

**NOTE BY THE DIRECTOR-GENERAL****RESPONSE TO THE REPORT OF THE TWENTY-NINTH SESSION
OF THE SCIENTIFIC ADVISORY BOARD
1 – 2 SEPTEMBER 2020**

1. This Note presents the Director-General's comments on the report of the Twenty-Ninth Session of the Scientific Advisory Board (SAB) (SAB-29/1, dated 2 September 2020) and the ongoing work of the Board.
2. Understanding the impact of scientific and technological evolution is a key aspect of the full and effective implementation of the Chemical Weapons Convention (hereinafter "the Convention"). Given current security concerns, a potential degradation of the norms around chemical weapons use, and a rapidly evolving technological landscape, the need for sound scientific advice for chemical disarmament and non-proliferation continues to be essential. Effectively preventing the re-emergence of chemical weapons and ensuring that the OPCW remains capable of meeting the needs of States Parties and society in general is a continuous challenge. In this regard, the SAB serves as a valuable resource in bringing sound scientific advice into the decision-making process.

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SCIENTIFIC ADVISORY BOARD**

3. The SAB met virtually via the Microsoft Teams platform for its Twenty-Ninth Session on 1 and 2 September 2020. The session was chaired by Chairperson Dr Christophe Curty, supported by Vice-Chairperson Dr Zrinka Kovarik. The report of the session was issued as SAB-29/1.
4. In her opening remarks (paragraphs 5.1 to 5.3 of SAB-29/1), the Deputy Director-General, on behalf of the Director-General, informed the SAB on developments at the OPCW following the Board's Twenty-Eighth Session in June 2019 (SAB-28/1, dated 14 June 2019). The Deputy Director-General recognised the impact that the coronavirus disease (COVID-19) was having on all facets of life, including work at the OPCW. However, she made it clear that the OPCW was still focused on its mission and working diligently in that respect. Against this backdrop, the Deputy Director-General noted several important developments and reports since the last SAB meeting: adoption by the Conference of the States Parties (hereinafter "the Conference") in November 2019, and subsequent entry into force on 7 June 2020 of the decisions on the inclusion of several families of chemicals to Schedule 1 of the Annex on Chemicals to the Convention (hereinafter "the Annex on



Chemicals”¹; and the first report of the Investigation and Identification Team, published in April 2020.² In addition, she remarked on the progress of the OPCW Centre for Chemistry and Technology, thanked the sponsors to date for their contributions, and thanked the SAB for its support of this important endeavour.

5. The Deputy Director-General noted the important topics that the SAB would discuss during the session and expressed her appreciation for the Board’s efforts to engage with and provide practical views for policymakers. She praised the SAB for its continuing efforts to lead, participate in, present at, and assist with scientific conferences and workshops. Notably, she recognised that the SAB will be briefed on the final report of the Temporary Working Group on Investigative Science and Technology.
6. After a careful review of the report of the Twenty-Ninth Session of the SAB, the Director-General is pleased to submit the following comments to the Council.

RECOMMENDATIONS TO THE DIRECTOR-GENERAL (PARAGRAPHS 1.4, 11.3, AND 11.4 OF SAB-29/1)

7. The Director-General thanks the SAB for the recommendations submitted through SAB-29/1. The scientific methodologies employed by the Technical Secretariat (hereinafter “the Secretariat”) must be rigorous and robust, and the Director-General is pleased to see these principles underpinning the recommendations from the SAB-29 session. The Director-General submits the following perspectives on the SAB’s recommendations:
 - (a) In response to the recommendation in subparagraph 1.4(a) of SAB-29/1, relating to topics of potential interest for future temporary working groups (TWGs), the Director-General appreciates the SAB’s recommendations and will consider the feasibility of establishing a new TWG. Both of the recommended TWG topics, provenancing of chemical samples and analysis of biotoxins, are of interest to the Secretariat and will be given serious consideration.
 - (b) In response to subparagraphs 1.4(a) and (b) of SAB-29/1, requesting the Director-General to consider in full the recommendations given in the final report of the TWG on Investigative Science and Technology, as well as to consider how to track and manage the Secretariat’s progress and adoption of the recommendations, the Director-General assures the SAB that the recommendations in the TWG’s final report will be seriously considered and discussed within the Secretariat. To that point, the Director-General would like to inform the SAB that preparations are already under way to hold an internal OPCW meeting on forensics. This meeting will assist the Secretariat in understanding the capabilities it already possesses, the capabilities it needs to invest more resources on, and how to best partner with other international

¹ C-24/DEC.4 and C-24/DEC.5 (both dated 27 November 2019).

