraph 1 of the rules of procedure: Egypt; Haiti; and United Republic of Tanzania.

10. One State, Israel, neither a party nor a signatory to the Convention, participated in the Meeting of Experts as an observer, in accordance with rule 44, paragraph 2.

11. The United Nations, including the United Nations Institute for Disarmament Research (UNIDIR), the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the United Nations Office for Disarmament Affairs (UNODA), attended the Meeting of Experts in accordance with rule 44, paragraph 3.

12. The European Union (EU), the International Committee of the Red Cross (ICRC), the Organisation for the Prohibition of Chemical Weapons (OPCW), the World Health Organization (WHO) and the World Organisation for Animal Health (OIE) were granted

observer status to participate in the Meeting of Experts in accordance with rule 44, paragraph 4.

13. In addition, at the invitation of the Chair, in recognition of the special nature of the topics under consideration at this Meeting and without creating a precedent, three independent experts participated in informal exchanges in the open sessions as Guests of the Meeting of Experts: Dr. Eleonore Pauwels, Woodrow Wilson International Center for Scholars; Dr. Katie Bowman, US National Academies of Sciences, Engineering and Medicine; Dr. Nancy Connell, Johns Hopkins Center for Health Security.

14. Thirty-one non-governmental organizations and research institutes attended the Meeting of Experts under rule 44, paragraph 5.

15. A list of all participants in the Meeting of Experts is contained in document [BWC/MSP/2019/MX.2/INF.1](#).

#### **IV. Work of the Meeting of Experts**

16. In accordance with the provisional agenda ([BWC/MSP/2019/MX.2/1](#)) and an annotated programme of work prepared by the Chair, the Meeting of Experts had substantive discussions on the issues allocated by the 2017 Meeting of States Parties.

17. Under agenda item 4 (“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”), working papers were introduced by Germany (with the Netherlands and Sweden), Switzerland, Australia and the Islamic Republic of Iran ([BWC/MSP/2019/MX.2/WP.1](#), [BWC/MSP/2019/MX.2/WP.2](#), [BWC/MSP/2019/MX.2/WP.4](#) and [BWC/MSP/2019/MX.2/WP.5](#) respectively). Dr. Nancy Connell of the Johns Hopkins Center for Health Security made a presentation as a Guest of the Meeting without prejudice to the positions of the States Parties. Technical presentations were made by France and the Russian Federation.<sup>1</sup> There then followed an interactive discussion on the agenda item in which the following States Parties participated: Brazil; Canada; China; Cuba; Ecuador; India; Iran (Islamic Republic of); Japan; Kenya; Netherlands; Pakistan; Peru; Switzerland; United Kingdom of Great Britain and Northern Ireland; United States of America; Venezuela (Bolivarian Republic of) on behalf the Group of the Non-Aligned Movement and Other States Parties to the BWC.. Various views were expressed during the consideration of this agenda item.

18. Under agenda item 5 (“Biological risk assessment and management”), working papers were introduced by the United States of America and the United Kingdom of Great Britain and Northern Ireland ([BWC/MSP/2019/MX.2/WP.3](#) and [BWC/MSP/2019/MX.2/WP.6](#) respectively). Dr. Katie Bowman from the US National Academies of Sciences, Engineering and Medicine made a presentation as a Guest of the Meeting without prejudice to the positions of the States Parties, and Belarus, France, Japan and Malaysia made technical presentations. There then followed an interactive discussion on the agenda item in which the following States Parties participated: Brazil; China; Germany; Libya; India; Indonesia; Iran (Islamic Republic of); Netherlands; Saudi Arabia; Switzerland; Ukraine; United Kingdom of Great Britain and Northern Ireland; United States of America; Venezuela (Bolivarian Republic of) on behalf the Group of the Non-Aligned Movement and Other States Parties to the BWC.<sup>2</sup> The World Health Organization also made a statement. Various views were expressed during the consideration of this agenda item.

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<sup>1</sup> Technical presentations posted on the webpage of the Meeting of Experts, with the consent of the presenter.

