



# BWV

Survey Template of National Implementation Measures for the 1972 Biological and Toxin Weapons Convention and biological weapons-related provisions of relevant international instruments

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#### **Photos**

Cover: Under a magnification of 83,900X, this digitally colored transmission electron microscopic (TEM) image depicts a salivary gland tissue section that had been extracted from a mosquito, which was infected by the eastern equine encephalitis (EEE) virus. The viral particles have been colorized red. © CDC/Fred Murphy; Sylvia Whitfield

Page 2: Using methylene-blue stain, this photomicrograph revealed the presence of numerous, *Francisella tularensis* bacteria, formerly known as *Pasteurella tularensis*. *F. tularensis* is the pathogen responsible for causing the disease tularemia. © CDC/Dr. P.B. Smith

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# Introduction

## The National Implementation Measures Programme

VERTIC's National Implementation Measures (NIM) Programme, established in 2008, provides tailored assistance to interested states for adherence to and implementation of international instruments, including those on chemical, biological, nuclear and radiological weapons and the security of related materials. The NIM Programme provides cost-free assistance through awareness-raising, legal analysis and legislative drafting assistance to interested states.

For over a decade, the NIM Programme has been engaged in systematic analysis and drafting of states' implementing legislation for the 1972 Biological Weapons Convention (BWC). Through our engagement with over 145 states worldwide and our participation in diplomatic and technical BWC-related processes, we have developed a unique understanding of states' approaches to implementing the Convention and of what constitutes effective practice.

## The content of the BWC legislation survey template

One of the primary activities that the NIM Programme undertakes is analysis of an interested state's existing laws and regulations for implementation of the BWC. In order to comprehensively analyse a state's BWC-related legislation, VERTIC has developed a survey template compiling national implementation measures which are necessary to fulfil Article IV of the Convention.<sup>1</sup> For this purpose, additional agreements and understanding as contained in the final documents of BWC Review Conferences have been taken into account, which help guide interpretation of the BWC.

The survey template also covers national implementation measures for the biological weapons-related requirements

of UN Security Council Resolution (UNSCR) 1540 (2004). UNSCR 1540 obligations bind all UN Member States; they reinforce and further expand national implementation obligations in the BWC. In addition, the survey template takes into account biological-weapons related provisions in a number of other international treaties relating to civil aviation, maritime navigation, terrorism and international crimes.

Finally, the survey template refers to non-binding documents which provide guidance on the implementation of the binding instruments. Such documents include the World Health Organization's (WHO) *Laboratory biosecurity guidance*, *Laboratory biosafety manual*, and *Guidance on implementing regulatory requirements for biosafety and biosecurity in biomedical laboratories* as well as the International Organization for Standardization's (ISO) *35001:2019 Biorisk management for laboratories and other related organisations*.

On the basis of these international instruments, the survey identifies 137 distinct national implementation measures falling into eight categories. The first category of national implementation measures concerns definitions of key terms, such as 'biological weapon'. The second category concerns offences and penalties for prohibited activities involving biological weapons and biological agents and toxins. For example, it should be an offence to possess a biological weapon, with an appropriate penalty for such conduct. The third category refers to forms of criminal liability, such as assisting in an offence. The fourth category relates to jurisdiction, which refers to the authority of states to try biological-weapons related offences. The fifth category concerns the establishment of national control lists of biological agents and toxins as well as related dual-use equipment, technology and software. The sixth category includes safety and security measures for the handling of biological agents and toxins, known as biosafety and bio-

security measures. The seventh category relates to controls of international transfers of biological agents and toxins and related dual-use equipment, technology and software. Finally, the eighth category contains legislative enforcement measures, such as inspections, criminal investigations and prosecutions.

## How to use the BWC legislation survey template

When using the survey template to conduct legislative analysis, NIM staff research, collate and analyse a state's national implementation measures in legislation, regulations, decrees, administrative acts and other pertinent official documents, across a broad range of areas. Such measures can be found in criminal laws, weapons- and treaty-specific laws, export control and strategic trade laws, public, animal and plant health and protection laws, biosecurity laws and customs laws. Our staff then enter the text of any provision which may serve to fulfil an implementation criterion in the appropriate cell, referencing the relevant source.

