



NOTE BY THE TECHNICAL SECRETARIAT

**MEASURES TO PREVENT HOSTILE USE OF TOXIC CHEMICALS
BY NON-STATE ACTORS**

DISCUSSION PAPER

Introduction

1. This discussion paper identifies a number of practical and concrete measures within the purview of the Chemical Weapons Convention (hereinafter “the Convention”) that, if undertaken by a State Party, could contribute to its national efforts to prevent non-State actors from carrying out acts prohibited by the Convention, that is to say, chemical terrorism. The measures are to be discussed and decided upon by States Parties, and the Technical Secretariat (hereinafter “the Secretariat”) stands ready to facilitate discussions and support implementation, as needed.
2. This paper will be on the agenda of the Open Ended-Working Group on Terrorism meeting to be convened on Monday, 6 July 2015, which precedes the Seventy-Ninth Session of the Executive Council. To encourage a dialogue that is as inclusive as possible, the paper recognises that the size and complexity of the chemical industry at large vary widely from one State Party to another, as do the capabilities, resources, and infrastructure that each State Party has available for its national efforts to prevent terrorism. Additionally, it is acknowledged that a State Party may already have mechanisms in place to address certain aspects raised in the paper, and already have established government agencies or have structures in place. In this regard, the intent of the paper is not to suggest that a State Party should replace, abandon, or duplicate what it already has in place.
3. Broadly speaking, global anti-terrorism efforts can be considered to be focused on preventing a terrorist act from occurring in the first place, and on being sufficiently prepared and equipped to respond to it in order to mitigate its consequences for human health, the environment, and the economy. It is therefore useful to adopt this premise when exploring the potential of the Convention to further contribute to anti-terrorism in terms of *prevention* or *response*. In keeping with this framework, it is noted that this discussion paper is dedicated to *prevention*.



Background

4. States, on a number of occasions and in a number of ways, have expressed their keen determination to address the threat of terrorism. For instance:
 - (a) Numerous States are signatories to the fourteen major international conventions and protocols, as well as to regional conventions, on terrorism.
 - (b) The Member States of the United Nations have resolved to undertake a number of measures to prevent and combat terrorism, in particular by denying terrorists access to the means to carry out their attacks. These measures are outlined in the United Nations Global Counter-Terrorism Strategy,¹ as adopted by the United Nations General Assembly through resolution A/RES/60/288 on 8 September 2006, and regularly reaffirmed since that time.
 - (c) In April 2004, the United Nations Security Council voted unanimously to adopt resolution 1540 (2004) under Chapter VII of the United Nations Charter. The resolution affirms that the proliferation of nuclear, chemical, and biological weapons and their means of delivery constitutes a threat to international peace and security. The resolution obliges States to, inter alia, refrain from supporting by any means non-State actors in the development, acquisition, manufacture, possession, transport, transfer, or use of nuclear, chemical, or biological weapons and their delivery systems.
 - (d) At the recent centennial commemoration of the first large-scale use of chemical weapons at Ieper, Belgium, on 21 April 2015, States Parties to the OPCW underscored "...their commitment to ensuring that non-State actors do not obtain chemical weapons or their means of delivery". States Parties, through the implementation of the provisions of the Convention, have also determined, for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons.
5. Given that the Convention will have successfully served to bring about the destruction of the world's declared stockpiles of chemical weapons in the coming years, there is a need to undertake a concerted and purposeful examination to see what more can be done under the Convention to prevent the use of chemical weapons by a non-State actor. Preventing the use of a chemical weapon by a non-State actor necessitates a different way of thinking from preventing the re-emergence of a chemical weapon by a State.

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The United Nations Global Counter-Terrorism Strategy outlines a number of measures that are mirrored in this discussion paper as they apply to the field of chemical weapons. For example, intensifying cooperation and exchange of information between States Parties and United Nations organisations; negotiating bilateral and multilateral arrangements to extradite perpetrators of terrorist acts; addressing the criminal aspects connected with terrorism, such as the smuggling of deadly materials; enhancing border and customs controls; capacity-building and providing technical assistance for States; and so on.

