



OPCW

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**RECENT DEVELOPMENTS OF CHEMICAL TECHNOLOGY AND THE
COMPREHENSIVENESS OF THE CHEMICAL WEAPONS CONVENTION**

Background

1. Rapid advances in chemical technology and the growing threat of chemical terrorism necessitate all States Parties of the Chemical Weapons Convention (hereinafter “the Convention” to re-examine the exiting industrial verification regime of the Convention. Many new synthetic routes have been developed and some of them are finding their way to scaling-up. Combinatorial chemical synthesis is rapidly growing, which enables rapid synthesis and screening of new chemical compounds. A chemical compound toxic to humans and animals can be synthesised, isolated, identified and, finally, produced in large scale using recently developed technologies. The advancement of catalysts, photochemistry, cell or enzyme based biological synthesis and purifying techniques may also challenge the effectiveness of the verification regime of the Convention. Moreover, flexibility and versatility of chemical manufacturing is greatly enhanced by technological developments. Many chemical industries around the world operate with multipurpose batch facilities, which can readily be switched from one product to another. The globalisation process of chemical trade and industry will inevitably lead to proliferation of flexible and versatile chemical manufacturing facilities worldwide.
2. Several chemical compounds in Schedule 1 and 2 have alkyl groups in the chemical structure which consist of not more than 10 carbons. These limits were enough to schedule all the toxic chemicals and their precursors at the time of drafting the Convention, probably more than 10 years ago. However, due to technological advances, these limits for alkyl groups may not be enough to include all the toxic derivatives now or in the near future.
3. Article I (General Obligations) and Article II (Definitions and Criteria) confirm the comprehensive nature of the Convention¹. Article VI (paragraph 2) also obligates all States Parties to take the necessary measures to ensure the comprehensive scope of the Convention. In addition, the Annex on Chemicals (Section B) clearly states that “these Schedules do not constitute a definition of chemical weapons”, meaning that chemical weapons include all toxic chemicals and their precursors intended for purposes prohibited under the Convention. In order to ensure the viability and

¹ This comprehensive nature of the Convention is generally referred to as the “general purpose criterion”



effectiveness of the Convention, the provisions of the Annex on Chemicals are also subject to changes in accordance with paragraph 5 of Article XV, if proposed changes are related to a matter of technical nature.

4. Due to the technological developments in the chemical industry and the growing threat of proliferation of dangerous chemicals and chemical terrorism, the “general purpose criterion” is gaining increasing importance and relevance. However, there has been little discussion on how to deal with this situation in practical terms. At present there seem to be no urgent calls for changes to the scheduled chemicals, but discussions on the issue of reviewing the Schedules should be initiated sooner rather than later. The First Review Conference might be a good occasion to bring this important subject to the attention of all States Parties. Therefore, we would like to put forward several practical steps to ensure the comprehensive scope of the Convention and to implement the “general purpose criterion”.

Practical Steps to Implement the “General Purpose Criterion”

5. First of all, since many of the new toxic chemicals and their precursors may be DOC/PSF, there is an urgent need for thorough risk assessment of DOC/PSF and for increasing the number of inspections at relevant DOC/PSF facilities in order to prevent the proliferation of dangerous chemicals. The characteristics of DOC/PSF facilities and their activities can be described under two different aspects. Firstly, these facilities can be assessed in accordance with the types of chemicals they produce. Secondly, they can be analysed in accordance with their characteristics in relation to processes and process equipment used².
6. Secondly, discussions on the unsolved industry issues should be expedited in preparation for the Review Conference so that consensus could be reached as soon as possible. Even though the outstanding industry issues are not directly related to the concept of the “general purpose criterion”, it is very important for full and effective implementation of the Convention in respect of strengthening the non-proliferation regime. Several outstanding industry issues are as follows: how to resolve discrepancies in export and import data (aggregate national data); consideration of other measures regarding transfers of Schedule 3 chemicals to States not Party to the Convention; formulation of a new selection methodology for DOC/PSF focusing on more relevant DOC/PSF plant sites; and the declaration issues related to scheduled chemicals (captive use, low concentration limits, salts, etc).
7. Thirdly, all States Parties should also ensure that their national implementation measures cover all activities prohibited under the Convention involving all toxic chemicals and their precursors intended for non-peaceful purposes. The current status of national implementation measures is far from satisfactory, as indicated in the Report by the Technical Secretariat³ (hereinafter “the Secretariat”). The legislation in the majority of the States Parties does not cover all the key areas in which legislative

² Information on the nature of the facilities declared and inspected under Article VI (Secretariat background paper, 27 January 2003)

³ According to Report by the Director General on national implementation measures (unedited version, 7 February 2003), only 82 States Parties (55%) had complied with the obligations under Article VII, paragraph 5.

and administrative measures are required under the Convention and there are gaps in their level of enforcement. The Review Conference should encourage all States Parties to give high priority to taking all necessary national implementation measures to ensure uniform and consistent implementation of the Convention.

8. Last but not least, we could consider establishing a mechanism for consultation among the States Parties and the Secretariat with active involvement of the Scientific Advisory Board (SAB), and in cooperation with relevant international organisations such as the United Nations Environment Programme (UNEP) as well as non-governmental organisations such as the International Union of Pure and Applied Chemistry (IUPAC) and the Intergovernmental Forum on Chemical Safety (IFCS). SAB reports must be based upon purely scientific grounds and fully utilised by the Secretariat and the States Parties. The States Parties are well advised to actively participate in this process and to share information on a voluntary basis on their production, consumption, processing, transfer activities and experiences gained from their risk assessment in the form of national papers. The national papers submitted to the Secretariat, together with the SAB reports, could be closely examined by all States Parties and developed into a draft decision regarding the list of scheduled toxic chemicals and their precursors so that it could be referred to the Executive Council and the Conference of the State Parties for its final adoption.

Conclusions

9. We consider this First Review Conference as a good opportunity to evaluate and improve the operations of the Convention. In order to ensure the comprehensive nature of the Convention, it is high time for the States Parties and the Secretariat to make concerted efforts to draw up and implement all possible practical steps.
10. In this process, we must also closely consult with the industry sector, taking into due consideration its concerns about protection of confidential information and potential increases in administrative and financial burdens. It is incumbent upon the States Parties and the Secretariat to make every effort to enhance the awareness of the chemical industry sector on the necessity and benefits of complying with the Convention. At the same time, we should continue our efforts for enhancement of cost-effectiveness and efficiency of industry inspections to minimise the burden for the industry sector.
11. We propose that the States Parties and the Secretariat closely examine the merits and feasibilities of our proposal so that they may contribute to achieving the objectives of the Convention.