In addition to completing a survey, NIM staff complete a survey overview, using a template we have developed. The survey overview provides a summary of the survey's gap analysis and complements it with a qualitative assessment of a state's national implementation measures along with recommendations for strengthening the state's legislative framework. Each completed survey and survey overview inform VERTIC's discussions with the surveyed state on the effectiveness of measures in force and on approaches for further strengthening its legal and regulatory framework. Such surveys are shared with the respective state.

The legislation survey and the survey overview are not compliance assessment tools. Rather, they are intended to aid states in their analysis of their legislation, to enable them to strengthen their legislative frameworks. There is no single approach to national implementation as the

approach taken will depend on the constitutional processes and needs of each state.

It is hoped that by publishing the survey and survey overview templates, state officials can use these tools to assess their legislative frameworks. By inputting the relevant legislative provision in the appropriate cell in the right-hand column of the survey tool, and comparing the text with the legislative implementation requirements in the cells in the left-hand column, users can see where there are gaps in their current legislation. Such a gap analysis can then inform future amendments to the legislative framework.

NIM staff stand ready to review and assist with such analysis, or conduct the legislative analysis at a state's request. For further information concerning our assistance activities, please contact: [NIM \[at\] vertic.org](mailto:NIM[at]vertic.org)

## Acknowledgments and liabilities

The BWC legislation survey and overview templates are the product of hard work from a number of current and former staff of the National Implementation Measures Programme.

VERTIC wishes to thank the Ministry of Foreign Affairs of Norway for their financial support for the major revision of these survey tools in 2020. The views expressed by VERTIC do not necessarily reflect theirs.

Although every care has been taken to prepare this legislation survey template and overview template, VERTIC hereby disclaims any liability or responsibility arising from their use in any way. VERTIC would be grateful for any errors or omissions that are brought to our attention.

### Notes

1. For more information on national implementation of the BWC, see VERTIC fact sheet: "National Implementation Measures for the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC)", and "Biological Weapons Convention: Report on National Implementing Legislation" November 2016.

# The survey

## State name:

Survey of National Implementation Measures for the 1972 Biological and Toxin Weapons Convention and biological weapons-related provisions of relevant international instruments

### I. ADHERENCE TO INTERNATIONAL INSTRUMENTS RELATED TO BIOLOGICAL WEAPONS<sup>1</sup>

<b>1925 Geneva Protocol</b> for the Prohibition of the Use of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare	[For more information, please check <a href="#">here</a> ]
<b>BWC:</b> 1972 Biological and Toxin Weapons Convention	[For more information, please check <a href="#">here</a> ]
<b>Beijing Convention:</b> 2010 Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation <sup>2</sup>	[For more information, please check <a href="#">here</a> ]
<b>SUA 2005:</b> Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, as amended by the Protocol of 2005 to the Convention <sup>3</sup>	[For more information, please check <a href="#">here</a> ]
<b>SUA PROT 2005:</b> Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf as amended by the 2005 Protocol to the Protocol (SUA PROT 2005)	[For more information, please check <a href="#">here</a> ]
<b>ICSTB:</b> 1997 International Convention for the Suppression of Terrorist Bombings	[For more information, please check <a href="#">here</a> ]
<b>Rome Statute:</b> 1998 Rome Statute of the International Criminal Court	[For more information, please check <a href="#">here</a> ]
<b>2017 Amendment</b> to the Rome Statute (Resolution ICC-ASP/16/Res.4)	[For more information, please check <a href="#">here</a> ]
<b>UNSCR 1540:</b> United Nations Security Council Resolution 1540 (2004) <sup>4</sup>	Decisions in UNSCR 1540 are legally binding on all UN Member States pursuant to Article 25 of the UN Charter.