6. It is recognised that assessing the risks of chemical terrorism, whether done qualitatively or quantitatively, is a complex task and likely specific to each State Party and region. Therefore, for the purposes of discussion, it may be useful to frame the risks of chemical terrorism in terms of following:
- (a) The risks of chemical terrorism reach all corners of the world because of the ubiquitous nature of chemicals and their use, the global nature of the chemical industry itself, and the international trade in chemicals. The wide availability and accessibility of information about the toxicity of a chemical, and of knowledge to enable its misuse, also contribute to this risk. An exploitable vulnerability in chemical security anywhere in the world could therefore have an impact thousands of kilometres away.
 - (b) Scenarios for chemical terrorism range from non-State actors acquiring chemical weapons and their means of delivery, either procured through the black market, acquired by illicit trade or by theft from militarily secured stockpiles; to non-State actors acquiring or producing chemical agents, such as sarin, to be deployed with an improvised device; to non-State actors finding ways to disperse industrial chemicals such as chlorine, or to contaminate the food chain, for example with ricin; and to non-State actors using conventional means to attack, or sabotage, assets such as chemical plants, toxic waste storage facilities, or strategic points in the supply chain such as a cargo ship, to cause dispersal of toxic chemicals into populated areas.
 - (c) The feasibility of carrying out the above scenarios is also wide ranging. At one end of the spectrum, the non-State actor needs to overcome the challenges of producing their own chemical agent, such as sarin, which involves having the right expertise, the right equipment, the right facilities, and sufficient funds, not only to produce the actual agent but to keep themselves protected from the toxicity of the agent during handling and storage. Scaling up production also has its technical challenges when compared to producing a small quantity in the ideal conditions of a laboratory. Somewhere in the middle of the spectrum, the non-State actor needs to find ways to disperse toxic chemicals into the surrounding population through conventional means, such as with explosives, hijacked vehicles, and so on. And, perhaps at the other end of the spectrum, the least scientifically demanding scenario involves the use of industrial toxic chemicals, such as chlorine, which is widely available on the commercial market in large quantities and is relatively easy to disperse.
 - (d) It is also important to note that the overall objective of non-State actors will likely dictate their method of terror. To achieve their objective, they may be aiming to cause a large number of casualties, or merely create an aura of fear, panic, or cause economic loss, which may involve only a few casualties or none at all.

Ideas to prevent hostile use of toxic chemicals by non-State actors

7. In light of the previous paragraph, this section outlines a number of specific ideas for States Parties to consider as a starting point for discussion. The ideas are arranged in

two subsections below, and are not intended to represent an exhaustive list. The first subsection contains ideas aimed at enhancing domestic efforts throughout the life cycle of a typical dual-use chemical. The second subsection is devoted to ways that States Parties can help prevent, through enhanced international cooperation, non-State actors from carrying out prohibited activities.

Enhancing domestic efforts throughout the chemical life cycle

Research² and development

8. Emphasis should be placed on the promotion and strengthening of ethical norms on responsible research and development among chemists, chemical engineers, and other professionals, through national scientific societies and organisations and academia, including efforts aimed at finding ways to replace toxic dual-use chemicals with those that are less toxic, where appropriate.

Production

(includes the facilities/factories, and areas where toxic chemicals are stored temporarily or permanently)

9. It is important to ensure that the facilities that produce toxic chemicals, or that use such chemicals to manufacture other goods, are made physically secure from theft and from an in situ attack that could release the toxic chemical into populated areas. In this regard, physical security programmes could be implemented, as well as programmes that promote chemical safety and security culture awareness, as well as normative attitudes towards toxic chemicals. Particular emphasis could be given to small- and medium-sized enterprises, which often do not have well-defined programmes that are typically present in large enterprises.
10. The legal mechanism underlying a State Party's obligation to make declarations under Article VI is also important, as that mechanism requires the chemical industry to provide the necessary information to the National Authority. This information could enhance the ability of the National Authority to control and monitor scheduled chemicals and facilities under its jurisdiction, and would necessitate efforts to ensure that the declarations were complete and correct.
11. The use of on-site inspections conducted by a State Party itself could serve as a means to confirm the chemical industry's compliance with national legislation. The modalities of any "technical assistance", if needed, such as that provided by the Secretariat upon request, would vary according to the needs of the State Party.

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It is noted that although "research" in itself is not a prohibited activity under Article I of the Convention, it is worth considering ideas on how to promote research in a responsible way to support economic and technological development.