² First Report by the OPCW Investigation and Identification Team Pursuant to Paragraph 10 of Decision C-SS-4/DEC.3 “Addressing the Threat from Chemical Weapons Use” Ltamenah (Syrian Arab Republic) 24, 25, and 30 March 2017” (S/1867/2020, dated 8 April 2020).

organisations to leverage their capabilities where appropriate. The topic of forensics and investigative science is of particular interest to the Secretariat given the recent decision by the Conference to provide the latitude to the Director-General to assist States Parties with a possible investigation of use of chemical weapons on their territory should they request such assistance.³

- (c) In response to subparagraph 1.4(c) of SAB-29/1, the Director-General appreciates the recommendation to convene a workshop dedicated to the newly scheduled chemicals, officially added to the Annex on Chemicals on 7 June 2020. The Director-General recalls the excellent advice the SAB provided to the Secretariat in 2018 on the topic of new types of nerve agents. Given that there are several new chemicals and families of chemicals that are now officially Schedule 1 chemicals under the Convention, it would be useful to take another look at detection and identification methods, as well as medical countermeasures, related to these chemicals specifically. The Director-General will consider this recommendation in light of the capabilities that are already available at the Secretariat, or that are at its disposal through a designated laboratories network.

UPDATES FROM THE TECHNICAL SECRETARIAT (PARAGRAPHS 6.1 TO 6.5, 8.1 AND 8.2, AND 10.1 AND 10.2 OF SAB-29/1)

8. The Director-General notes the challenges that COVID-19 has brought to bear upon the world and the work of the OPCW, and commends the SAB for continuing to conduct its important business during these uncertain times. He appreciates the willingness of the Board to convene virtually, over many time zones, to discuss topics important to the Secretariat. He thanks the Secretariat staff who provided updates, and especially those who assisted in the success of the Twenty-Ninth Session as a virtual session. He encourages units within the Secretariat to attend and engage in discussions during Board meetings, and especially to liaise with the SAB Secretary for further interactive opportunities with the Board. With regard to topics discussed at the Twenty-Ninth Session of the SAB, the Director-General provides the following views:
- (a) In reference to the OPCW's increased collaboration with industry (paragraph 6.5 of SAB-29/1), the Director-General is excited to be able to continue to strengthen the Secretariat's cooperation with industry partners such as the International Council of Chemical Associations (ICCA) and the International Chemical Trade Association (ICTA). He considers these partnerships critical and mutually beneficial, as both industry and the Secretariat have important roles in preventing the proliferation of chemicals and chemical weapons. Taking that into account, the Director-General would appreciate the SAB continuing to liaise and otherwise reach out to industry on scientific and technical topics of relevance to the Convention. Of particular note is research in the pharmaceutical industry and industry's research and consideration in, and its approach to, emerging technologies.

³ Paragraph 20 of C-SS-4/DEC.3 (dated 27 June 2018) entitled "Addressing the Threat from Chemical Weapons Use".

- (b) In reference to the update by the Secretariat on the OPCW Centre for Chemistry and Technology (paragraphs 8.1 and 8.2 of SAB-29/1), the Director-General is grateful to the SAB for its continued support of the project. He appreciates the questions and discussion the SAB had on the project, and looks forward to be able to tap into the SAB's expertise and wealth of experience on future uses of the Centre for research and capacity-building projects.
- (c) In reference to the SAB's use of technology to build resilience into its work (paragraphs 10.1 and 10.2 of SAB-29/1), the Director-General is pleased that the SAB will be using SharePoint and other online-related tools to continue to not only conduct its work, but also make it more robust in the future. The use of advanced collaboration tools, like SharePoint and Teams, will ensure that the SAB can continue to meet, and collaborate and discuss, regardless of the COVID-19 pandemic or other unforeseen circumstances.

STAKEHOLDER ENGAGEMENT ACTIVITIES OF THE SAB (PARAGRAPHS 7.1 AND 7.2, AND 9.1 TO 9.4 OF SAB-29/1)