<sup>2</sup> Notes sent by Colombia, Ecuador, Guatemala and Peru on the statements delivered by the NAM Chair.

19. Under agenda item 6 (“Development of a voluntary model code of conduct for biological scientists and all relevant personnel, and biosecurity education, by drawing on the work already done on this issue in the context of the Convention, adaptable to national requirements”), a working paper was introduced by the Islamic Republic of Iran (BWC/MSP/2019/MX.2/WP.5). Technical presentations were made by France and the Organization for the Prohibition of Chemical Weapons. There then followed an interactive discussion in which the following States Parties participated: Botswana; Brazil; Canada; China; Germany; Iran (Islamic Republic of); Japan; Pakistan; Switzerland; Ukraine; United Kingdom of Great Britain and Northern Ireland; United States of America; Venezuela (Bolivarian Republic of) on behalf of the Group of the Non-Aligned Movement and Other States Parties to the BWC. Various views were expressed during the consideration of this agenda item.

20. Under agenda item 7 (“Any other science and technology developments of relevance to the Convention and also to the activities of relevant multilateral organizations such as the WHO, OIE, FAO, IPPC and OPCW”), Dr. Eleonore Pauwels from the Woodrow Wilson International Center for Scholars gave a presentation as a Guest of the Meeting without prejudice to the positions of the States Parties. The Organization for the Prohibition of Chemical Weapons and the World Health Organization gave technical presentations. There then followed an interactive discussion on the agenda item in which the following States Parties participated: Botswana; Brazil; Canada; China; Germany; India; Japan; Kenya; Switzerland; Iran (Islamic Republic of); Iraq; United Kingdom of Great Britain and Northern Ireland; United States of America; Ukraine. The European Union also delivered a statement. Various views were expressed during the consideration of this agenda item.

21. In the course of its work, the Meeting of Experts was able to draw on a number of working papers submitted by States Parties, as well as on statements and presentations made by States Parties, international organizations and Guests of the Meeting, which were circulated in the Meeting.

22. The Chair, under his own responsibility and initiative, has prepared a paper listing considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the agenda items under discussion at the Meeting. The Meeting of Experts noted that this paper had not been agreed and had no status. It was the Chair’s view that the paper could assist delegations in their preparations for the Meeting of States Parties in December 2019 and those in the remaining year of the intersessional programme and in the Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention in the intersessional programme in 2020 and also in their consideration of how best to “discuss, and promote common understanding and effective action on” the topics in accordance with the consensus reached at the 2017 Meeting of States Parties. The paper prepared by the Chair, in consultation with States Parties, is attached as Annex I to this report.

## V. Documentation

23. A list of official documents of the Meeting of Experts, including the working papers submitted by States Parties, is contained in Annex II to this report. All documents on this list are available on the BWC website at <http://www.unog.ch/bwc> and through the United Nations Official Document System (ODS), at <http://documents.un.org>.

## VI. Conclusion of the Meeting of Experts

24. At its closing meeting on 2 August 2019, the Meeting of Experts adopted its report by consensus, as contained in document BWC/MSP/2019/MX.2/CRP.1, as orally amended, to be issued as document BWC/MSP/2019/MX.2/2.

# Annex I

## Summary report

### **Submitted by the Chairperson of the Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention**

1. The chairperson under his own responsibility and initiative has prepared this paper which lists considerations, perspectives, and conclusions drawn from the presentations, statements, working papers and interventions on the agenda items under discussion at the Meeting held on 31 July and 2 August 2019. The Meeting of Experts noted that this paper had not been agreed and had no status. It was the Chairperson's view, however, that this paper could assist delegations in their preparations for the Meetings of States Parties in December 2019 and 2020 and also in the succeeding Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention in the intersessional programme in 2020.