Procurement

12. States Parties could consider enhancing their outreach to chemical producers and distributors to stress the need to “know your customer”. Such cooperation and communication could be particularly useful where there are many small enterprises in the supply chain. Law enforcement and the chemical industry also have a mutual interest in identifying and investigating suspicious purchase requests and instances where purchases have been denied. National or regional “warning lists” of specific chemicals and their quantities, and of specific dual-use equipment, could be useful in identifying purchases that may not be consistent with the purported profile of the purchasing company or individual.
13. Cooperation and exchange of information between law enforcement and the industry could help prevent “black market” trade of toxic chemicals, thereby minimising the risk of specific chemicals being acquired by a non-State actor through illicit or criminal networks. The conduct of table-top exercises and exercises that challenge existing measures (such as finding ways to bypass domestic or import/export controls), could help identify gaps between the stakeholders in terms of communication or coordination of activities, in addition to identifying gaps in the measures themselves.
14. Complete and correct declarations of imports and exports of toxic chemicals and precursors, and the resolution of transfer discrepancies between States Parties, could also provide a means for States Parties to undertake trade to detect the theft or diversion of large quantities of chemicals, though perhaps less effective in detecting the theft or diversion of smaller quantities that might be of interest to a non-State actor.

Movement of toxic chemicals throughout the domestic and international supply chain

(includes import/export of chemicals, means of shipment/transportation, and customs and border controls)

15. Every State that imports or exports chemicals, or that serves as a transit point, needs to have a system for monitoring these activities. In this regard, it is important to have well-trained and well-equipped customs officers, and sufficiently robust border controls for the monitoring, detection, and interdiction of illicit trade or smuggling of toxic chemicals.
16. As mentioned in paragraph 9 above, the various means of transporting toxic chemicals within a State Party and between States Parties need to be made physically secure not only from theft, but also from an in situ attack that could release toxic chemicals into populated areas. In this regard, it is important to implement physical security programmes, as well as programmes that promote chemical safety and security culture awareness and normative attitudes towards toxic chemicals with, for instance, logistic and freight companies and the individuals employed to transport those chemicals.
17. Close collaboration and engagement between the National Authority, the chemical production sector, and the domestic and international supply chain companies could be key to the effective implementation of a State Party’s chemical security education

and outreach priorities, which could include initiatives to improve chemical security culture and awareness.

18. Although there are only a small number of States not Party to the Convention, there is still an opportunity for non-State actors to use such States as transshipment points for smuggling toxic chemicals, or as “safe havens” for the development and stockpiling of weapons. States Parties could continue to promote universal adherence of the Convention and actively encourage such promotion through various channels, such as regional organisations.

Disposal of chemical waste

19. “Toxic waste”, which is likely comprised of solvents, various toxic chemicals, and so on, may be kept physically less secure than relatively pure chemicals that are considered more valuable, and could be the target of deliberate in situ release, or theft, by a non-State actor. As such, the measures to secure toxic chemicals at chemical facilities (see paragraph 9 above) and in transit (see paragraph 16 above) also apply to the storage and transport of toxic waste.

Overall management and oversight of the chemical life cycle

20. The full and effective implementation of the Convention is a key measure in preventing non-State actors from conducting prohibited activities, and the establishment of an adequately resourced, knowledgeable, and sustainable National Authority as the focal point within the State Party, as well as for the OPCW, is a fundamental and critical step in ensuring that a State Party can fulfil its obligations under the Convention.
21. Considering the government agencies and structures already established within a State Party, the role and function of the National Authority or other relevant government agencies could evolve to also focus on managing matters within the State Party throughout all phases of the chemical life cycle. For example, the National Authority in its current role of providing declarations under the Convention may be positioned to lead or at least contribute to national risk assessments, as outlined in the next paragraph. The National Authority could also enter into partnership with other governmental agencies within the State Party or region that are functionally responsible for ensuring security in terms of biological, nuclear, or radiological material.
22. The identification of the toxic chemicals and precursors that are produced, used in manufacturing, stored, or transported, and the identification of the facilities used in such activities within the State Party’s jurisdiction are an essential and fundamental aspect of managing risk. A comprehensive understanding of this aspect would allow a State Party to develop a risk profile considering all stakeholders involved in the chemical life cycle, and would be useful in deciding how and where to allocate its available resources and which measures could be applied, commensurate with the State Party’s chemical risk profile. As the threat posed by non-State actors varies from one State Party to another, an assessment of this threat is another important aspect of a State Party’s risk assessment.

