

Background Brief No. 4 National Implementation

The Biological and Toxin Weapons Convention (BTWC) was constructed to prevent the development of Biological and Toxin weapons, devices which disseminate disease-causing organisms or poisons to kill or harm humans, animals or plants. Under Article IV of the BTWC:

“Each State Party to this Convention shall, in accordance with its constitutional processes, take any necessary measures to prohibit and prevent the development, production, stockpiling, acquisition, or retention of the agents, toxins, weapons, equipment and means of delivery specified in article I of the Convention...”

The language here is important and the EU has suggested it amounts to “not simply an obligation of conduct but amounts to an obligation of result”. There are several measures which can be undertaken by states to ensure the peaceful use of biotechnology. More recently, the BTWC has been complimented by UN Security Council Resolution 1540 which stipulates that “States shall take and enforce effective measures to establish domestic controls to prevent the proliferation of ... biological weapons and their means of delivery, including by establishing appropriate controls over related material”. Although there is no one size fits all solution for national implementation and states need to tailor material to the specific linguistic, cultural and legal context, there are several categories of measures which can be undertaken to ensure the peaceful use of biology and biotechnology, including inter alia:

- National Legislation - National Legislation has become increasingly important since September the 11th and many states have constructed or revised their legislation in the 21st Century to ensure its relevance but also added measures to ensure enforcement provision is in place in accordance with obligations under UNSC Resolution 1540 and the BTWC.
- Export Controls - changing science and security have generated new challenges as well as compounding old problems for effective export controls. However States have responded to these challenges and many states have updated export control provision and lists of agents and equipment but also catch all controls designed to cover dual use items.
- Biosafety Regulation - Biosafety according to the WHO refers to the "the containment principles, technologies and practices that are implemented to prevent unintentional exposure to pathogens and toxins, or their accidental release". Measures to ensure biosafety in scientific research have been developed by many states.
- Biosecurity measures – Definitions of biosecurity vary however, in the BTWC, Biosecurity is “most commonly used to refer to mechanisms to establish and maintain the security and oversight of pathogenic microorganisms, toxins and relevant resources”. A range of measures have been reportedly undertaken by states to encourage biosecurity however key elements of biosecurity include: Personnel Reliability; Physical Security; Information Technology Security; Material Control and Accountability; Material Transfer Security & Program Management.
- Codes of Conduct – Discussion at BTWC meetings in 2005, have generated increased interest in codes of conduct/ethics/practise which are designed to raise awareness of the BTWC and ensure scientists are cognisant of an obligation to do no harm.
- Education - Discussion in the BTWC and elsewhere have led to a significant increase in attention devoted to education designed to nurture a culture of responsibility

amongst life scientists and ensure awareness of legislation and regulations which govern scientific research.

Not all States have implemented all -or in some cases any- of these measures, however, most states have implemented some of these measures and it is important to be aware of how these measures –in conjunction with international legislation- can affect scientific research within any given countries. For more information on national measures in your country or region the following sites provide material on the implementation at the national level:

- Organisation for the Prohibition of Biological Weapons
- Biosecurity Codes
- UN Office Geneva (UNOG)
- VERTIC