2. The Chairperson would like to express his gratitude to delegations for their active participation in the Meeting, particularly for the various working papers that were submitted and which together with oral statements and the constructive debate, as well as the interventions by relevant international organizations and the Guests of the Meeting have served as the basis for this summary report. The procedural report of the Meeting details which delegations spoke under the different agenda items, and which delegations introduced working papers, so such information will not be repeated in this summary report.

3. Discussions cut across the different agenda items as some of the agenda items are intertwined and science and technology impacts on various items of the Convention. The in-depth and substantive discussions indicated the clear interest of delegations in the review of developments in the field of science and technology related to the Convention. The following sections summarize and synthesize substantive discussions under agenda items 4 to 8.

#### **I. Agenda item 4. 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**

4. Four States Parties presented their working papers under this agenda item and a Guest of the Meeting spoke about positive implications of technologies to address global catastrophic biological risks. Furthermore, two States Parties also made technical presentations. States Parties noted both the rapid scientific and technological advances in the field of life sciences as well as the growing do-it-yourself bio community. Reference was also made to, inter alia, research in the field of synthetic biology, genome editing, gene drive techniques, and metabolic engineering. Furthermore, information was provided about technologies with the potential to reduce global catastrophic biological risks (e.g. ubiquitous genomic sequencing and sensing, cell-free diagnostics, 3D printing of chemicals and biologics, synthetic vaccinology). While these technologies should not be considered as a panacea, they could be a critical part of the response to severe pandemics and global catastrophic biological risks. States Parties also highlighted some examples of scientific research undertaken with the potential for dual-use application.

5. It was noted that dual-use technologies will remain of relevance for the foreseeable future. At the same time, it was also emphasized that the potential dual-use nature of certain technologies should not serve as a pre-text for restricting scientific exchange and technology transfer, especially for developing countries. In this regard, States Parties stressed the importance of full and effective implementation of Article X in order to help developing countries benefit from advances in science and technology. A number of States Parties also shared information about capacity-building projects, including on the training of scientists and laboratory workers in biosafety, biosecurity and laboratory diagnostics and twinning programmes.

6. Broad support has been expressed to consider a systematic and structured science and technology review process in the framework of the Convention to monitor relevant developments and assess their potential implications. There appears to be broad convergence of views concerning many features of such a process, including: the need for geographical diversity, a broad range of scientific expertise, insulation for political influence, and adequate personnel and financial resources. Many States Parties highlighted their readiness to engage further on this issue. It was also noted that such a process should not only address risks and benefits but have a wider horizon scanning and more holistic function which should contribute to a more effective implementation of various articles of the Convention.

7. Various States Parties welcomed the concrete proposals made on the issue of a science and technology review process by States Parties and noted the multiple working papers and considerable discussions on the subject matter since the Seventh Review Conference in 2011. In addition, suggestions were made regarding the incorporation of a standing science and technology advisory function in the Implementation Support Unit as well as more regular sharing of information on relevant events and work conducted by international academics and States Parties.

8. In their discussions, States Parties exchanged views about various issues, including, inter alia, the structure of such a process and group composition, scope, costs and funding options, guidance and coordination as well as administrative support, input of expertise, and reporting issues. It was noted that such a process would need to be technical in nature, independent, transparent, inclusive and geographically representative, and encompass broad and multi-disciplinary scientific expertise. Some delegations stressed the importance of ensuring that participation in the process is open-ended. Additionally, it was emphasized that any decisions on recommendations for action should be at the prerogative of States Parties. Some States Parties suggested to further build on areas where broad support exists and work towards a broadly supported proposal for adoption at the Ninth Review Conference in 2021. One State Party noted that this process would benefit from a cost estimate and suggested that the ISU might be able to provide such a document.

9. While discussions indicated a broad level of support for a strengthened review mechanism, some States Parties underlined that there is no consensus among States Parties on this issue and questioned the need for an additional mechanism. In this regard, caution was also expressed against too simplistic a comparison between the Convention and the OPCW including its Scientific Advisory Board, given the many differences between both regimes. A number of States Parties also emphasized that any proposal on a strengthened review mechanism should not be seen in isolation but would need to be considered in a balanced manner and in the context of progress made in other areas of relevance to the Convention.

