

Tuesday 7th August 2018

## The 2018 Meetings of Experts: continuity and change

The 2018 Meetings of Experts (MXs) for the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) are a continuation of work programmes that were first established in 2002; at the same time they represent a significant change in structure.

This series of meetings is the most recent iteration of work programmes held between the five-yearly Review Conferences of the Convention that are commonly known as the 'inter-sessional process'. The Eighth BWC Review Conference in 2016 was unable to agree on the contents of a new inter-sessional process but was able to agree to delegate further discussion on what might be in such a process to the Meeting of States Parties (MSP) held in December 2017. The 2017 MSP agreed to the holding of five distinct MXs in each of 2018, 2019 and 2020. Each year would also include a week-long MSP towards the end of the calendar year. The Chair of the 2018 MSP has been confirmed as Ljupčo Jivan Gjorgjinski (former Yugoslav Republic of Macedonia).

In summary, the MXs and their topics, as agreed by the 2017 MSP, and the Chairs appointed through subsequent consultations are:

- MX1 – 7-8 August (Tuesday-Wednesday) Cooperation and Assistance, with a Particular Focus on Strengthening Cooperation and Assistance under Article X – Ambassador Maria Teresa Almojuela (Philippines)
- MX2 – 9-10 August (Thursday-Friday) MX2 - Review of Developments in the Field of Science and Technology Related to the Convention – [Chair to be announced]
- MX3 – 13 August (Monday) Strengthening National Implementation – Ambassador Julio Herráiz España (Spain)
- MX4 – 14-15 August (Tuesday-Wednesday) Assistance, Response and Preparedness – Daniel Nord (Sweden)
- MX5 – 16 August (Thursday) Institutional Strengthening of the Convention – Otakar Gorgol (Czech Republic)

### **Changes from earlier Meetings of Experts**

As each meeting is a stand-alone activity with a different occupant in the Chair, each meeting needs to have its own opening formalities, such as adoption of its agenda and decisions on participation, and its own adoption of a report.

As each MX is so short, being only one or two days long, there is no chance for the traditional general debate that would take up much of the first day, or sometimes longer, of the five- or ten-day MXs of earlier inter-sessional processes. As one part of the general debate has been to include a chance for non-governmental organizations (NGOs) to give statements in an informal arrangement, a knock-on effect of the lack of a general debate is the loss of this opportunity for NGOs to address the MXs. Consultations to find another way for NGOs to be able to offer their perspectives are ongoing. For the first time, a joint NGO position paper has been put together which will be circulated to delegates in hard copy and has been placed on the BWC website (see below).

The official reports from each of the MXs are expected to be essentially procedural as the purpose of the MXs are to exchange ideas, innovations and perspectives

rather than reach consensus positions. Hence, there is little more to report each time other than the procedural aspects of each MX. The inter-sessional meetings are intended to be practical and focused on promoting ideas and learning from experiences in order to develop common understanding and effective action. The MSP, scheduled for December 2018, is expected to produce a report in line with previous practice.

A further innovation is the intention to have the MXs livestreamed via the UN Web TV service <<http://webtv.un.org/>>. While live coverage has been tried on occasions in the past, with some technical difficulties, this is the first use by the BWC of the UN system.

### **Topics under discussion during MX1**

The overarching topic for MX1 is ‘Cooperation and assistance, with a particular focus on strengthening cooperation and assistance under Article X’. Article X of the BWC is about access to the life sciences for peaceful purposes. The renunciation of biological weapons and the control of the hostile uses of the life sciences have to be implemented so that they do not hinder the use of the life sciences for peaceful purposes. Article X also provides ‘the right to participate in, the fullest possible exchange’ of materials and technologies ‘for the use of bacteriological (biological) agents and toxins for peaceful purposes’. Cooperation and assistance goes further than Article X, including other aspects such as capacity building, and so MX1 will be discussing a number of sub-topics such as identification of challenges and obstacles to cooperation and assistance and how to overcome them; and reviewing the report of the database on assistance and cooperation put together by the BWC Implementation Support Unit (ISU). MX1 will also consider reports provided by states parties of their activities in support of Article X.

### **MX documentation and printed information**

A number of working papers have already been issued as formal MX documents. Further papers have been issued as ‘advance versions’ prior to being typeset as official documents. Additional papers are likely to be issued. These papers, together with statements and presentations made within the MXs and letters from the Chairs of the MXs, can be found via the BWC ISU website – the page for the latest set of meetings is linked from <<https://www.unog.ch/bwc/meeting>>; official documents can also be found via the UN documents server <<http://documents.un.org>>. Official document references for MX1 all start BWC/MSP/2018/MX.1/, for MX2, BWC/MSP/2018/MX.2/, and so forth. At the time of writing, eight MX1 working papers were available as official documents, with one other available as an advance version.

The ISU has prepared a background information document for each of the MXs which includes details of provisions within the Convention text relating to the topics under discussion, understandings reached by Review Conferences and by meetings in previous inter-sessional programmes, and relevant ISU activities.

### **BWC membership**

At the 2017 MSP, membership of the BWC stood at 179. On 9 January 2018 the State of Palestine deposited its instrument of accession to the BWC with the relevant authorities in Moscow and London, becoming the 180th member. On 14 June 2018 Niue deposited its instrument of accession to the BWC with the relevant authorities in Washington, DC, becoming the 181st member. Universal membership of the Convention is a long-established aspiration and a number of activities have taken place since the 2017 MSP, such as regional workshops, to encourage and assist states that are not yet members to join.

*This is the first report from the series of five Meetings of Experts for the BWC which are being held from 7 to 16 August 2018 in Geneva. These reports have been produced for all BWC meetings since the Sixth Review Conference in 2006 by the BioWeapons Prevention Project (BWPP). They are posted to <<http://www.bwpp.org/reports.html>> and <<http://www.cbw-events.org.uk/bwc-rep.html>>. An email subscription link is available on each page.*

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Wednesday 8th August 2018

## The opening of the 2018 Meetings of Experts: MX1 cooperation & assistance

Tuesday morning saw the first day of the first of the Meetings of Experts (MXs) for this year under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC). MX1 is on the topic of 'Cooperation and Assistance, with a Particular Focus on Strengthening Cooperation and Assistance under Article X'. The meeting was opened with Ambassador Maria Teresa Almojuela (Philippines) in the Chair who was able to promptly steer the plenary through the opening formalities allowing more time for substantive work.