9. Access to scientific networks and the sharing of scientific research and discovery across broad scientific communities is fundamental to the SAB and its ability to provide effective science advice. The Director-General recognises the SAB's need to draw upon knowledge from a wide range of scientific experts in order to fully assess the impact and recognise opportunities from technological change. To that end, the Director-General has been impressed by the SAB's ability to engage with experts coming from a range of scientific and engineering disciplines, and fully supports the Board continuing to seek out opportunities to do so.
10. The Director-General commends Professors Ponnadurai Ramasami and Syeda Sultana Razia for their respective roles in organising and coordinating the successful 2020 Virtual Conference on Chemistry and its Applications (VCCA-2020), and in participating in and providing expert opinions during the recent Expert Group Meeting on Green and Sustainable Chemistry for Safety and Security. Professor Ramasami showed amazing agility and expert decision making in deftly transforming VCCA-2020 into a fully remote conference in just a few months' time because of COVID-19. The Director-General is interested in capturing his experience and lessons learned from this endeavour. The Director-General also remains impressed with Professor Razia's commitment to chemical safety and security, and appreciates her participation and outbrief on the OPCW's Expert Group Meeting on Green and Sustainable Chemistry for Safety and Security in August 2020.
11. The Director-General also notes the important briefing provided by Dr Brigitte Dorner from the Robert Koch Institute on the workshop entitled "Biotoxins – relevant molecules under UNSGM⁴ and OPCW activities" that took place in January 2020. He takes particular interest in this topic; biological toxins are within the mandate of the Convention, and a more robust understanding of their risks and how best to coordinate with relevant international partners to mitigate those risks

⁴ UNSGM = United Nations Secretary-General's Mechanism for Investigation of the Alleged Use of Chemical, Biological or Toxin Weapons.

is imperative. He agrees with the Board's assessment that the international community requires a credible and reliable process for determining the facts in the event of an alleged attack with biological toxins. The Director-General supports the Board's continuing efforts to participate in inter-organisational meetings of this type and its continued collaboration with entities such as the United Nations Office for Disarmament Affairs.

TEMPORARY WORKING GROUP ON INVESTIGATIVE SCIENCE AND TECHNOLOGY (PARAGRAPHS 11.1 TO 11.5 OF SAB-29/1)

12. The TWG on Investigative Science and Technology has held two meetings in the period from September to November 2019. A final substantive report was finalised in early 2020 at the completion of the Group's mandate. The Director-General has carefully reviewed this final report of the TWG and the resultant discussions within the SAB. The TWG has received substantive briefings from inspectors experienced in non-routine operations taking place under challenging circumstances. The Director-General appreciates how the TWG has taken into consideration experiences of current and former members of the Secretariat, the non-routine investigative experiences of other organisations, and the wide range of existing tools and transdisciplinary approaches that can be applied to provenance and the reconstruction of past events.
13. The Director-General is impressed with the quality and volume of work that the TWG was able to perform, and again thanks the entire TWG, support staff, and all speakers, both internal to the Secretariat and external, for their efforts. He expects relevant staff members to explore how best to consider the recommendations and implement them where possible.

FUTURE WORK AND OTHER BUSINESS OF THE SCIENTIFIC ADVISORY BOARD

14. The SAB will seek to hold its Thirtieth Session in November 2020, at which time the Board will follow up on topics flagged for further discussion at its Twenty-Ninth Session and continue developing the scope and events of the scientific review in the lead up to the Fifth Review Conference.⁵ Looking towards the SAB's continued work in 2020 and beyond, the Director-General thanks Dr Christophe Curty and Dr Zrinka Kovarik for their dedication and leadership of the SAB in their roles as Chairperson and Vice-Chairperson, respectively.
15. The SAB will continue its practices of engaging and networking with scientific communities, in particular through conference and workshop attendance, and scientific publications, with administrative support provided by the Secretariat. These activities serve to strengthen the Secretariat's knowledge-base on science and technology relevant to the Convention and the mission of the OPCW.

⁵ Review Conference = Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention.

16. Later in 2020, the Secretariat will, for the first time, initiate a “crowdsourcing challenge” to collect technical information on observable and biomarker-based signatures of toxic chemical exposure in plants. The use of crowdsourcing, which the SAB had proposed as an approach for the Secretariat to consider, opens up new opportunities for engagement with technical communities and will assist the Secretariat and the scientific community in understanding what gaps still exist in this field. The Director-General is grateful to the SAB members who will work with the Secretariat to support this effort moving forward.
17. The Director-General thanks the European Union for its Council Decision 2019/538 of 1 April 2019, which provides funding for both the crowdsource challenge and the work of TWGs.
18. The need for sound and actionable technical inputs to support the implementation of the Convention will only continue to grow, as will the need for a strong scientific base within the Secretariat and States Parties from which to draw upon. The SAB’s activities continue to serve as a valuable resource, providing science advice and facilitating awareness-raising in technical communities. The Director-General appreciates the quality and substance of the SAB’s work and recommendations. He is grateful to all the members of the Board for their willingness to stand ready to provide technical advice and guidance in support of the Convention.

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