## II. LEGISLATION SURVEY

### A. Definitions

A.1	Biological agent {e.g. ISO 35001: 2019, section 3.13 page 3; WHO Guidance on implementing regulatory requirements for biosafety and biosecurity in biomedical laboratories, Annex 1 page 61; WHO Laboratory biosafety manual: fourth edition, Glossary of terms page x}	
A.2	Biosafety <sup>5</sup> {BWC Eighth Review Conference final document, Article IV 11(c); e.g. ISO 35001: 2019, section 3.22 page 4; WHO Laboratory biosafety manual: fourth edition, Glossary of terms page x}	
A.3	Biosecurity <sup>6</sup> {BWC Eighth Review Conference final document, Article IV 11(c); e.g. ISO 35001: 2019, section 3.23 page 4; WHO Laboratory biosafety manual: fourth edition, Glossary of terms page xi}	
A.4	Dual-use {e.g. WHO Laboratory biosecurity guidance, page iv; WHO Laboratory biosafety manual: fourth edition, Glossary of terms page xii}	
A.5	Explosive or other lethal device {ICSTB, Article 1(3) <sup>7</sup> }	
A.6	Toxin {e.g. ISO 35001: 2019, section 3.15 page 3; WHO Laboratory biosecurity guidance, section 4.2 page 16}	
A.7	Non-state actor {UNSCR 1540, Preamble}	
A.8	Biological weapon {BWC, Article I; Beijing Convention, Article 2(h)(a); SUA 2005, Article 1(1)(d)(i); SUA PROT 2005, Article 1(1)}	
A.9	Other	



## B. Offences and penalties

### Offences related to biological weapons

B.1	<b>Develop</b> biological weapons [see in A.8]; penalties { <i>BWC, Article IV; UNSCR 1540, OP 2</i> }	
B.2	<b>Manufacture/produce</b> biological weapons; penalties { <i>BWC, Article IV; UNSCR 1540, OP 2</i> }	
B.3	<b>Acquire</b> biological weapons; penalties { <i>BWC, Article IV; UNSCR 1540, OP 2</i> }	
B.4	<b>Stockpile/store</b> biological weapons; penalties { <i>BWC, Article IV; UNSCR 1540, OP 2</i> }	
B.5	<b>Possess/retain</b> biological weapons; penalties { <i>BWC, Article IV; UNSCR 1540, OP 2</i> }	
B.6	<b>Transfer</b> <sup>8</sup> , directly or indirectly, a biological weapon to any other person; penalties { <i>BWC, Article III; UNSCR 1540, OP 2</i> }	
B.7	<b>Transport</b> biological weapons; penalties { <i>UNSCR 1540, OP 2</i> }	
B.8	<b>Use</b> biological weapons; penalties { <i>BWC, Article IV<sup>9</sup>; UNSCR 1540, OP 2</i> }	
B.9	Engage in any <b>military preparations to use</b> biological weapons; penalties <sup>10</sup>	
B.10	<b>Construct, acquire or retain any facility</b> intended for the production of biological weapons; penalties <sup>11</sup>	