The UN Web TV livestreaming appears to have worked well, although it has had the disadvantage of showing the speaker, not the slides, when presentations are being given. However, as with past practice, any presenter can provide their slides or other presentation materials to the BWC Implementation Support Unit (ISU) to have them posted on the meeting website. The livestreaming can be watched via <http://bit.ly/bwcmxs2018> and each meeting seems likely to have a separate archive link on the UN Web TV system.

This MX has had a more interactive nature than most of its predecessors and so these daily reports will only refer to the first time any delegation takes the floor under each agenda sub-topic. There was considerable overlap between the sub-topics.

During the day, the appointment of Pedro Luiz Dalcero (Brazil) as Chair of MX2 was announced. At the end of the day, a short time was allowed for the action points from the NGO joint position paper relating to MX1 to be communicated to the meeting.

An overarching theme of the day was that the challenges of the control of biological weapons are multidimensional as are the peaceful uses and benefits of the life sciences, not least that improved efforts against infectious disease have significant public health benefits that no country can implement in isolation.

### **Consideration of reports by states parties**

The ISU summarized the elements of its background paper for this MX that related to reports from states parties, noting that the number of reports was low. Australia, USA, Iran, UK, Russia, Germany, Italy, Saudi Arabia, China, Mali, Philippines, Mexico and Brazil took the floor. The first two of these spoke to their Article X reports (WP.1 and WP.7 respectively). UK spoke to an earlier report (WP.7, MSP 2017) and Russia spoke to both an earlier report (WP.37, Eighth Review Conference) and to a newly submitted information document – the recommendation has been for individual states to produce Article X reports every other year. There were some common themes, such as acknowledgement that these reports could not be comprehensive as Article X-relevant activities were spread across governments and were usually outside of formal BWC structures. Many interventions made reference to the various types of assistance that have been given in a variety of contexts. With such variety, it was suggested that a single format for reporting of activities might be difficult, while on the other hand a more consistent style of reporting could make it easier to draw information from the separate reports. It was noted that reports from those receiving assistance might provide valuable lessons for future assistance activities and the interventions from Mali and the Philippines were seen as helpful in this light.

### **Review of the Article X database report**

The ISU introduced its report on the assistance and cooperation database noting that its earliest iteration was less like a database and more like simple lists of offers and requests. This initial iteration was mandated by the Seventh Review Conference with no additional resources to the ISU to create it. A voluntary contribution from Ireland allowed development of an improved database system which is now receiving more usage. The USA, the 1540 committee experts, the South Centre and the Stimson Center (as a ‘Guest of the Meeting’) took the floor, followed by Venezuela (on behalf of the non-aligned states), China, India, Switzerland, Brazil, UK, Saudi Arabia, Iran, Spain, Indonesia and Interpol.

The USA spoke to its paper (WP.9). The 1540 expert described the process for ‘matchmaking’ between assistance requests and providers that the committee uses. The South Centre outlined comparable arrangements in other forums such as the UN Technology Facilitation Mechanism and the Climate Technology Centre and Network (CTCN). The Stimson Center outlined its online database <<http://1540assistance.stimson.org/>> which details a number of assistance providers and which is being further developed. India noted that the Biosafety Clearing-House of the Cartagena Protocol to the Convention on Biological Diversity had taken a decade to fully develop. A number of interventions emphasised a desire to have the BWC as the focal point for assistance while at the same time there were acknowledgements that much assistance naturally flows through other channels, although in these latter cases the ISU could be informed of such activities. In this context it was important that the database was a politically neutral resource.

### **Obstacles and ways to overcome them**

This sub-topic contained the most pronounced divergence of views, particularly on whether export controls caused denial of transfers of pathogens and equipment for peaceful purposes. Venezuela/NAM, Iran, China, Germany, Cuba, Chile, Angola, Russia, Brazil, Saudi Arabia, UK, France, USA, Indonesia, India and the Organization for the Prohibition of Chemical Weapons (OPCW) took the floor.

Venezuela, for the non-aligned, called for the ‘full, effective and non-discriminatory implementation’ of Article X in similar terms to calls at earlier meetings, although it is not clear by what benchmark ‘full’ implementation would be measured. China highlighted the proposals it made in 2016 (WP.32, Eighth Review Conference) on a non-proliferation export control and international cooperation regime under the framework of the BWC. The UK and USA both emphasized how few export licence denials there were, while Brazil and Iran countered that some companies didn’t even consider certain possible exports on the assumption licences would not be granted and so the headline figures did not tell the full story. The OPCW presented its activities under Article XI of the Chemical Weapons Convention which has a similar underlying nature to BWC Article X.

### **In memoriam – Volker Beck**

Just before the lunch break, the plenary was informed of the placing of a memorial book to celebrate the life of Volker Beck, a long-standing BW expert from Germany, at the back of the meeting room. This prompted words of appreciation for this NGO initiative from the German delegation who noted Volker’s substantial contributions to work within the BWC.

### **Side event**

Russia convened a lunchtime event on Tuesday, entitled ‘Peptide vaccines: effective means to rapidly counter emerging biological hazards - Russia's synthetic peptide Ebola vaccine’, with presentations from Rospotrebnadzor [the country’s health protection agency].

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Thursday 9th August 2018

## The conclusion of MX1, some reflections, and a look towards MX2

Wednesday saw the conclusion of the first of the Meetings of Experts (MXs) for this year under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC). The topic for MX1 has been ‘Cooperation and Assistance, with a Particular Focus on Strengthening Cooperation and Assistance under Article X’.

After consideration of four sub-topics, MX1 adopted its formal report at 6pm. An initial draft had been circulated just before lunch, which was then updated in relation to proceedings during the afternoon. During discussion, some verbal amendments were made.

