



OPCW

Organisation for the Prohibition of Chemical Weapons

Science and Technology at the OPCW: An Update

2021 Biological Weapons Convention Meeting of Experts
MX2: Science and Technology
Geneva, Switzerland
1-2 September 2021

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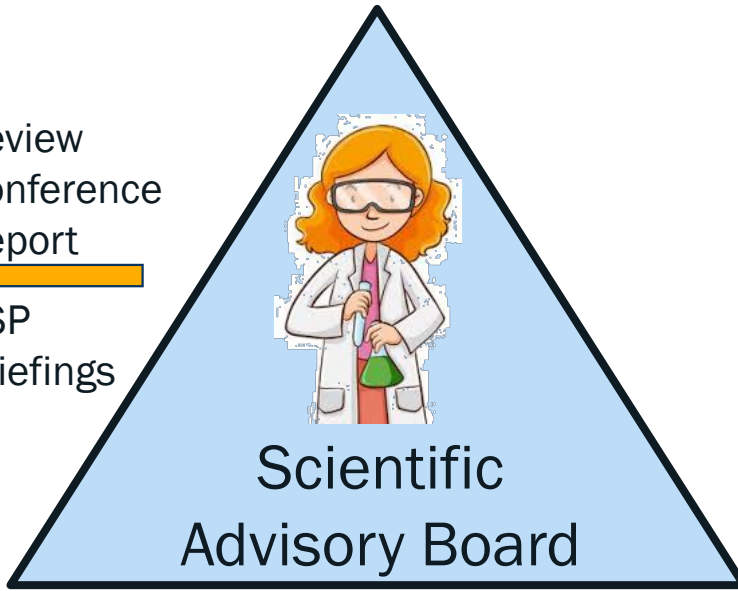
States Parties



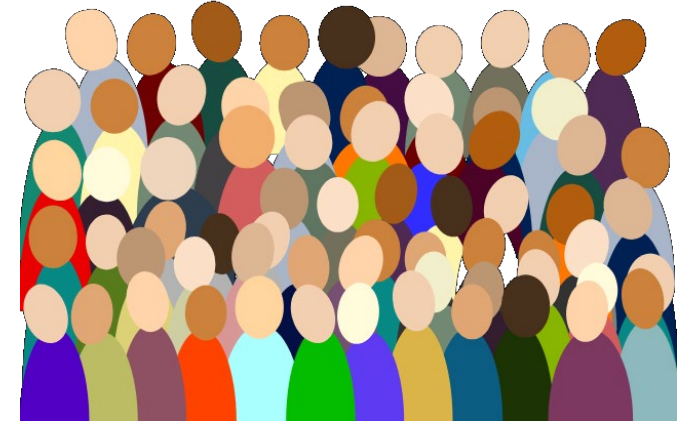
Review
Conference
Report



CSP
Briefings



General Public



SAB efforts over the last 2 years

- Have had 4 virtual sessions (in-person session scheduled for November 2021)
- Oversaw the completion of the TWG on investigative science and technology
- Overseeing a new TWG on analysis of biotoxins
- Preparing for the Scientific Report for the OPCW's 5th Review Conference (2023)
- Have assisted with numerous TS efforts, to include
 - Plant Biomarkers Challenge
 - Capacity building events



Trust Fund
(voluntary contributions
from States Parties)



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SAB Sessions before, during and after COVID-19

	2015 – 2019 (pre-pandemic)	2020 – 2021 (pandemic)	2022 and beyond (end of / post pandemic)
Session Modality	In-Person	Virtual	Hybrid
Session Location	The Hague, Netherlands	Microsoft Teams	Netherlands and Microsoft Teams
Session Frequency	Once per year (sometimes twice)	2-3 times per year	2-3 times per year
Session Length	4-5 full days	2-3 half days	Variable as needed
Participation Rate	88-96%	>95%	Unknown, should be high



Pros and Cons to Virtual and In-Person Meetings

	In-Person	Virtual
Pros	<ul style="list-style-type: none"> • Side meetings and building rapport is easier • Smoother flow to meeting • Able to cover more material 	<ul style="list-style-type: none"> • Easier to find and accommodate external speakers • Negligible costs • Shorter meetings
Cons	<ul style="list-style-type: none"> • Expensive (travel and per diem) • Time-consuming for attendees • External speakers limited to those with time/inclination 	<ul style="list-style-type: none"> • Need to accommodate for time zones • No ‘unstructured’ rapport building • Simultaneous language interpretation is harder



Temporary Working Group on Analysis of Biotoxins

- Formally began on 26 January 2021
 - Initial duration of two years
- Comprised of 15 members
 - 9 SAB members – Chair is Daan Noort (The Netherlands)
 - 6 external experts – Vice Chair is Suzanne Kalb (USA)
 - 9 females, 6 males
 - 4 of 5 regional groups represented
- Funding provided by the European Union



Questions under Consideration

- a. What are the underlying requirements for the analysis of biological toxins in order to investigate alleged use of toxic chemicals as weapons?
- b. What classes of biological toxins are most likely to be relevant in investigations of alleged use?
- c. Are there other relevant compounds of biological origin that should also be considered based on their potential for misuse or technological change associated with them?



Questions under Consideration (continued)

- d. What are the technical requirements for analysis of the most relevant types of biological toxins? Please consider:
 - i. analytical approaches needed for unambiguous identification of both low and high molecular weight biotoxins;
 - ii. instrumentation and/or procedures that should be standardized across labs to ensure reproducible and consensus results;
 - iii. analytical criteria that should be in place in order to match forensic requirements; and
 - iv. the role and utility of degradation products and other markers and/or compounds; and
 - v. the role of biomarkers and biomedical samples.



Questions under Consideration (continued)

- e. What are the analytical standards and requirements of other international and national investigative authorities and how do these compare and/or factor into OPCW considerations and operations?
- f. How can programs of analytical exercises conducted by different networks of laboratories be coordinated or harmonized to minimize duplication, promote consistent practices, and develop a comprehensive picture of laboratory capabilities? Please consider:
 - i. the quality system requirements for the laboratories that should be in place (e.g., consideration of ISO 17025 for OPCW Designated Labs); and
 - ii. how the analytical exercises can be harmonized yet remain flexible to address new or emerging biotoxin threats.



Questions under Consideration (continued)

- g. What institutional or legal measures need to be established to facilitate cooperation between the OPCW and other organisations working on development of capabilities for analysis of biological toxins?

For the entire Terms of Reference, please see Annex 2 in the Report of the SAB at its Thirty-First Session (SAB-31/1, dated 4 March 2021):

<https://www.opcw.org/sites/default/files/documents/2021/05/sab-31-01%28e%29.pdf>



TWG Timeline of Events

- Virtual Meeting
- In-Person Meeting
- Virtual update



- 1st meeting report (SAB-32/WP.1, dated 6 May 2021) can be found here: <https://www.opcw.org/sites/default/files/documents/2021/07/sab-32-wp01%28e%29.pdf>
- 2nd meeting report in preparation





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منظمة حظر الأسلحة الكيميائية

禁止化学武器组织

Organisation for the Prohibition of Chemical Weapons

Organisation pour l'Interdiction des Armes Chimiques

Организация по запрещению химического оружия

Organización para la Prohibición de las Armas Químicas