



S/2373/2025
25 February 2025
ENGLISH only

NOTE BY THE TECHNICAL SECRETARIAT**INVITATION TO APPLY FOR A WORKSHOP ON ARTIFICIAL INTELLIGENCE
AND CHEMICAL SAFETY AND SECURITY MANAGEMENT
SHANGHAI, CHINA
17 – 20 JUNE 2025**

1. The Technical Secretariat of the OPCW (the Secretariat) is pleased to inform States Parties that the Secretariat, in collaboration with the Government of China, is organising a workshop on artificial intelligence (AI) and chemical safety and security management from 17 to 20 June 2025 in Shanghai, China. Senior representatives from government institutions and the chemical industry who are responsible for overseeing the impact of AI technology on chemical safety and security management, and who are from States Parties with a developing or transitioning economy are invited to submit applications for the workshop.
2. With the theme of “AI for Good and for All: Enhancing the Role of Artificial Intelligence in the Implementation of the Chemical Weapons Convention”, this workshop aims to foster international cooperation among States Parties by providing a platform to learn about valuable tools and knowledge for leveraging AI technology within the context of the peaceful use of chemistry. It will also address potential security and non-proliferation threats. The event will highlight best practices in the host country, focusing on chemical safety and security management.

BACKGROUND

3. AI is rapidly developing and now widely applied, becoming a significant driving force for a new technological revolution and industrial transformation. Its advanced capabilities in data analysis, pattern recognition, and prediction offer innovative solutions to numerous global challenges. However, AI also presents significant risks, such as algorithmic bias, data security vulnerabilities, and potential data breaches, which could result in malicious exploitation, undermining its intended benefits.
4. In the field of chemistry, AI has introduced new opportunities and challenges. AI is enhancing the efficiency and accuracy of chemical synthesis, toxicity prediction, and risk assessment, improving the detection and monitoring capabilities of chemical weapons, and driving the digital transformation of the chemical industry. However, the misuse of AI brings new security risks, such as the development of new toxic substances, threats to chemical facility operations through cyberattacks and the malicious use of automated weapon systems. Additionally, the lack of a global unified regulatory framework for AI exacerbates these security challenges. Ensuring the safe, reliable, and beneficial development of AI in chemistry has become an increasingly urgent issue.



5. Concerns over the potential threats and opportunities posed by AI technology in chemistry and their implications for the implementation of the Chemical Weapons Convention (the Convention) have been raised by States Parties in recent years. To address these concerns, the Secretariat has taken steps to broaden its understanding of this novel technology. In April 2024, the Director-General hosted a meeting on AI with external experts to explore its potential implications for the Convention and the work of the OPCW. Following this, the Secretariat issued a Note detailing key takeaways and the path forward (S/2289/2024, dated 23 May 2024). In June, the Secretariat launched the OPCW AI Challenge, inviting States Parties to submit innovative proposals on AI to benefit the implementation of the Convention. In October, Morocco and the OPCW co-hosted the Global Conference on the Role of Artificial Intelligence in Advancing the Implementation of the Chemical Weapons Convention in Rabat, Morocco. This groundbreaking conference explored the implications of AI technology within the framework of the Convention. As a result, the Secretariat issued a Note (S/2360/2025) on 25 January 2025, summarising key discussions, opportunities, associated risks, and next steps.
6. One of the key recommendations from the Global Conference in Morocco was the importance of the peaceful application of AI and its use for international cooperation within the framework of the Convention. To follow up on this recommendation and further strengthen the efforts of States Parties to enhance chemical safety and security management, the Secretariat, in collaboration with the Government of China, is proposing a pilot project focusing on the various applications of AI in chemical safety and security management.

OBJECTIVES

7. The workshop aims to raise awareness among States Parties of the impact of AI on the chemical industry within the framework of the Convention. The workshop will address both the opportunities and the risks associated with AI technology in chemical safety and security management.
8. To this end, the workshop will feature sessions that showcase the use of AI in improving production and safety practices within the industry. Additionally, it will raise awareness about the potential misuse of AI technology, which could lead to negative outcomes such as weakened security measures or chemical terrorism.