## **II. Agenda item 5. Biological risk assessment and management**

10. Under this agenda item, two States Parties presented their working papers on risk assessment and management and a number of States Parties made technical presentations. Additionally, a Guest of the Meeting made a presentation about qualitative frameworks that can be used to structure systematic discussions among experts including preliminary outcomes from an expert workshop which had been held in Geneva on 1 August.

11. States Parties noted the continuous emergence of new technologies and novel technical capabilities in the life sciences and underlined the importance of timely assessment of their potential implications for the Convention. They also emphasized that these technologies enable various legitimate and beneficial applications, but also bear the risk of being misused for malign purposes and military applications. In this regard, States Parties noted the difficulty of adequately predicting and anticipating future advances including assessing related risks and benefits.

12. A number of States Parties shared their concerns in regard to this challenge and emphasized the need to further improve risk assessment methodologies. States Parties informed about various approaches to assessing and managing potential risks and benefits of advances in science and technology. These ranged from formal, quantitative models through statistical approaches to qualitative tools. It was highlighted that all the approaches have potential relevance for the Convention. Additionally, these risk assessment and management frameworks could supplement existing self-governance and oversight measures and help reduce the risk of misuse. In view of the difficulty to obtain full knowledge about the potential implications of various technologies, some States Parties noted the option of assessing risks on a 'weight of evidence approach' based on science and data. Furthermore, the suggestion was made to discuss and determine which level of risk is acceptable. In addition to discussions of risk assessment methods, several State Parties expressed interest in learning about available methods to assess benefits, which could inform risk management approaches. Additionally, some States Parties noted the importance of addressing intangible aspects of technology in risk-benefit assessments.

13. Taking into account the convergence of technologies, States Parties stressed the need for a holistic approach towards bio-risk assessment and management, which needs to cut across various scientific disciplines and involve stakeholders from various backgrounds. Some States Parties also underlined that discussions in the framework of the Convention should not only address risks but also aim to maximize the benefits of technologies for all States Parties.

14. Various States Parties informed about their existing national bio-risk and management approaches and noted that there is no 'one size fits all' solution in the framework of the Convention. It was indicated that there is no commonly agreed definition of biosafety and biosecurity in the Convention. States Parties therefore emphasized the need to develop broad guiding principles for bio-risk assessment and management on issues specific to the Convention, which could then be adapted to national contexts and circumstances. A number of States Parties suggested examining the applicability of available frameworks and principles, including from industry and other relevant international stakeholders in the context of the Convention.

15. In the course of the discussions, some States Parties also informed about international biosecurity capacity-building projects and referred to a variety of bio-risk management tools, such as national biosecurity checklists for use in laboratories, biosecurity self-scan toolkits and vulnerability scans. They noted that those tools have assisted in addressing concerns about laboratory security and have led to enhanced capabilities for detecting and preventing the deliberate release of biological agents and toxins. Furthermore, those tools have also contributed to a sustainable culture of scientific responsibility. Other practical and technical measures that could be applied to reduce risks, inter alia the development of countermeasures such as detection methods and prophylactic/therapeutic measures, and experimental approaches to reduce the potential for the products of research to cause inadvertent or deliberate harm, were mentioned as well. States Parties also recognized the importance of increasing transparency in research, addressing dual-use risks in emerging life science fields at university levels and conducting education and outreach programmes in relevant institutions as effective complementary measures.

16. States Parties also noted the need for further capacity-building to enhance biosafety and biosecurity standards in developing countries. In this regard, they emphasized the importance of the full, effective and non-discriminatory implementation of Article X including unhampered exchange of science and technology in the framework of the Convention.

