

## **Twenty-Sixth Session of the Conference of the States Parties**

### **Remarks by Dr Christophe Curty, Chairperson of the OPCW Scientific Advisory Board**

**12 November 2021**

Mr. Chairman,

Director-General,

Excellencies,

Distinguished Delegates,

Ladies and Gentlemen,

Two thousand twenty was the year of a new normality for all of us! Two thousand twenty-one has been a year of consolidation of the alternative working procedures established for the Scientific Advisory Board (SAB)!

Due to the Covid-19 pandemic as well as restrictions established worldwide to protect the population, it has still not been possible for the Board to hold in-person meetings in The Hague.

The SAB held three regular Sessions in 2021, meeting virtually for its Thirty-First Session in March 2021, its Thirty-Second Session in June 2021 and its Thirty-Third Session in November 2021. The routine use of online platforms have enabled the Board to continue its exchanges and discussions, and to provide specialised advice. In this regard, the SAB expresses its profound appreciation for the support and effort provided by the Secretariat of the OPCW to make this possible.

The SAB is the only advisory board that has its own provision in a disarmament convention. As stipulated under Article VIII of the Chemical Weapons Convention, the SAB enables the Director-General, in the performance of his functions, to render specialised advice to the Conference, Executive Council or States Parties in areas of science and technology relevant to the Convention. The Board consists of 25 members appointed by the Director-General. Each member serves in their individual capacity as an independent expert.

This year's focus was on the preparation of the SAB's scientific report on developments in science and technology relevant to the Convention for the upcoming Fifth Review Conference. The SAB invited external speakers to inform on topics that included chemicals, developments in chemical production, technologies for the delivery of toxic chemicals, science and technology of relevance to verification, assistance and protection, science and technology of relevance to chemical safety and security and, science advice and communication. With the Fifth Review Conference tentatively scheduled for April 2023,

the SAB's report on science and technology review is due in the autumn 2022. I strongly hope that this report will assist you, the States Parties, in your decision-making process.

The SAB greatly appreciates the reliable assistance and guidance provided by the Secretariat. It is important that the SAB periodically receive updates on internal scientific and technical projects and developments. This is not only to ensure that the SAB remains informed, but also to bring their attention to various projects and allow them to provide input where necessary. The developments in the OPCW Centre for Chemistry and Technology (ChemTech Centre) have been followed with interest. The SAB is convinced that the ChemTech Centre will be an important instrument to address the future challenges facing the OPCW. The Secretariat can count on the support from the SAB for this significant project.

I would like to take this opportunity to inform the Conference on some advancements in science and technology relevant to the Convention.

Exactly two years ago during its Twenty-Fourth Session, the Conference of the States Parties adopted decisions in which it approved, in accordance with Article XV of the Convention, certain changes to Schedule 1 of the Annex on Chemicals to the Convention. The entry into force of the changes took place in June 2020. This was the first time that new chemicals were added to the Annex on Chemicals, demonstrating that the Convention can adapt to evolving threats. The SAB notes that the biomarkers of the cholinesterase inhibitor found in Mr Navalny's blood and urine samples have similar structural characteristics as the toxic chemicals belonging to schedules 1.A.14 and 1.A.15 in the Annex on Chemicals to the Convention. I further note that the specific chemical used, however, is not listed in the Annex on Chemicals. Today, although some peer-reviewed articles have been published in scientific journals, specific information on their detection and identification as well as protection and countermeasures is still lacking. The SAB encourages all efforts to address this outstanding issue and urges States Parties to share such relevant technical information with the Secretariat.

The rapid development in using artificial intelligence (AI) and other automated processes in chemistry holds, among other fields, considerable promise for revolutionizing drug design and chemical property prediction. Both the beneficial and potentially malicious uses of this rapidly maturing field are worth considering in terms of their impact on the Convention and the work of the OPCW.

The SAB observes with interest the recent publication of peer-reviewed articles in the area of chemical forensics relevant to the Convention. Methods of linking a specific chemical to a production route, manufacturer, geographical region, chemical precursor, or other field samples, are promising tools to best support the work of the OPCW in all of its investigation missions. We encourage continued work in this direction.

I am pleased to inform the Conference that the Temporary Working Group (TWG) on the Analysis of Biotoxins, which was established for a two-year period by the Director-General, held its first meeting in May 2021. The group has met two further times in June and

November 2021 under the capable chairing of SAB member Dr Daan Noort. Though all meetings so far have been conducted in a virtual format the TWG is making good progress. The SAB has been regularly updated on the progress achieved by the TWG and has observed that the work on the questions in the TWG's terms of reference is well advanced. The TWG report will provide an in-depth review of the methods and technologies that are used in the analysis of biotoxins – from on-site investigation to the laboratory, including the requirements for such analysis. The SAB expresses its appreciation to all TWG members for their on-going efforts to support this work, which is essential to allow the Secretariat to augment its capacity in this area. The SAB looks forward to the continuation of this well-established working group.

I assure the Conference that in these unusual times the SAB continues with its role in advising the Director-General. The SAB has a long tradition of scientific discourse and knowledge-sharing relevant to the Secretariat's needs. We continue to think about the science and technology dimension underlying the Convention, as well as the needs of the OPCW. We therefore monitor the advances in science and technology, hear from pre-eminent experts on recent developments, and participate in and lead conferences of relevance to the OPCW. The SAB remains scientifically fit to support the OPCW in future missions.