Offences related to biological weapons on aircraft, ships, fixed platforms and public places	
B.11	Unlawfully and intentionally <b>release or discharge</b> from an <b>aircraft</b> in service any biological weapon [see in A.8]; in a manner that causes or is likely to cause death, serious bodily injury or serious damage to property or the environment; penalties <i>{Beijing Convention, Article 1(1)(g) and Article 3}</i>
B.12	Unlawfully and intentionally <b>use</b> against or on board an <b>aircraft</b> in service any biological weapon in a manner that causes or is likely to cause death, serious bodily injury or serious damage to property or the environment; penalties <i>{Beijing Convention, Article 1(1)(h) and Article 3}</i>
B.13	Unlawfully and intentionally <b>transport</b> , cause to be transported, or facilitate the transport of, on board an <b>aircraft</b> any biological weapon, knowing it to be a biological weapon; penalties <i>{Beijing Convention, Article 1(1)(i)(2) and Article 3}</i>
B.14	Unlawfully and intentionally <b>transport</b> , cause to be transported, or facilitate the transport of, on board an <b>aircraft</b> any <b>equipment, materials or software or related technology</b> that significantly contributes to the design, manufacture or delivery of a biological weapon without lawful authorisation and with the intention that it will be used for such purpose; penalties <i>{Beijing Convention, Article 1(1)(i)(4) and Article 3}</i>
B.15	Unlawfully and intentionally, when the purpose of the act, by its nature or context, is to intimidate a population, or to compel a government or an international organisation to do or to abstain from doing any act, <b>use</b> against or on a <b>ship</b> or discharge from a ship a biological weapon in a manner that causes or is likely to cause death or serious injury or damage; penalties <i>{SUA 2005, Article 3bis(1)(a)(i) and Article 5}</i>
B.16	Unlawfully and intentionally <b>transport</b> on board a <b>ship</b> any biological weapon, knowing it to be a biological weapon; penalties <i>{SUA 2005, Article 3bis(1)(b)(ii) and Article 5}</i>
B.17	Unlawfully and intentionally <b>transport</b> on board a <b>ship</b> any <b>equipment, materials or software</b> or related technology that significantly contributes to the design, manufacture or delivery of a biological weapon, with the intention that it will be used for such purpose; penalties <i>{SUA 2005, Article 3bis(1)(b)(iv) and Article 5}</i>
B.18	Unlawfully and intentionally <b>transport</b> another <b>person</b> on board a ship knowing that the person has committed an act that constitutes an offence set forth in [B.15 to B.17 and B.19] and intending to assist that person to evade criminal prosecution; penalties <i>{SUA 2005, Article 3ter and Article 5}</i>
B.19	Unlawfully and intentionally <b>injure or kill</b> any person in connection with the commission of any of the offences set forth in [B.15 to B.18]; penalties <i>{SUA 2005, Article 3quater(a) and Article 5}</i>

B.20	Unlawfully and intentionally, when the purpose of the act, by its nature or context, is to intimidate a population, or to compel a government or an international organisation to do or to abstain from doing any act, <b>use</b> against or on a <b>fixed platform</b> or discharge from a fixed platform a biological weapon in a manner that causes or is likely to cause death or serious injury or damage; penalties <i>{SUA PROT 2005, Article 2bis(a)}</i>	
B.21	Unlawfully and intentionally <b>injure</b> or <b>kill</b> any person in connection with the commission of any of the offences set forth in [B.20]; penalties <i>{SUA PROT 2005, Article 2ter(a)}</i>	
B.22	Unlawfully and intentionally <b>deliver, place, discharge</b> or <b>detonate</b> an <b>explosive or other lethal device</b> [see A.5] in, into or against a <b>place of public use</b> , a State or <b>government facility</b> , a public transportation system or an infrastructure facility, with the intent to cause death or serious bodily injury or with the intent to cause extensive destruction of such a place, facility or system, where such destruction results in or is likely to result in major economic loss; penalties <i>{ICSTB, Article 2(1) and Article 4}</i>	
<b>Offences related to war crimes</b>		
B.23	Employing weapons, which use microbial or other biological agents, or toxins, whatever their origin or method of production in an international armed conflict <i>{2017 Amendment to the Rome Statute (ICC-ASP/16/Res.4), Article 8(2)(b)(xxvii)}</i>	
B.24	Employing weapons, which use microbial or other biological agents, or toxins, whatever their origin or method of production in an armed conflict not of an international character <i>{2017 Amendment to the Rome Statute (ICC-ASP/16/Res.4), Article 8(2)(e)(xvi)}</i>	
<b>Offences related to biological agents and toxins</b>		
B.25	<b>Engage in activities</b> involving dangerous biological agents or toxins <b>without authorisation</b> /in violation of the conditions of an authorisation; penalties [see F.16] <i>{UNSCR 1540, OP 3(a)}</i>	
B.26	<b>Transfer</b> dangerous biological agents or toxins <b>without authorisation</b> /to unauthorised persons; penalties <i>{UNSCR 1540, OP 3(d)}</i>	
B.27	<b>Transport</b> dangerous biological agents or toxins <b>without authorisation</b> ; penalties <i>{UNSCR 1540, OP 3(a)}</i>	
B.28	Internationally <b>transfer</b> dual-use biological equipment and related technology and software <b>without prior declaration</b> or licence [see G.1] <i>{UNSCR 1540, OP 3(d), footnote regarding 'related materials'}</i>	