FOCUS AREAS AND TOPICS

9. The workshop will cover, inter alia, the following focus areas and topics:
 - (a) Development of AI technology and the global governance landscape:
 - (i) general developments with AI in chemistry; and
 - (ii) current trends in AI governance and best practices in China.
 - (b) Impact of AI on the chemical industry:
 - (i) development of AI technology in chemical industry and research;
 - (ii) AI-driven improvements in production and safety in the chemical industry; and
 - (iii) digital transformation in chemical enterprises.

- (c) Challenges posed by AI in chemical security and opportunities for implementing the Convention:
 - (i) AI and chemical security and supply chain security management;
 - (ii) prevention of chemical terrorism and of the illicit transfer of chemicals; and
 - (iii) AI as a facilitator of international cooperation to implement the Convention.
- 10. An updated, detailed programme will be shared at a later stage; subtopics are subject to change. The workshop will be conducted in English.

SELECTION CRITERIA

- 11. To help ensure a diverse and knowledgeable representation at the workshop, States Parties are encouraged to nominate participants who:
 - (a) are senior representatives from government institutions, the chemical industry, chemical industry associations, or academia;
 - (b) have expertise in or professional affiliation with AI and its subfields (such as machine learning and deep learning), or related technologies;
 - (c) have experience managing matters related to chemical safety, chemical security, or the non-proliferation of chemical weapons; and
 - (d) have an interdisciplinary background in scientific, technological, and regulatory fields.
- 12. The Secretariat strongly encourages States Parties and National Authorities to seek, support, and endorse applications from qualified women candidates.

APPLICATION/NOMINATION PROCEDURE

- 13. All applications/nominations should be submitted online individually through Eventus, the OPCW event management system (<https://eventus.opcw.org>).
- 14. Only applications endorsed by the respective National Authority or Permanent Representation of the applicant's country to the OPCW will be considered. Applications and endorsements should be received no later than 30 April 2025. Late applications will not be accepted.
- 15. All applications must be accompanied by the following attachments:
 - (a) a detailed curriculum vitae; and
 - (b) a photocopy of the personal identification pages of the candidate's passport.
- 16. Further information on the workshop programme may be obtained from the OPCW International Cooperation Branch, International Cooperation and Assistance Division (icb.events@opcw.org).

ADMINISTRATIVE AND LOGISTICAL INFORMATION

17. The Secretariat expects to be able to sponsor a limited number of participants, for whom it will cover the costs of travel, meals, and medical insurance, and provide a limited subsistence allowance to cover sundry expenses. The Secretariat will also arrange and pay for accommodation for sponsored participants. The detailed programme will be sent to all registered participants in due course.
18. When making travel arrangements for sponsored participants, the Secretariat will seek the most economical options. It will purchase tickets and send them to participants. Participants will be allowed to purchase tickets locally only if this leads to further savings for the Secretariat, and if the Secretariat authorises it. In order for the Secretariat to keep costs to a minimum, participants are expected to arrive no earlier than Monday, 16 June 2025 and to depart no later than Saturday, 21 June 2025. The Secretariat will not cover expenses unrelated to the workshop or that result from changes to travel arrangements that it has not authorised. Sponsored participants must bear all costs resulting from changes they make, including cancellations, once the Secretariat has purchased tickets. Participants who have not been sponsored are requested to make their own travel and accommodation arrangements.
19. Additional information about the workshop may be obtained from the International Cooperation Branch of the International Cooperation and Assistance Division of the OPCW. The OPCW focal points for this workshop are Mr Taeon Kim, Programme Officer (Email: taeon.kim@opcw.org), and Ms Ting Zhang, Senior Project Assistant (Email: ting.zhang@opcw.org).

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