### **III. Agenda item 6. Development of a voluntary model code of conduct for biological scientists and all relevant personnel, and biosecurity education, by drawing on the work already done on this issue in the context of the Convention, adaptable to national requirements**

17. Under this agenda item one delegation presented its working paper on scientific and technological developments of relevance to the Convention. Additionally, technical presentations were provided on dual-use research of concern and by the OPCW on The Hague Ethical Guidelines. In the ensuing deliberations, several States Parties noted that the subject of this agenda item had been discussed within the framework of the Convention for quite some time and various models have been proposed. At the same time, it was noted that the scope of such a code has yet to be agreed upon. Various States Parties and international organizations presented national examples of codes of conduct or guidelines and highlighted the benefits of these instruments.

18. A number of States Parties stressed the crucial importance of awareness-raising and education as a complementary and effective measure to reduce risks regarding dual-use research of concern. Some also remarked on the benefits of open online training and education material. Additionally, some States Parties emphasized the importance of incorporating the Convention's provisions as well as biosafety and biosecurity related topics into university curricula.

19. Many States Parties spoke in favor of a voluntary code of conduct for scientists under the Convention and referred to a joint proposal made by two States Parties. In this regard, some States Parties emphasized the need for a state-driven process and noted that a decision on the content, promulgation and adoption of a code of conduct should remain the prerogative of States Parties. Similarly, it was pointed out that adopting a 'one size fits all' approach for such a code would not be feasible; hence any such code should rather have a model character that could be tailored to the individual circumstances and different regulations existing in various States Parties. The utility of having a model code or principles available in different languages was also mentioned during discussions. Additionally, it was pointed out that an international code of conduct should not result in any restrictions on international scientific cooperation and the exchange of scientific discoveries for peaceful purposes.

20. Many States Parties expressed the view that any such code should be aspirational in nature and could thereby be conducive to norm-setting and strengthening the objectives of the Convention. In this regard, such a code should promote responsible behaviour of scientists and emphasize ethical and moral norms and values. It was also stressed that any such code cannot be imposed by governments but should be developed in close collaboration with, and the active participation of, the scientific community in order to ensure its acceptability and relevance.

### **IV. Agenda item 7 - Any other science and technology developments of relevance to the Convention and also to the activities of relevant multilateral organizations such as the WHO, OIE, FAO, IPPC, and OPCW**

21. A number of States Parties took the floor under this agenda item, as well as a Guest of the Meeting and representatives of international organizations. States Parties noted the rapid advances in the field of science and technology including the ever-increasing convergence of technologies from traditionally different scientific fields and disciplines. In particular, the implications of the convergence between cyber technologies, artificial intelligence and biotechnologies were discussed and the huge impact on various sectors such as health, medicine, industry, or agriculture was noted. It was also emphasized that the availability and accessibility of information, including intangible information, as well as new technologies has become much more widespread.

22. While States Parties acknowledged that these developments yield important benefits for humankind, they also noted the potential risks of misuse and the implications for biosecurity. As such, the need for closer collaboration among experts and tailoring of tools at the interface between cyber and biosecurity was stressed. It was also emphasized that the benefits of these new technologies should be widely shared among all States Parties and that exchange of relevant knowledge and equipment should not be restricted. Furthermore, some States Parties were of the view that it is essential to consider particularly the positive developments in biotechnology under this agenda item with a view to reach common understandings and effective action.

23. Many States Parties stressed the importance of reviewing scientific and technological developments of relevance to the Convention on a regular and systematic basis. States Parties showed considerable interest in a presentation given by the OPCW on scientific advice for the Chemical Weapons Convention (CWC). Related discussions focused, *inter alia*, on the terms of reference, purpose, composition and functioning of the OPCW Scientific Advisory Board (SAB), the evolution of the science advisory process since the entry into force of the CWC, the specifics of the interactions between the SAB and relevant stakeholders. Additionally, deliberations touched upon the selection of the scientific and technical aspects as well as ways of getting access to expertise in relevant scientific and technological disciplines. Additionally, and in light of the increasing convergence between chemistry and biology, the necessity of a continued, meaningful dialogue between the two Conventions was noted. Furthermore, the importance of closer interaction with the scientific and technical communities and the involvement of non-governmental experts, scientists, professional associations and industry in the work of the Convention was emphasized.