B.29	<b>Broker</b> international transfers of biological agents and toxins or dual-use biological equipment, technology and software in contravention of an applicable control measure [see G.12] {UNSCR 1540, OP 3(c),(d), footnote regarding 'related materials'}	
<b>Other offences</b>		
B.30	Providing <b>false or misleading information</b> to enforcement authorities/agencies; penalties <sup>12</sup>	
B.31	Criminal responsibility for <b>legal persons</b> (corporations, partnerships, associations, etc.) and their responsible officers (directors, managers, etc.) or agents {BWC, Article IV; <sup>13</sup> Beijing Convention, Article 4; SUA 2005, Article 5bis, SUA PROT 2005, Article 1(1)}	
B.32	Other	
<b>C. Participation in offences in (B)</b>		
C.1	<b>Assist</b> anyone to engage in an activity prohibited in (B.1-B.10, B.23-B.29); penalties {UNSCR 1540, OP 2; Rome Statute, Article 25(3)(c)}	
C.2	<b>Encourage</b> anyone to engage in an activity prohibited in (B.1-B.10, B.25-B.29); penalties <sup>14</sup>	
C.3	<b>Induce</b> anyone to engage in an activity prohibited in (B.1-B.10, B.25-B.29); penalties <sup>15</sup>	
C.4	<b>Order</b> anyone to engage in an activity prohibited in (B.23 and B.24); penalties {Rome Statute, Article 25(3)(b)}	
C.5	<b>Organise or direct</b> anyone to engage in an activity prohibited in (B.11-B.22); penalties {Beijing Convention, Article 1(4)(b); SUA 2005, Article 3quater(d); SUA PROT 2005, Article 2ter(d), ICSTB, Article 2(3)(b)}	
C.6	Act as an <b>accomplice</b> to an activity prohibited in (B.1-B.22, B.25-B.29); penalties {UNSCR 1540, OP 2; Beijing Convention, Article 1(4)(c); SUA 2005, Article 3quater(c); SUA PROT 2005, Article 2ter (c); ICSTB, Article 2(3)(a)}	

C.7	<b>Finance</b> an activity prohibited in (B.1-B.10, B.25-B.29); penalties {UNSCR 1540, OP 2}	
C.8	Contribute in any other way to the commission of one or more activities prohibited in (B) <b>by a group of persons acting with a common purpose</b> ; such contribution shall be intentional and either be made with the aim of furthering the general criminal activity or purpose of the group where such activity or purpose involves the commission of the activities prohibited in B.11-B.24, or be made in the knowledge of the intention of the group to commit activities prohibited in B.11-B.24; penalties {Beijing Convention, Article 1(5); SUA 2005, Article 3quater(e); SUA PROT 2005, Article 2ter(e); ICSTB, Article 2(3)(c); Rome Statute, Article 25(3)(d)}	
C.9	<b>Threaten</b> to commit an activity prohibited in B.11-B.12; penalties {Beijing Convention, Article 1 (3) (a)}	
C.10	Unlawfully and intentionally, when the purpose of the act, by its nature or context, is to intimidate a population, or to compel a government or an international organisation to do or to abstain from doing any act, <b>threaten</b> , with or without a condition, as is provided for under national law, to commit an offence in B.15 and B.20; penalties {SUA 2005, Article 3bis(1)(a) (iv) and Article 5; SUA PROT 2005, Article 2bis(c)}	
C.11	<b>Attempt</b> to commit an activity prohibited in (B); penalties {UNSCR 1540, OP 2; Beijing Convention, Article 1(4)(a); SUA 2005, Article 3quater(b); SUA PROT 2005, Article 2ter(b); ICSTB, Article 2(2); Rome Statute, Article 25(3)(f)}	
C.12	Other	