### **Mobilizing resources**

The USA and the Coalition for Epidemic Preparedness Innovations (CEPI) (as a ‘Guest of the Meeting’ [GoM]) gave presentations. Venezuela/NAM, Germany, UK, and the Philippines took the floor after these. The USA spoke to its working paper (WP.3) on a workshop in Rabat in May 2018. CEPI outlined its work to support vaccines in cases where usual market forces lead to a lack of preparedness through a public-private partnership. The Philippines noted that the CBRN National Action Plans under the EU Centres of Excellence projects provide information that allow additional donors to understand where further assistance would have an impact.

### **Education, training, exchanges and twinning**

China and the International Centre for Genetic Engineering and Biotechnology (ICGEB) (as a GoM) gave presentations. Romania, India, UK, Venezuela/NAM, Germany, Switzerland, Brazil, Australia, Mali and USA took the floor following these. China spoke of the coordination between the Chinese Academy of Sciences and The World Academy of Sciences. ICGEB spoke of the work of the Centre in research, training and technology transfer. Many interventions illustrated specific programmes for training or exchanges of research staff. The need for ongoing programmes, rather than one-off activities, was emphasized. The development of human skills was recognized as an important complement to access to materials and technologies. The reduced costs of gaining scientific information through increasing use of open access academic journals were highlighted.

### **Capacity building in biosafety, biosecurity and disease response**

The UK and Norway spoke to their working papers (WP.2 [jointly with Canada] and WP.4, respectively). The first of these was on sustainability of laboratories handling dangerous pathogens in resource limited settings. The second related to an international workshop on cooperation and assistance held in Geneva in June. France gave a presentation on the sharing of experience in biosafety and biosecurity requirements through the establishment of a database. Russia described its work on a peptide vaccine for Ebola virus. The USA outlined activities of its Biosecurity Engagement Program. The Republic of Korea, Jordan, Japan, Venezuela/NAM, Saudi Arabia, Italy, India, Netherlands, Germany and Malaysia each took the floor. The EU spoke to its working paper (WP.8) on a conference in Rabat in

October 2017. The session concluded with presentations by the World Organization for Animal Health (OIE) and Interpol on their work on building capacity to respond to outbreaks. Earlier in the day, the United Arab Emirates had made a statement on behalf of the ‘Arab Group’ which was recorded as contributing to this agenda item.

### **Collaboration with international organizations and networks**

Presentations were given by the World Health Organization (WHO) and Interpol. Romania, Venezuela/NAM, Brazil, Mali and Switzerland took the floor following these. The WHO noted that there were many challenges to dealing with deliberately induced diseases that were harder than those for dealing with naturally occurring outbreaks.

### **Reflections on MX1**

MX1 has produced two days of intensive working. Indeed, from memory, there has been more detailed discussion during MX1 about practical aspects of Article X implementation than this author has experienced in any single one of the MXs in earlier inter-sessional processes. There doesn’t seem to be a clear single reason for this, but one influence may be that the delay in putting together this latest ISP has perhaps focused minds so that delegates have been keen to make the most of opportunities. Ambassador Maria Teresa Almojuela (Philippines) has fulfilled the role of the Chair extremely effectively, creating an atmosphere of interactivity that has enabled continued substantive work.

Looking to the long term, certain of the fundamentals of the divergence of views on Article X remain unchanged, but there is some movement. Perceptions of Article X are closely related to how the BWC is seen overall. For those who see the BWC first and foremost as a disarmament and security treaty, the role of Article X is to ensure that the prohibitions to prevent the use of disease as a weapon do not unduly hinder peaceful activities. For those who see the BWC as having a broader remit perceive all the articles as carrying equal significance and therefore deserving of equal implementation effort. There are many who hold positions somewhere in between these two. Where on this continuum any particular delegate may sit depends on a number of political, geographic and economic influences. The change is a growing perception amongst some of those that see the BWC primarily as a security treaty of the global benefits through greater implementation of Article X (and the overlap with Article VII) that reduce biological threats for all humankind.

### **Preparations for MX2**

The series of MXs moves to MX2 for Thursday and Friday, for which the overarching topic is ‘Review of Developments in the Field of Science and Technology Related to the Convention’. The ongoing rapid advances within the life sciences mean that the BWC operates within a rapidly changing scientific and technological (S&T) context which includes advances for peaceful uses as well as possible hostile uses. Activities taking place under the auspices of the Convention cannot operate effectively unless this constantly changing context is well understood. At the time of writing, six MX2 working papers were available as official documents, with a further three available as advance versions. There is also an ISU background information document. These materials, as ever, can be found via the BWC ISU meetings website – <<https://www.unog.ch/bwc/meeting>>.

### **Side events**

There were two lunchtime events on Wednesday. One, entitled ‘Emerging Infectious Diseases: Detection, response, assistance and challenges’, was convened by India. The other, convened by the Johns Hopkins Center for Health and Security, was entitled ‘Laboratory Biosafety & Biocontainment: Global Norms and Implementation’

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Friday 10th August 2018

## MX2 - scientific developments, risk assessment and codes of conduct

The first day of the second in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) was held on Thursday. The topic for MX2 is 'Review of Developments in the Field of Science and Technology Related to the Convention'. The Chair of MX2 is Pedro Luiz Dalcero (Brazil).

Michael Møller, Director-General of the United Nations Office at Geneva, offered a few words at the start of the meeting. He reminded participants of the biological aspects of the UN Secretary-General's disarmament initiative – 'Securing Our Common Future: An Agenda for Disarmament', launched in Geneva in May – and highlighted its connections with the Strategic Development Goals for 2030.

As with MX1, there was a swift run through of opening formalities to allow more time for substantive work.

The dual-use nature of the life sciences was an underlying theme with many reminders from the floor that there were substantial benefits for humankind from scientific and technological developments that should not be overlooked when considering potential negative aspects.

At the end of the day, time was allowed for the action points relating to MX2 from the NGO joint position paper to be conveyed to the meeting in a short intervention. Following the day's formal proceedings, a poster session was held in the hallway outside of the meeting room.

### **Review of science and technology developments**

Presentations were given by the USA and Michael Imperiale (University of Michigan, as a 'Guest of the Meeting'). The floor was then taken by Romania, UK, India, Saudi Arabia, Spain, Venezuela/NAM, Pakistan, Nepal, Switzerland and the Philippines.