When taking into account the full elimination of all declared chemical weapon stockpiles, which is expected in 2023, we envisage that the OPCW will continue to adapt and evolve to meet its continued mission under the Convention, while ensuring that emerging relevant areas are appropriately integrated. The Secretariat must therefore continue to consider the science and technology applicable to the Convention, and keep abreast of developments in science and technology in order to suitably adapt. The role of the SAB in such a challenging transition is of great importance.

This Conference will consider the draft decision on central nervous system-acting (CNS-acting) chemicals. I can inform the Conference that the Board is already considering CNS-acting chemicals as part of their preparations for their scientific report for the Fifth Review Conference. It is clear that if needed the SAB remains ready for further technical clarification in this field.

The Director-General supports the SAB's plan to hold workshops in the near future to assist in preparing our scientific report for the Fifth Review Conference.

In particular, a workshop with chemical industry would allow the SAB to be informed about the latest developments in the field of chemistry and to discuss several topics of mutual interest such as the toxicities of chemicals, chemical decontamination, waste procedures, chemical risk assessments, as well as life cycle assessment, and sustainable approaches along the value chain. Contacts with industrial members of the OPCW's Chemical Industry Coordination Group (CICG) and the European Chemical Industry Council (CEFIC) are well underway to achieve this goal.

A workshop in partnership with the International Union of Pure and Applied Chemistry

(IUPAC) will consider emerging technologies relevant to the Convention, such as the applications of artificial intelligence technologies in the field of chemistry.

The intensification of the interaction with the Advisory Board on Education and Outreach (ABEO) allows us to understand the work of the Board better and to define common topics of interest. Effective communication of science and technology to stakeholders during this special and restrictive time is one area of mutual interest. We all look forward to continuing developments in this field.

I am happy to report to the Conference that a total of fifteen proposals were submitted for the EU funded “Plant Biomarker Challenge” project launched by the Secretariat, with support from the SAB as a scientific reviewing body. This project engages the scientific community in looking at various approaches to better identify potential biomarkers of chemical exposure in common vegetation. The Technical Evaluation Team met multiple times and recommended six proposals for funding. The SAB is delighted with this success and remains confident that innovative approaches will benefit the Convention and the OPCW.

The SAB also continues to assist the OPCW in its review of projects for the Research Project Support Programme, which is an important instrument for promoting the use of chemistry for peaceful purposes around the world.

The Covid-19 pandemic has compelled the SAB to continue working with last years established normality – the virtual normality! The in-person meetings, communication with the delegations and discussions with OPCW staff members are truly missed. Additionally, we miss the Science for Diplomats initiative, which serves to bridge the conversation between science and policy and provide meaningful scientific information to policymakers and delegates of States Parties. For this reason, I ask you, the States Parties and the various divisions within the Secretariat, to invest time in reading our reports, which currently remain the predominant means of communication available to us in providing advice.

The SAB is extremely fortunate to enjoy the full support of the Director-General and expresses its genuine thanks for his efforts to provide the Board with the tools necessary to continue to provide advice on the scientific and technological developments relevant to the Convention. We sincerely appreciate the direct dialogues with the Director-General. His attentive response to our reports has provided the SAB with continued energy and inspiration to support the Convention.

The SAB takes this opportunity to reiterate its thanks to the Secretariat for the excellent support of its work. You make this possible!

I would like to express my thanks to all States Parties who have supported the work of the SAB, with a special thank you to the EU for its support of the SAB and TWG functions in 2021.

Peer-reviewed scientific papers give visibility to the scientific communities. The SAB is

proud to announce that an article entitled “Advice on assistance and protection provided by the Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons: Part 3. On medical care and treatment of injuries from sulfur mustard” was published in the respected peer-reviewed journal “Toxicology”. I invite you all to read this very informative and comprehensive paper.

I would like to take this opportunity to particularly thank my colleagues who, after two terms of reference, will leave the Board at the end of this year. Zrinka Kovarik (of Croatia), Isel Pascual Alonso (of Cuba), Ponnadurai Ramasami (of the Republic of Mauritius), Farhat Waqar (of Pakistan), and Robert Mikulak (of the United States of America); I thank you all very much for your commitment and support over the past six years to achieve the goals of the SAB.

After serving the Board for the past 6 years, my term on the SAB is coming to an end. I would like to thank all the SAB members, past and present, for their dedication and enthusiasm in their efforts to support the activities of the SAB. The Board is efficient, respectful of all members, and speaks with one voice. I leave a Board that is prepared to provide scientific advice to support the Director-General and the mission of the OPCW. It has been a privilege to be a member of the SAB and to work with such talented and prestigious experts and colleagues. I have learned a lot from you all over the past six years and I am especially grateful to all of you for the trust you have shown in me during my mandate. Science and technology is our playground, a world free of chemical weapons is our norm.

The provision of independent and objective scientific advice relevant to the Convention will continue in the same spirit under the able guidance of the 2022 SAB Chair and Vice-Chair, Günter Povoden and Andrea Leisewitz. I am confident that the Board will continue to disseminate its message – a message of diplomacy and science for peace – to all regions of the world.

I thank you for your attention and wish you all a successful conference. I request that this statement be posted on the OPCW's public website.