#### D. Jurisdiction over offences in (B) and (C)<sup>16</sup>

D.1	Offence in (B) committed in the <b>territory</b> of the State or in any other <b>place under its jurisdiction</b> as recognised by international law or in any place <b>under its control</b> {BWC, Article IV; Beijing Convention, Article 8 (1) (a); SUA 2005, Article 6 (1) (b); ICSTB, Article 6(1)(a); Rome Statute, Article 12(2)(a)}	
D.2	Offence in B.11-B.14, B.22 or B.23-B.24 committed against or on board an <b>aircraft registered</b> in the State {Beijing Convention, Article 8 (1) (b); ICSTB, Article 6(1)(b); Rome Statute, Article 12(2)(a)}	
D.3	Offence in B.22 committed on board an <b>aircraft operated</b> by the <b>Government</b> of the State {ICSTB, Article 6(2)(e)}	

D.4	Offence in B.11-B.14, committed on board an <b>aircraft</b> which lands in the State's territory with the alleged <b>offender still on board</b> <i>{Beijing Convention, Article 8(1)(c)}</i>	
D.5	Offence B.11-B.14, committed against or on board an <b>aircraft leased</b> without crew to a lessee whose principal place of business or, if the lessee has no such place of business, whose <b>permanent residence</b> is in the State <i>{Beijing Convention, Article 8(1)(d)}</i>	
D.6	Offence in B.15-B.19, B.22 or B.23-B.24 committed against or on board a <b>ship</b> flying the flag of the State at the time the offence is committed <i>{SUA 2005, Article 6(1)(a); ICSTB, Article 6(1)(b); Rome Statute, Article 12(2)(a)}</i>	
D.7	Offence in B.20-B.21 committed against or on board a <b>fixed platform</b> while it is located on the continental shelf of the State <i>{SUA PROT 2005, Article 3(1)(a)}</i>	
D.8	Offence in B.1-B.24 allegedly committed by a <b>national</b> of the State <i>{Beijing Convention, Article 8(1)(e); SUA 2005, Article 6(1)(c); SUA PROT 2005, Article 3(1)(b); ICSTB, Article 6(1)(c); Rome Statute, Article 12(2)(b)}</i> <sup>17</sup>	
D.9	Offence in B.11-B.22 allegedly committed by a <b>resident or stateless person</b> whose habitual residence is in the territory of the State <i>{Beijing Convention, Article 8(2)(b); SUA 2005, Article 6(2)(a); SUA PROT 2005, Article 3(2)(a); ICSTB, Article 6(2)(c)}</i>	
D.10	Offence in B.15-B.22 was committed with <b>intent to harm the State</b> or its <b>nationals</b> or to compel the State to do or abstain from doing any act <i>{SUA 2005, Article 6(2)(c); SUA PROT 2005, Article 3(2)(c); ICSTB, Article 6(2)(d)}</i>	
D.11	Offence in B.22 was committed against a State or government facility of that State <b>abroad, including an embassy or other diplomatic consular premises</b> of that State <i>{ICSTB, Article 6(2)(b)}</i>	
D.12	<b>Victim</b> of the offence in B.11-B.22 was a <b>national</b> of the State <i>{Beijing Convention, Article 8(2)(a); SUA 2005, Article 6(2)(b); ICSTB, Article 6(2)(a)}</i>	
D.13	Offence involved the <b>use of biological weapons</b>	
D.14	Other	

E. Control lists		
E.1	Control lists for dangerous biological agents and toxins {UNSCR 1540, OP 3(a), (d) and OP 6}	
E.2	Control lists for dual-use biological equipment and related technology and software {UNSCR 1540, OP 3(a), (d) and OP 6}	
E.3	Updating of control lists	
E.4	Other	
F. Control measures to account for, secure and physically protect dangerous biological agents and toxins <sup>18</sup>		
Measures to account for, secure and physically protect		
F.1	Measures to account for <b>production</b> {UNSCR 1540, OP 3(a)} <sup>19</sup>	
F.2	Measures to <b>account for use</b> {UNSCR 1540, OP 3(a)} <sup>20</sup>	
F.3	Measures to <b>account for storage</b> {UNSCR 1540, OP 3(a)} <sup>21</sup>	
F.4	Measures to <b>account for transport</b> {UNSCR 1540, OP 3(a)} <sup>22</sup>	
F.5	<b>Penalties</b> (criminal/civil/both) for failures to ensure proper accounting	
F.6	Measures to <b>secure production</b> {UNSCR 1540, OP 3(a)} <sup>23</sup>	

