OPCW

NOTE BY THE TECHNICAL SECRETARIAT

GLOBAL CONFERENCE: THE ROLE OF ARTIFICIAL INTELLIGENCE IN ADVANCING THE IMPLEMENTATION OF THE CHEMICAL WEAPONS CONVENTION

1. Artificial intelligence (AI) has advanced rapidly in recent years, permeating various aspects of daily life beyond information technology alone. It has extended into fields traditionally reliant on human intelligence through the use of machine learning and deep-learning technologies, which continue to evolve and improve at pace.

2. This surge in new technologies presents both opportunities and challenges in the field of science and technology that are directly relevant to the Chemical Weapons Convention (the Convention). For instance, emerging platforms leverage AI to design new chemical compounds, while predicting their toxicity and properties. Additionally, AI-based technologies have the potential to improve and advance safety and security management systems within the chemical industry.

3. There is, however, a downside to this development. If these technologies were to be used for malicious purposes, they could potentially pose significant risks and threats to international peace and security. For instance, new toxic substances created using AI could be deployed to harm individuals, or contaminate the environment, evading detection by existing equipment or the relevant regulations. Moreover, an AI-based cyberattack could significantly disrupt chemical production processes and lead to catastrophic consequences. Harnessing AI responsibly has the potential to bolster defences against the risk posed to the Convention by chemical terrorism, while promoting collaborative efforts to leverage AI for peaceful purposes.

4. Given these implications, and recalling the interim report produced by the United Nations Secretary-General's AI Advisory Body seeking a closer alignment between international norms and the development and roll-out of AI, there is a clear need to discuss the role of AI in the implementation of the Convention.

5. The Technical Secretariat (the Secretariat) acknowledges the rapid advancements in AI technology and emphasises the need for immediate action to explore its capabilities in greater depth. Efforts in this regard are already under way. On 22 and 23 April 2024, the Director-General hosted an AI event at the OPCW aimed at gathering insight from scientific experts on the current AI landscape and its prospects, while also fostering a deeper understanding of the associated risks and opportunities. The Secretariat issued a Note detailing key takeaways and the path forward (S/2289/2024, dated 23 May 2024). Additionally, on 28 June 2024, the Director-General will participate in the Conference on Artificial Intelligence and Weapons of Mass Destruction, hosted by the German Federal Foreign Office in Berlin, where he will deliver a keynote address.

6.   Building on this momentum, the Kingdom of Morocco and the Secretariat will convene a global conference in Morocco, which will endeavour to take a holistic approach to exploring and examining the implications of AI technology within the framework of the Convention. It will bring together leading global experts from the fields of science, industry, civil society, and government in order to facilitate a comprehensive understanding and appreciation of the topic.

7.   This note cordially invites States Parties to the Chemical Weapons Convention (the Convention) to participate in the Global Conference on the Role of Artificial Intelligence in Advancing the Implementation of the Convention. The conference will be held in Rabat, Morocco, from 22 to 24 October 2024.

CONFERENCE OBJECTIVE

8.   The conference aims to enhance the understanding of AI and its role and impact on the implementation of the Convention through discussions and dialogue with leading global experts.

9.   It is anticipated that the conference will facilitate a better understanding of the role of AI in the implementation of the Convention; help contextualise the developments within the broader international landscape and the United Nations framework; and inform future policy discussions and initiatives to advance international cooperation mechanisms to address the evolving risks and threats posed by AI-enabled technologies in the field of chemical security and chemical disarmament.

ENVISAGED OUTCOME

10.   The conference is designed to foster a better understanding of the role of AI within the framework of the implementation of the Convention. It is also expected to offer a platform that is conducive for States Parties to collectively discuss and drive regional and/or global endeavours, as appropriate, with a view to harnessing the potential of AI while mitigating its potentially negative ramifications in terms of promoting peaceful and responsible chemistry.

11.   Following the event, the conference proceedings will be released to serve as a valuable resource and reference for future engagements and discussions.

PROVISIONAL PROGRAMME

12.   The provisional programme for the conference is attached as Annex 1 to this Note.

13.   The expert sessions of the conference will focus, inter alia, on the following topics:

(a)   The role and impact of AI in chemistry through the prism of evolving science and policy discourse, where discussions will include deliberations on:

(i)   general developments regarding AI in chemistry;

(ii)   AI, science, policy, and ethical considerations; and

(iii)   international cooperation for peaceful uses of chemistry.

(b)   The impact and challenges of AI on the wider chemical industry, where discussions will include deliberations on:

    (i)   AI and chemical risk, safety, and security management;

    (ii)   AI-related challenges and opportunities in chemical supply chain resilience; and

    (iii)   AI and cybersecurity management in chemical plants.