The US presentation introduced WP.5 on recent advances in gene editing. As this paper derived from the work of a group of experts, the USA invited one of these, Gigi Gronvall (Johns Hopkins Center for Health Security) to speak on this. Michael Imperiale, spoke to a report from the US National Academies of Sciences, Engineering and Medicine entitled 'Biodefense in the Age of Synthetic Biology' which had been prepared by a panel he had chaired. He highlighted four aspects for assessments of levels of concern about particular capabilities: usability of the technology, usability as a weapon, capability of actors [both in resources and expertise], and potential for mitigation.

Particular developments were referred to in a number of contributions to the discussion: CRISPR/Cas9 (sometimes simply called 'CRISPR', although this term is less specific) [a method for accurately and exactly editing genetic sequences], gene drives [a method that, in theory, ensures a genetic modification is passed down through successive generations until it predominates across the population], advances in gene sequencing [the ability to make long strands of genetic code both accurately and cheaply], and metabolic pathway engineering [the manipulation of the internal machinery of living cells to produce products not usually associated with living organisms]. These short descriptions do not capture all the nuances of such developments.

### **Biological risk assessment and management**

This was the sub-topic/agenda item that took the shortest time for discussion, not least as some aspects were covered under other sub-topics – a code of conduct is irrelevant if it is not connected with some arrangement to consider implications of research or other activities. There were no specific working papers on this subject, although the UK spoke to elements in its working paper on genome editing (WP.4) and three headings of paragraphs were notable: ‘What are we concerned about?’, ‘How should we assess the risks?’, and ‘How should we manage the risks?’ Other interventions were made by India, Saudi Arabia, Spain, Sweden, USA, Netherlands and Venezuela/NAM.

Differences between risk scenarios in relation to biosafety and biosecurity were noted. The need for assessment methodologies to assess whether risk assessment arrangements were adequate was highlighted.

### **Voluntary codes of conduct**

As there were a large number of presentations within this sub-topic/agenda item they were spread out across the available working time. For ease of reporting, the presentations are grouped together in this summary. The first presentation was given by Weiwen Zhang (Tianjin University, as a ‘Guest of the Meeting’) who described elements that should be within codes and China’s experiences of codes. Germany spoke to its paper (WP.1) on contributions of codes to self-governance in Leopoldina [National Academy of Sciences] and the German Research Foundation. China spoke to its paper (WP.9 [jointly with Pakistan]) on its voluntary code of conduct proposal. Japan outlined work to help society understand implications of dual-use research which then informs the operations of codes. France presented on the contribution of codes to ethics and scientific integrity in that country and noted that most guidelines on research integrity do not have dual-use elements within them. The United Nations Interregional Crime and Justice Research Institute (UNICRI) outlined its ‘International Network on Biotechnology’ work. The final presentation, by the Organization for the Prohibition of Chemical Weapons (OPCW), described the derivation of the Hague Ethical Guidelines. Other interventions were from UK, Romania, USA, Australia, Switzerland, Spain, Cuba, India, Pakistan, Netherlands, Iran, Mali, Ukraine, Venezuela/NAM and Russia.

Many references were made to earlier BWC discussions on codes of conduct held in MXs in 2005 and 2008. There were many observations that codes are not stand-alone activities and that they have to be allied with programmes of education and of awareness raising. The need for the scientists involved to have ‘ownership’ of codes was emphasized. The role of research funding agencies in ensuring work carried out using their resources was carried out within appropriate ethical frameworks was highlighted. The different elements that codes contribute to governance of research compared with laws (and other regulations) were hinted at. The overlapping nature of codes was touched upon, i.e., that a profession may have a code and a workplace may have a code such that the work of a researcher would fall within the remit of both codes. Some suggestions were made that codes should be adopted voluntarily on a national basis and, in reference to Article X, Iran noted codes shouldn’t impose limitations inconsistent with the Convention.

### **Side events**

There were two lunchtime events on Thursday. One, entitled ‘Synthetic biology: opportunities for peaceful application and risks of misuse’, was convened by Russia. The other, convened by the InterAcademy Partnership (IAP) and US National Academy of Sciences, Engineering and Medicine, was entitled ‘Academies of science: Assessing security and governance issues of modern biotechnology’.

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Monday 13th August 2018

## MX2 wraps up scientific developments, look to MX3 on national implementation

The second in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) concluded on Friday on the topic of ‘Review of Developments in the Field of Science and Technology Related to the Convention’. The Chair of MX2, Pedro Luiz Dalcero (Brazil), opened the day’s proceedings noting that many of the scientific and technological developments being discussed in the MX were unheard of just a few years ago.

After consideration of two sub-topics, MX2 adopted its formal report in the middle of the afternoon, after an initial draft had been circulated just before lunch. Some verbal amendments were made. After the report had been adopted, a discussion was held on how the MX2 in 2019 could build on the experience of this year. Just before the close of the meeting, the Chair of the Meeting of States Parties (to be held in December), Ljupco Jivan Gjorgjinski (former Yugoslav Republic of Macedonia), informed delegates that there would be an ‘impromptu meeting’ on Tuesday regarding the BWC finances which have suffered from late payments by some states parties.

As there were a large number of presentations within the sub-topics/agenda items discussed on Friday they were spread out across the available working time. For ease of reporting, the presentations are grouped together for each sub-topic in this summary.

### **Genome editing**

Presentations were given by Switzerland, Australia, UK and Iran who each spoke to their working papers (WP.2, WP.3, WP.4 and WP.6, respectively). Other delegations taking the floor were the Netherlands, USA, India, France, Romania and Venezuela/NAM. Of the highlighted scientific and technological developments relating to genome editing, CRISPR/Cas9 was the most prominently mentioned. It was noted that genetic modification was just one element that might contribute to deliberate disease – many other technologies and techniques are needed for successful preparation of a biological weapon and so it is of limited risk in isolation. It was highlighted that while genome editing has clear potential for use for hostile purposes, it also has clear potential for helping develop medical countermeasures to disease, whether deliberate or naturally occurring. New technologies exist in a context, and it was noted that focus needed to be on regulation of what can be done with new processes, not simply the processes themselves as they can be used for many different products that can be good or bad. National threat assessments were mentioned, with the Netherlands noting that over next five years there was more likely to be a threat from the deliberate use of a naturally occurring organism than one that has been engineered. France expressed agreement with this. If a genomically manipulated organism were to be used in an attack, the precision of editing has particular implications for forensic examination of a scene, potentially creating challenging situations..

