

## 8. Reducing security threats from chemical and biological materials

### Overview

*In 2013 states continued to develop strategies to prevent and remediate the effects of the possible misuse of toxic chemicals and of biological materials. Some of these activities are carried out in the context of environmental and human health, while others are done in the security and defence spheres. The principal legal instruments against chemical and biological warfare (CBW) are the 1993 Chemical Weapons Convention (CWC) and the 1972 Biological and Toxin Weapons Convention (BTWC). They inform the consideration of CBW threats and responses, understanding of past programmes, allegations of the use of biological or chemical weapons, the nature of possible standby programmes, and efforts to ensure that science and technology are not misused for hostile purposes or as a method of warfare.*

*The most significant developments concerning security threats from chemical or biological materials in 2013 related to Syria (see section I in this chapter). After the Syrian Government's admission in 2012 that it possessed chemical weapons, in 2013 a series of increasingly serious allegations, threats of military intervention and attempted international investigation eventually led to an international inspection team, working under the auspices of the United Nations Secretary-General, entering Syria. Its report, which confirmed the use of chemical weapons in the civil war without specifying which side had used them, was a contributing factor to Syria becoming a party to the CWC.*

*As a CWC party, Syria made a formal declaration of its stockpiles of chemical weapons and reached agreement on the removal of chemical weapon agents and their precursors from its territory for destruction. A multifaceted and evolving inspection and verification effort was carried out under a cooperative arrangement involving the UN Office for Disarmament Affairs (UNODA), the Organisation for the Prohibition of Chemical Weapons (OPCW), the World Health Organization (WHO) and other bodies, including national laboratories. However, the Syrian Government continued to deny that it had used chemical weapons and did not mention in its initial declaration any weapons of the two types identified by the international inspectors as having been used at Ghouta on 21 August.*

*The Third Review Conference of the CWC and the 18th Conference of the States Parties received significant international prominence, partly as a result*

*of attention to the continued conflict in Syria and the decision by the United States not to attack Syria for its chemical weapon use in exchange for verified chemical weapon disarmament (see section II). The US administration had repeatedly indicated in preceding months that the use of chemical weapons in the conflict would constitute a 'red line' and would lead to 'serious consequences'—widely understood to mean military engagement. In 2013 the OPCW won the Nobel Peace Prize 'for its extensive efforts to eliminate chemical weapons'.*

*The states parties to the BTWC met twice during 2013 in the second of a series of four intersessional meetings of experts and parties agreed by the Seventh Review Conference in 2011. The meetings focused on science and technology developments and on confidence-building measures—in particular, on whether and how to establish states parties' compliance with the convention (see section III).*

*Developments in dual-purpose research in the life sciences—that is, scientific research that has potential military applications—included the ending of the long-running Russian–US Cooperative Threat Reduction (CTR) programme, the recent focus of which has been on biological threat reduction (see section IV). Researchers who discovered a new botulinum neurotoxin chose not to submit the sequence data to a public repository of nucleotide sequences until an effective antitoxin has been developed because of the toxin's serious risks to public health. The threat posed by public availability of such a nucleotide sequence was illustrated by the announcement of a project to develop the biological equivalent of a three-dimensional (3D) printer, which could be used to sequence pathogenic microorganisms.*

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