24. Under this agenda item, the WHO also informed the Meeting of Experts about its science and technology forecast process including risk management of dual-use research of concern (DURC). It was noted that closer collaboration between various relevant international organizations is taking place in view of the wide range of scientific and technological advances that are to be addressed and which impact upon the work of each organization. Furthermore, the WHO informed States Parties about its approach to ensuring freedom of research while addressing dual-use research of concern.

## **V. Agenda item 8 - Adoption of the factual report reflecting the deliberations of the meeting, including possible outcomes**

25. During the discussion on the factual report one delegation stressed the necessity to promote geographical diversity for the participation of researchers from different geographical regions in the deliberations as Guests of the Meeting. The Chair made a statement describing the current, transparent and open-ended invitation process and encouraged all States Parties to nominate Guests of the Meeting.

26. One State Party made a concrete proposal to include in the report a new section on possible outcomes and the following language to be inserted:

“Recognizing the importance of monitoring developments in areas of science and technology relevant to the BWC and referring to Article XII of the Convention which stipulates the review of the operation of the Convention shall take into account any new scientific and technological developments relevant to the Convention, the Meeting of Experts recommends to establish the Scientific and Advisory Committee to assess developments in areas of science and technology relevant to the Convention and render specialized advice to States Parties.”

27. While some delegations were not in a position to support this proposal due to various procedural reasons, others expressed concerns about the wording. Several delegations also noted their support to a more neutral endorsement of a structured science and technology review. Eventually, the Chair was asked to reflect the proposal in the Chair’s Summary.

## Annex II

### List of documents of the Meeting of Experts on Review of developments in the field of science and technology related to the Convention

<i>Symbol</i>	<i>Title</i>
BWC/MSP/2019/MX.2/1	Provisional Agenda for the 2019 Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention - Submitted by the Chairperson
BWC/MSP/2019/MX.2/2	Report of the 2019 Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention
BWC/MSP/2019/MX.2/CRP.1 English only	Draft Report of the 2019 Meeting of Experts on Review of Developments in the Field of Science and Technology Related to the Convention - Submitted by the Chairperson
BWC/MSP/2019/MX.2/INF.1 English/French/Spanish only	List of participants
BWC/MSP/2019/MX.2/WP.1 English only	Rethinking the BTWC Science and Technology Review: A Renewed Case for a BTWC Scientific and Technological Experts Advisory Forum (STEAF) - Submitted by Germany, co-sponsored by the Netherlands and Sweden
BWC/MSP/2019/MX.2/WP.1/Corr.1 English only	Rethinking the BTWC Science and Technology Review: A Renewed Case for a BTWC Scientific and Technological Experts Advisory Forum (STEAF) - Submitted by Germany, co-sponsored by Chile, the Netherlands and Sweden
BWC/MSP/2019/MX.2/WP.2 English only	Scientific and Technological Developments of Relevance to the Convention and the Assessment of Benefits and Risks - Submitted by Switzerland
BWC/MSP/2019/MX.2/WP.3 English only	Approaches to Risk and Benefit Assessment for Advances in the Life Sciences - Submitted by the United States of America
BWC/MSP/2019/MX.2/WP.4 English only	Review of Developments in the Field of Science and Technology Related to the Convention – Synthetic biology - Submitted by Australia
BWC/MSP/2019/MX.2/WP.5 English only	Scientific and Technological Developments of Relevance to the Convention - Submitted by the Islamic Republic of Iran
BWC/MSP/2019/MX.2/WP.6 English only	Biological Risk Assessment and Management: Some Further Considerations - Submitted by the United Kingdom of Great Britain and Northern Ireland
BWC/MSP/2019/MX.2/WP.7 English only	Review of Developments in the Field of Science and Technology Related to the Convention - Submitted by the Bolivarian Republic of Venezuela on behalf of the Group of the Non-Aligned Movement and Other States Parties to the BWC