### **Any other developments and cooperation with international organizations**

This sub-topic/agenda item was opened with a statement by the European Union followed by Switzerland talking to elements of its working paper not included in the earlier sub-topic.

Technical presentations were given by the Organization for the Prohibition of Chemical Weapons (OPCW), the World Organization for Animal Health (OIE) and the 1540 committee experts. Other delegations taking the floor were Mexico, UK, United Arab Emirates, Philippines and India. The European Union spoke of its outreach work on scientific and technological issues, including through four regional workshops in the past year in Ukraine, Mexico, Jordan and South Africa and a further one planned for the Philippines. Switzerland spoke of removal of bottlenecks in development of 'DNA origami' which involves folding strands of DNA into complex 3-dimensional shapes which then take on other properties, such as being able to exert mechanical forces or transport other chemical payloads within their structure that, for example, might not be able to cross barriers on their own. The OPCW described experiences of science advice, highlighting the importance not only of advice being put forward but of arrangements to take on board such advice. The OIE described work under its Biological Threat Reduction Strategy. The 1540 committee expert noted their review process for implications of emerging technologies and highlighted the issues of intangible transfers of technologies.

### **Reflections on MX2**

Like MX1, MX2 has produced two days of intensive working. Again, more productive than MXs of recent years, despite the late confirmation of who would take the role of the Chair which reduced time for some preparations. However, the number of delegations with the willingness to take the floor to talk about scientific and technological issues remains small and this challenge must be faced.

This series of MXs continues to suffer from a challenge of where to discuss the overlaps between the main meeting topics. An example of this are the implications for national implementation of scientific and technological developments. While some of the implications were touched upon in the discussions in MX2, detailed discussion falls between the MXs. A partial corrective to this in future years may be to introduce an agenda item within each MX that prompts discussion on the implications for other MXs of the area it is dealing with.

### **Preparations for MX3**

The series of MXs moves to MX3 for Monday, for which the overarching topic is 'Strengthening National Implementation'. This will be the first of the one-day MXs. The importance of national implementation of Convention obligations has been regularly highlighted. For a number of years it has been observed that many states parties have incomplete domestic implementation measures with widespread acknowledgement that there is much room for improvement. There is now an increasing recognition that scientific and technological developments mean that regular reviews of national implementation measures help keep them effective and that development of regulatory measures tends to be at a slower pace than the rate of relevant scientific and technological developments. There remains a divergence of views of what forms of implementation activities should take place at a national vs international level. At the time of writing, seven MX3 working papers were available as official documents. There is also an ISU background information document.

### **Side events**

There were two side events on Friday. One, before the start of proceedings, entitled 'Disarmament and Technological Change', was convened by the OPCW. The other, at lunchtime, was convened by China and was entitled 'Development of a Model Code of Conduct for Biological Scientists'.

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Tuesday 14th August 2018

## A day of national implementation in MX3, a look toward to MX4

The third in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) took place on Monday on the topic of ‘Strengthening National Implementation’. It was the first one-day meeting of this series. The Chair of MX3, Ambassador Julio Herráiz España (Spain), opened the day’s proceedings noting that, with five substantive sub-topics on the agenda, the clock was ticking. Indeed, MX3 took all the available time for discussion and continued beyond the closure of interpretation, having started promptly for both morning and afternoon sessions. The adoption of the report took longer than for either of the two previous meetings, with approval for the formal report being gavelled at 18.40. At almost exactly 18.00, a short time had been allowed for the action points from the NGO joint position paper relating to MX3 to be communicated to the meeting.

Owing to space constraints, reflections on MX3 will be reported later.

**Measures related to Article IV** – Spain introduced its working paper (WP.1/Rev.1, co-sponsored by Chile, Colombia and Panama) suggesting arrangements for safer transport of biological materials. The UK spoke to WP.4 on its new ‘Biological Security Strategy’ which relates to deliberate as well as natural disease. Morocco spoke to WP.5 which outlined the work of a conference in Rabat in May which reviewed that country’s BWC national implementation and made some recommendations. France gave a technical presentation on the review of its national implementation, highlighting some changes being made following the review. Other delegations taking the floor were Iran (which made some points from WP.7 which it presented later), USA, Germany, Venezuela/NAM, Australia, India, Brazil, Russia, Poland, Colombia, Italy, China, Iraq, United Arab Emirates and Mexico. At the end of the interactive discussion the 1540 experts and the EU gave statements. Germany gave some details of a prosecution against an individual alleged to be isolating ricin to use as a weapon. This highlighted that national implementation is more than legislation/regulations and needs enforcement to be meaningful.

**Confidence Building Measures (CBMs)** – This sub-topic started with an introduction from the Implementation Support Unit (ISU) on CBMs. The number of CBM returns peaked at 82 in 2016 and dropped back to 76 in 2017, although this is the second highest figure of all time. A large number of states parties have never submitted a CBM return. The ISU outlined the new electronic system <<https://bwc-ecbm.unog.ch/>> for CBMs which has been developed using a voluntary financial contribution from Germany. The USA introduced its WP.3 proposals to improve the CBM system, including a recommendation to convene an informal working group on the subject. Japan spoke to its proposal in WP.6 (co-sponsored by Australia, Germany, Malaysia, Republic of Korea and Switzerland) for allowing states parties to submit a CBM in stages in a ‘step-by-step approach’ which had been developed further since it had originally been put forward in 2013. Russia spoke to its earlier paper (WP.9, Eighth Review Conference [8RC]) that had proposed a new form to submit information in cases where one country operated a ‘military biomedical activity’ in another.

UK, Germany, Switzerland, China, Iran, Brazil, Venezuela/NAM and Spain also intervened. After the interactive discussion the EU made a statement. Numerous delegations encouraged greater participation and noted there was a need to know why countries do not submit CBMs as this would allow assistance to overcome obstacles.