(c)   Challenges presented by AI in counterterrorism and implementation of the Convention, including:

    (i)   AI and chemical security, prevention of chemical terrorism and of the illicit transfer of chemicals;

    (ii)   AI and verification and inspection mechanisms/methodologies; and

    (iii)   AI and hazardous chemical detection and monitoring.

14.   Expressions of interest are invited from States Parties to host a side event during the conference. These events can be held either on the margins of the conference or in the afternoon of the last day, Thursday, 24 October 2024, which has been specifically left open for this purpose. Interested parties can send their expressions of interest with concept details to icb.events@opcw.org, no later than 31 July 2024.

15.   The conference will be conducted in English, with simultaneous interpretation provided in Arabic, French, and Spanish.

NOMINATIONS

16.   This Note invites and seeks nominations of representatives/delegates from interested OPCW Member States, **on a self-funded basis**, with a maximum of two participants per Member State.

CRITERIA TO ASSIST WITH NOMINATIONS

17.   To help ensure a diverse and knowledgeable representation at the conference, Member States are strongly encouraged to nominate representatives/delegates who align to, or meet the proposed nomination criteria:

(a)   background in or affiliation with AI, machine learning, deep learning, or related technologies;

(b)   experience in dealing with affairs related to chemical safety, chemical security, or the non-proliferation of chemical weapons; and

(c)   an interdisciplinary background covering the scientific, technological, and regulatory fields.

18.   States Parties and National Authorities are strongly encouraged to support and endorse nominations of suitable female candidates.

APPLICATION/NOMINATION PROCEDURE

19. All applications/nominations should be submitted online individually through the OPCW Eventus event management system (https://apps.opcw.org/eventus).

20. A maximum of two participants per Member State will be selected for participation at the conference, which will be on a self-funded basis.

21. Only applications endorsed by the respective National Authority or Permanent Mission will be considered. Endorsement should be received no later than 31 July 2024. Late applications will not be accepted.

22. 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.

23. Further information on the conference programme may be obtained from the OPCW International Cooperation Branch, International Cooperation and Assistance Division (icb.events@opcw.org).

24. Any queries regarding logistical and local coordination assistance may be sent by email (Morocco.AiEvent@maec.gov.ma) to the designated focal points: Mr Mustapha El Alami El Fellousse, Head of Division for Global Security and Social Issues, and Mr M. Hicham Bayar, Counsellor, Directorate of Global Issues at the Ministry of Foreign Affairs, African Cooperation and Moroccan Expatriates, Kingdom of Morocco.

Annex: Global Conference: The Role of Artificial Intelligence in Advancing the Implementation of the Chemical Weapons Convention – Provisional Programme

Annex

GLOBAL CONFERENCE: THE ROLE OF ARTIFICIAL INTELLIGENCE IN ADVANCING THE IMPLEMENTATION OF THE CHEMICAL WEAPONS CONVENTION

PROVISIONAL PROGRAMME

22 OCTOBER 2024

AM	**Opening ceremony** Foreign Minister of the Kingdom of Morocco Director-General, OPCW High-level invited guests
PM	**Plenary – Panel discussion** **Focus area 1: The role and impact of AI in chemistry through the prism of evolving science and policy discourse** • General developments regarding AI in chemistry • AI, science, policy, and ethical considerations • International cooperation for peaceful uses of chemistry

23 OCTOBER 2024

AM	**Plenary – Panel discussion** **Focus area 2: The impact and challenges of AI on the wider chemical industry** • AI and chemical risk, safety, and security management • AI-related challenges and opportunities in chemical supply chain resilience • AI and cybersecurity management in chemical plants
PM	**Plenary – Panel discussion segment** **Focus area 3: Challenges presented by AI in counterterrorism and implementation of the Convention** • AI and chemical security, prevention of chemical terrorism and of the illicit transfer of chemicals • AI and verification and inspection mechanisms/methodologies • AI and hazardous chemical detection and monitoring

24 OCTOBER 2024

AM	**Conclusion of panel discussion on focus area 3 (Challenges presented by AI in counterterrorism and implementation of the Convention)**
	Debriefing by moderators on three focus areas:
	- Focus area 1: The role and impact of AI in chemistry through the prism of evolving science and policy discourse.
	- Focus area 2: The impact and challenges of AI on the wider chemical industry.
	- Focus area 3: The challenges posed by AI in counterterrorism and the implementation of the Convention
	Summary wrap-up of the conference
	Closing remarks
PM	Available and open to organisation/hosting of side events (Subject to expressions of interest)

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