23. The adoption of national legislation to criminalise and penalise a non-State actor's activities as outlined in Article I³ and required under Article VII is essential, as it gives the particular State Party the legal authority necessary to investigate, interdict or intervene, and prosecute a non-State actor before a toxic chemical is used as a weapon. Having the ability to use that legal authority is also an essential deterrent. For example, law enforcement agencies need the technical capability to investigate illegal chemical activities, including the ability to operate in contaminated crime scenes.
24. As a non-State actor would not likely restrict itself solely to the use of chemicals listed in the Schedules, consideration could be given to reviewing international norms, national legislation, the regulatory framework, and any administrative as well as law-enforcement measures, to extend beyond the scheduled chemicals to other non-scheduled toxic chemicals and their precursors, as needed.

Enhancing international cooperation

25. At various international and regional fora, States Parties could bring to the table their experiences with implementing aspects of the Convention that could help prevent non-State actors' use of chemical weapons. For example, enhanced cooperation could take the form of sharing information, experiences, and best practices, as well as sharing knowledge and expertise through training, assistance visits, peer reviews, and so on. Enhanced cooperation could also help build upon existing industry efforts, such as Responsible Care® or similar programmes.
26. States Parties could establish a regional or international mechanism that facilitates the provision of financial assistance, resources, or special expertise to support chemical security programmes that lack sufficient resources.
27. States Parties' police agencies could enhance their cooperation through existing regional or international mechanisms, for example, INTERPOL⁴, in coordination with their National Authorities. Such mechanisms could strengthen national capacities in law enforcement by sharing best practices and conducting training.
28. Legal cooperation amongst States Parties, for example in terms of establishing bilateral or multilateral agreements that facilitate sharing of relevant information or the extradition of persons who have undertaken activities prohibited under the Convention extra-territorially, could prevent a toxic chemical from being used as a weapon in the first place.
29. States Parties could explore innovative and cost-effective options through regional and international collaboration on a wide range of new technologies that have chemical security applications. For example, technologies to detect chemicals of interest in transit or to monitor chemical shipments; methods to test the environment

³ "To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone; to use chemical weapons; to engage in military preparations to use chemical weapons; to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention."

⁴ INTERPOL = International Criminal Police Organization.

for the presence of chemicals of interest; or arrangements to utilise existing data streams and networks already being monitored within, or outside, civil society.

30. As a means to support regional and international efforts to prevent terrorism, States Parties could report to a global repository its national events that involve an attack, or attempted attack, by a non-State actor using toxic chemicals, for example to a database modelled on the experience of the University of Maryland's database of terrorist attacks (<http://www.start.umd.edu/gtd/about/>), which was intended to help improve the global understanding and study of terrorist violence, and for which the data could be used to evaluate the risks in various regions in the world. Reporting events involving toxic chemicals to international organisations, such as INTERPOL, could be useful as the activities of criminals and non-State actors have shown to have no geographical borders, thereby necessitating the involvement of organisations with global intelligence and reach.
31. A State Party's active engagement, and sharing of information, with other United Nations organisations, such as providing national reports in accordance with United Nations Security Council resolution 1540 (2004), and developing CBRN⁵ National Action Plans through the United Nations Interregional Crime and Justice Research Institute, could facilitate a State Party's access to chemical weapons expertise and the required training and capacity building. A State Party could also encourage the United Nations agencies and other international organisations of which it is a member to enhance interagency collaboration to better meet the needs of the State Party. For example, involving organisations such as INTERPOL and the OPCW to strengthen the State Party's capacities to detect, identify, and investigate toxic chemical use through table-top exercises or training; or to assist with the State Party's investigation of suspicious events involving toxic chemicals, which would bring teams with specific expertise to the State Party that might not otherwise be available domestically.

Conclusion

32. There are a number of concrete measures that, when implemented under the purview of the Convention, could enhance national efforts to prevent non-State actors from undertaking activities that are prohibited under the Convention. Although the adoption of any measure, either by a State Party or a region, will depend upon a number of factors, such as the nature and risks of the terrorist threat in that State or region, available resources, and so forth, there may be topics of common interest to all States Parties. Examples in this regard are identifying the barriers to implementation of a measure and ways in which those barriers could be overcome; identifying methods for conducting national or regional risk assessments; identifying experience or expertise that could benefit other States Parties; and so on. The Secretariat stands ready to convene the necessary discussions, and to assist in the full and effective implementation of the Convention by all States Parties.

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⁵ CBRN = chemical, biological, radiological, nuclear.