**Promoting transparency and confidence building** – Georgia spoke to WP.2 (co-sponsored by Germany). Germany, Colombia, Russia, Switzerland, Netherlands, France, USA, Venezuela/NAM, Spain, Brazil and Iran also took the floor. At the end of the interactive discussion the EU made a statement. The transparency activity highlighted most commonly was peer review. Peer review activities are informal arrangements by which states parties allow others to examine their national implementation. Proponents of peer review argue that it identifies where improvements can be made and provides confidence in processes and procedures for national compliance, while opponents argue that it distracts from, and cannot substitute for, efforts towards multilateral verification.

**Role of international cooperation and assistance in support of implementation** – Iran spoke to WP.7; while it has Article IV in the title, much of it is about the balance between articles of the BWC, especially Article X. Japan, Nepal, Malaysia, Venezuela/NAM, Germany, Colombia, UAE, USA, Kenya and Sweden also took the floor. Examples of assistance offers included support from Japan for a forthcoming Asia-Pacific workshop for national points of contact. Examples of how assistance has helped included Kenya outlining the development of its new legal framework to manage biological activities. Sweden spoke as co-chair of the Global Partnership Biosecurity Sub-Working Group

**Article III / export controls** – While no new working papers were submitted for this sub-topic, China gave a presentation in relation to an earlier proposal for a multilateral export control system (WP.31, 8RC, co-sponsored by Pakistan) developing the proposal further, suggesting a working group on the subject. Venezuela/NAM, Brazil, Iran, USA, UK, India and Australia also took the floor. The USA and India both highlighted points from their earlier working paper (WP.1, 8RC) with the USA suggesting that there were key essential elements to effective export control systems, as listed in the paper.

**Preparations for MX4** – MX4 will be a two-day meeting on Tuesday and Wednesday, for which the overarching topic is ‘Assistance, Response and Preparedness’. Response to use of biological weapons relates mostly to BWC Article VII but has some issues that go wider than this. Article VII deals with the provision of ‘assistance’ by states parties if a state party is ‘exposed to danger’ because of a breach of the Convention. As no government is likely to have ready all of the resources required to respond to a severe biological attack, the concept of receiving assistance applies to all. The means by which any alleged use of biological weapons might be investigated has been the subject of some controversy. At the time of writing, ten MX4 working papers were available as official documents. There is also an ISU background information document.

**Side events** – There were three side events on Monday. A breakfast one, entitled ‘Overcoming BTWC implementation challenges’, was convened by the Centre for Biosecurity and Biopreparedness (CBB), Denmark and Kenya. Two were held at lunchtime, convened by the EU on ‘EU Legislative Assistance in BTWC implementation’ and by the USA on ‘Different Perspectives on Strengthening National Implementation’.

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Wednesday 15th August 2018

## First day of MX4 - assistance, response and preparedness

The fourth in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) opened on Tuesday to examine the topic of 'Assistance, Response and Preparedness'. The Chair of MX4, Daniel Nord (Sweden), started the day's proceedings with a record-breaking run through of the opening formalities in under 4 minutes. Before the start of the day's proceedings, the Chair of the Meeting of States Parties (to be held in December), Ljupco Jivan Gjorgjinski (former Yugoslav Republic of Macedonia) held informal consultations on the difficult financial position of the BWC under his mandate to produce an information paper on the subject. At the end of the day, the action points from the NGO joint position paper relating to MX4 were communicated to the meeting.

Now that the official reports of the MXs are indicating which delegations are taking the floor under each sub-topic/agenda item (although these reports have not been published yet owing to time constraints), it may be a better use of space in these daily reports to select themes that warrant more detailed examination. Hence, this report will detail themes raised rather than the sequence that issues arose under the meeting agenda.

### **Contextual influences on the debate**

The contemporary perspectives on infectious disease are of direct relevance to the Article VII debate. While the 2014 Ebola virus disease outbreak in West Africa was of natural origin, the many interventions making reference to it indicate that there has been widespread recognition that there are a number of lessons that can be learned from the response efforts for that outbreak that could apply to any future disease outbreak triggered by the use of biological weapons. Such lessons might be applied at the local, national, regional and international levels and so are not specifically limited to issues relating to Article VII.

### **Commonality of capacities for natural and deliberate disease outbreaks**

Saudi Arabia noted its preparations in relation to the naturally occurring disease amongst the high numbers of people who travel there on pilgrimage each year. The response capabilities deriving from these preparations enhance abilities to respond to deliberate disease. Brazil spoke of its preparations for dealing with mass gathering events such as the 2014 World Cup and their potential for natural spread of disease as well as potential as a target for biological attack. More broadly, benefits of effective disease surveillance were highlighted as this capacity assists with handling an outbreak on a national scale but is also vital in conveying information to those outside of the country that might provide assistance. On an international level, it was clear that synergies existed between international organizations with relevant mandates. There were suggestions that the BWC should have some of its own disease response capacities while others queried whether this would be a cost-effective way of dealing with the challenges.

A number of interventions indicated that for most scenarios it would be difficult to distinguish in the early stages whether an outbreak was natural or deliberate. This was

specifically noted in WP.7 from Japan (with co-sponsors). Whether a natural or deliberate outbreak, a number of interventions noted there would be some form of emergency in public health terms and so numerous agencies would be involved from the start.

The discussion also highlighted differences between activities for dealing with natural or deliberate outbreaks. Concerns were raised about whether bodies such as the World Health Organization should be engaged with any assessment of the cause of an outbreak if there were indications it was deliberate in case this brought the health body into the security realm with potential negative consequences for other health work. A number of contributions to the discussion noted that health officials would have different roles to officials looking to attribute the cause of an attack and there was a need to ensure that effective ways of operating together were established. An example of the challenges was given in WP.10 from the USA in the section on 'preservation of evidence'.

### **Requesting assistance**

In 2014, South Africa raised questions about how a state party might go about requesting assistance under Article VII, leading to a working paper at that year's MX. These ideas were developed further and are contained in WP.3 for this meeting. Speaking to the paper, South Africa noted the importance of making the process workable in order to enable prompt assistance. There was a positive response to the further development of these guidelines, although it is not clear through what process such development might be carried out. The OPCW noted its experience in dealing with assistance activities, highlighting that any official communication would start the assistance process.

Article VII states its provisions are only active 'if the Security Council decides that such Party has been exposed to danger as a result of violation of the Convention'. Iran raised concerns about the use of the veto if a P-5 country was alleged to have been involved in an attack. Brazil suggested that the BWC should have its own decision mechanism.

### **Article VII database**

Paragraph 47 of the final document of the Eighth Review Conference held in 2016 reads: 'The Conference supports the establishment of a database open to all States Parties to facilitate assistance under the framework of Article VII. The purpose of this database could be one way to help implement Article VII of the Convention and allow matching specific offers and requests for assistance.' However, the difficult negotiations of other sections of that final document meant that those parts of it that would have given a specific mandate and a budget for such a database were not agreed upon. One MX4 delegate described this as a 'decision in principle' for the Article VII database. France and India had initially proposed the Article VII database at the 2015 MSP and put forward a working paper (with co-sponsors) to the Preparatory Committee of the Eighth Review Conference (WP.38). Both spoke to this paper in MX4, describing its potential as an important resource tool requiring a substantive discussion to move its development forward. Russia spoke to elements of a paper (WP.1) which included some examples of types of information that could be included in the database. No delegation spoke against the concept of the database.

### **Side events**

There were three side events on Tuesday. One, before the start of proceedings, entitled 'Article VII project', was convened by Canada. Two were held at lunchtime, convened by France on 'Triggering Article VII' and by Russia on 'Mechanisms for delivering protection from biological weapons under the BWC: mobile biomedical units, Article VII database and other options and their combinations'.

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Thursday 16th August 2018

## MX4 concludes on responses to disease, a look to MX5

On Wednesday, the fourth in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) concluded its examination of the topic of ‘Assistance, Response and Preparedness’.

As has been set by precedent in the earlier MXs, the draft report was circulated just before the lunch break and adopted after the substantive discussions were concluded in the afternoon.

### **Mobile labs and response teams**

A major part of the discussion during the morning focused on mobile biomedical laboratories and rapid response teams that could be deployed to areas where there were outbreaks of disease. As with discussion on Tuesday, many aspects of commonality of capacities for natural and deliberate disease outbreaks were highlighted, alongside recognition of responses through other channels, such as the International Health Regulations which entered into force in 2007.

Russia spoke to its paper (WP.1) about mobile biomedical laboratories, a subject on which it has had a continuing focus and about which it has produced three previous working papers, with the concept being developed further each time. A number of countries described experiences of their mobile labs, for example Belgium and India. Germany noted that its experience with Bundeswehr mobile labs had contributed to the development of EU civil mobile labs. It was not clear overall how many countries had offerable mobile laboratory capacities and the suggestion that an Article VII database could contain details of these received support from a number of delegations. There was a general recognition that mobile labs would contribute to any response effort, but how they would fit in required further discussion, especially where labs from different countries were operating together. It was suggested that the potential for smooth interoperability would be enhanced by regular exercises.

The UK spoke to its paper (WP.2) on a ‘Public Health Rapid Support Team’ (UK-PHRST), deployable at short notice, which became operational in November 2016. The flexibility of modes of deployment was highlighted with an example given of the team going to a country to contribute to cholera surveillance in circumstances where an outbreak might have been expected and when the outbreak did not occur, the team switched its activities to train local staff. Other delegations noted related capacities in their countries, for example, the USA outlined the work of the Centers for Disease Control and Prevention.

It was recognized that deployable response teams and laboratories work most effectively when they work in concert with local capacities. Australia spoke to a paper (WP.6) on its Health Security Initiative, noting that effective protection against infectious disease relies on robust and functional public health surveillance and laboratory systems and these, in turn, are reliant on a sufficient and appropriately trained work force. The initiative aims to enhance these fundamental capacities in the Asia-Pacific region.

### **A BWC ‘Mechanism’ for Article VII**

During MX4 there have been many references suggesting that improved implementation of the Convention requires an Article VII mechanism. However, there seems to be differences of perspective of what constitutes such a mechanism. In discussion of procedures for handling requests for assistance there have been clear suggestions of a decision-making mechanism to decide assistance that is outwith the UN Security Council. In other interventions, delegates have referred to an Article VII mechanism as a wider set of arrangements within the BWC to support countries under attack. Paragraph 47 of the consensus report of the 2015 Meeting of States Parties (BWC/MSP/2015/6) includes a list of proposals that could contribute to an Article VII mechanism.

### **Animal and plant diseases – ‘one health’**

During the afternoon, the World Organization for Animal Health (OIE) introduced its Guidelines for Investigation of Suspicious Biological Events. Brazil noted the economic as well as human costs of infectious diseases in agriculture. Reference was made to the outbreak of Foot and Mouth Disease in the UK in 2001 which had widespread impacts, including on tourism. There was recognition of the synergies of steps to reduce biological threats to humans, animals and plants as in the ‘one health’ concept.

### **MX 3 and MX4 reflections**

Both of these meetings were very active. There was particularly productive discussion in MX4 on the Article VII database and on guidelines for implementation of Article VII, but there is little clarity on how to turn these positive discussions into actual results. Just as the MSP in 2017 took decisions on a delegated mandate from the Eighth Review Conference to establish the current inter-sessional work programme, the MSP in 2018 could be considered the correct forum to start the process of turning the decision in principle at the Review Conference to establish an Article VII database into a practical reality.

### **Preparations for MX5**

The last in the series of MXs for 2018 will be MX5 on Thursday, for which the overarching topic is ‘Institutional Strengthening of the Convention’ with just 1 sub-topic: ‘Consideration of the full range of approaches and options to further strengthen the Convention and its functioning, through possible additional legal measures or other measures, in the framework of the Convention.’. This will be the second of the one-day MXs. This topic has not been previously on the agendas of any of the earlier inter-sessional meetings. At the time of writing, three MX5 working papers were available as official documents. There is also an ISU background information document.

### **Side events**

There were two side events on Wednesday. One, before the start of proceedings, entitled ‘Civil Society tools and events to advance preparedness and response to deliberate biological events’, was convened by Georgetown University and NTI. One was held at lunchtime, convened by the Johns Hopkins Center for Health Security on ‘Clade X: A Pandemic Exercise’.

***NOTE: There will be an additional MX report covering MX5.  
This will be published next week and will be posted at the web locations given below.***

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Wednesday 22nd August 2018

## MX5 on institutional strengthening and reflections on the MXs as a whole

The fifth, and final, meeting in the series of 2018 Meetings of Experts (MXs) under the 1972 Biological and Toxin Weapons Convention (BWC/BTWC) was held on Thursday on the topic of ‘Institutional Strengthening of the Convention’ and was the second of the one-day MXs. MX5 had just one sub-topic: ‘Consideration of the full range of approaches and options to further strengthen the Convention and its functioning, through possible additional legal measures or other measures, in the framework of the Convention’.

The substantive discussion was delayed owing to a desire by some to have an agenda that only reflected the single sub-topic, rather than follow the agenda proposed by the Chair that included time for discussion of other questions relating to the main topic. In the end a single agenda item was agreed with delegations acknowledged to be able to speak on anything they wished. Japan (WP.1), Cuba (WP.2) and the USA (WP.3) spoke to their working papers which were on building an investigation framework, on building on the protocol negotiations from the Ad Hoc Group (AHG), and on alternatives to a single instrument, respectively. Broadly, the subsequent interactions followed lines consistent with previous positions, some of which are discussed in the reflections piece below.

### Reflections

A conscious effort is taken in writing these daily summaries to report objectively and not give opinion. However, there are times that this style of reporting does not convey some of the atmosphere of meetings. The following are some personal reflections that do not necessarily represent anyone’s views other than the author’s own. This chapeau applies to all of the reflections sections of this series of daily reports.

**MX5 and compliance/verification** – Before MX5 formally opened there was a US side event for which there had been some anticipation. The United States is by far the most vocal expressor of views against resumption of negotiations for any form of compliance instrument for the BWC and has regularly spoken about what it sees as limits to verification. Rather than speak to arguments against the US position, it was mostly a simple restatement of the policy which has remained relatively constant since 2001. In this sense it was a lost opportunity as what would be most productive now would be a debate and a debate would have involved challenging assumptions others have made about US policy.

Those that have been the most vocal advocates of negotiations for some form of legally binding instrument appear to forget the difficulties that the AHG had in attempting to reach consensus. Anyone interested in the lessons of history would do well to read Jez Littlewood’s book *The Biological Weapons Convention: a Failed Revolution* (Ashgate Publishing, 2005) which is based on his PhD research and illustrates some of the challenges faced by the AHG, many of which would be relevant if negotiations restarted tomorrow. As the Meetings of States Parties (MSPs) in 2014 and 2015 and the Eighth Review Conference in 2016 had considerable difficulties in reaching consensus on what were essentially political declarations [decision parts of the Review Conference document were cut back to the maintenance of the ISU and holding the 2017 MSP], it is not clear whether any form of

negotiation would foreseeably see any kind of consensus. This point is of such significance it is worth pausing for a moment and considering it from a slightly different angle – if it is hard to reach consensus on political declarations, how hard will it be to reach consensus on a document that would impose legal obligations on states parties, which any legally binding instrument to strengthen the Convention must, by definition, do? The airing of views in MX5 may have been seen by some as useful, although it would seem unlikely for any delegate to say the interaction changed their mind. Debate is needed, not just interaction.

The position of the non-aligned states is clear that they wish negotiations to start forthwith. Many other states parties would like to see a return to negotiation, but see it as impractical at this time. This author supports additional legal commitments to strengthen the Convention – whether that should be through a single instrument or a series of measures would depend on what was achievable in any particular circumstances.

An additional complication is the financial cost of negotiations. Support for meetings is one of the major costs of the BWC. With the financial uncertainties for the BWC, simply due to certain states parties being in arrears with their payments, it is unclear how financial support for negotiations could be considered sustainable.

**BWC finances** – The financial uncertainties for the BWC are imperiling the MSP to be held in December. Monthly reports of received assessed contributions are posted to the BWC website each month under the ‘latest information’ section. While some further funds might be expected in the coming months, the sums of money available at the time of writing would not be enough to support the four-day MSP. As the readership of these reports comes from around the world, it might be helpful to the sustainability of the Convention if readers were to review the monthly financial reports and see whether their governments were up to date with payments. It would seem that, despite many prompts on the subject, many delegations (and governments) do not seem to have grasped the severity of the situation.

**The current inter-sessional process** – Each of the inter-sessional programmes has had some differences in characteristics from the previous ones and the meetings in the first year of each all had some element of taking on board whatever innovation in the process that had been agreed upon. For this series of MXs there have been two notable innovations – (i) the breaking up of the former single MX with a number of major topics on its agenda into separate meetings each with one major topic; and (ii) the inclusion of institutional strengthening, including compliance/verification, as a topic for discussion. The second of these is discussed above. The five separate meetings had a benefit of focusing the substantive work, but had limitations (as in earlier work programmes) in making connections between topics dealt with in separate meetings. Having Chairs who need only focus on one topic spread the workload and enhanced the effectiveness of meetings, although the late appointment of a Chair for MX2 reduced the preparation time for that meeting. Early nomination of Chairs for next year would be beneficial.

A novelty of this series of MXs was the webcasting, made possible because the meetings were in room XVII. The MSP in December will return to room XVIII (where BWC meetings are usually held) which is not equipped for webcasting.

### **Side events**

There were three side events on Thursday. One, before the start of proceedings, entitled ‘BWC Compliance: Is Verification Feasible?’, was convened by the USA. Two were held at lunchtime, convened by the Geneva Disarmament Platform and the British American Security Information Council on ‘Establishing a WMD-free-zone in the Middle East: Biological compliance aspects’ and by King's College London and Norway on ‘Bringing the BWC Verification Protocol Discussion into the 21st Century’.

*This is the ninth and final report from the series of BWC Meetings of Experts which were held from 7 to 16 August 2018 in Geneva. The reports are prepared by Richard Guthrie (CBW Events) <[richard@cbw-events.org.uk](mailto:richard@cbw-events.org.uk)> and posted to <<http://www.cbw-events.org.uk/bwc-rep.html>> and <<http://www.bwpp.org/reports.html>>. An email subscription link is available on each page.*