F.7	Measures to <b>secure use</b> {UNSCR 1540, OP 3(a)} <sup>24</sup>	
F.8	Measures to <b>secure storage</b> {UNSCR 1540, OP 3(a)} <sup>25</sup>	
F.9	Measures to <b>secure transport</b> {UNSCR 1540, OP 3(a)} <sup>26</sup>	
F.10	<b>Penalties</b> (criminal/civil/both) for failures to ensure proper security	
F.11	Measures for <b>disposal</b> <sup>27</sup>	
F.12	Measures for <b>physical protection of facilities</b> which produce, use or store dangerous biological agents or toxins and related penalties <sup>28</sup>	
F.13	Measures for <b>physical protection of dangerous biological agents</b> and <b>toxins</b> and related penalties {UNSCR 1540, OP 3(b)} <sup>29</sup>	
F.14	Measures for <b>physical protection of facilities and vehicles</b> involved in <b>transporting</b> dangerous biological agents or toxins and related penalties <sup>30</sup>	
F.15	Measures for <b>protection of information</b> (including electronic) related to dangerous biological agents and toxins and related penalties <sup>31</sup>	
<b>Licensing system</b>		
F.16	<b>Authorisation</b> of activities involving dangerous biological agents or toxins [See B.25] (e.g., licensing or registration of facilities and persons, notification of internal transfers) {UNSCR 1540, OP 3(a)}	



F.17	<b>Exemptions/revocation/prohibited</b> persons	
F.18	National licensing <b>authority</b>	
F.19	Interagency <b>review</b> for licences	
F.20	Authorisation of <b>transporters</b> of dangerous biological agents and toxins <sup>32</sup>	
<b>Measures for personnel</b>		
F.21	<b>Background checks</b> for personnel undertaking activities involving dangerous biological agents or toxins <sup>33</sup>	
F.22	Biosecurity <b>awareness</b> and training for personnel undertaking activities involving dangerous biological agents or toxins <sup>34</sup>	
F.23	Promotion of a <b>culture of responsibility</b> amongst relevant national professionals and development, adoption and promulgation of codes of conduct <sup>35</sup>	
F.24	Measures to <b>restrict access</b> to areas with dangerous biological agents or toxins to those with authorisation only <sup>36</sup>	
<b>Other preventative measures for dangerous biological agents and toxins</b>		
F.25	Measures to ensure a biosecurity <b>risk assessment</b> is undertaken for facilities involving dangerous biological agents <sup>37</sup>	
F.26	Measures to control <b>funding</b> for activities involving dangerous biological agents and toxins	

F.27	Regulations for <b>genetic engineering work</b> <sup>38</sup>	
F.28	Measures to strengthen methods and capacities for <b>surveillance, detection and response of outbreaks</b> of disease <sup>39</sup>	
F.29	Measures to <b>report/notify incident</b> involving biological agents and toxins <sup>40</sup>	
F.30	Measures to develop and implement <b>emergency response plans</b> for facility handling dangerous biological agents and toxins to prepare an emergency response plan <sup>41</sup>	
F.31	Other legislation/regulations related to biosafety and biosecurity	
F.32	Other enforcement agencies/authorities	
F.33	Other	

**G. Measures to control transfers of dangerous biological agents, toxins, dual-use biological equipment and related technology and software**<sup>42</sup>

G.1	<b>Authorisation</b> for exports and imports (e.g., general or single licences, permits) <i>{UNSCR 1540, OP 3(d)}</i>	
G.2	<b>Exemptions</b> from authorisation	
G.3	Export/import control <b>authority</b>	

G.4	Other enforcement agencies/authorities	
G.5	<b>End-user</b> controls {UNSCR 1540, OP 3(d)}	
G.6	<b>Catch-all clause</b> (i.e. covering non-listed biological agents and toxins and dual-use biological equipment and related technology and software suspected of being misused for illegal purposes) <sup>43</sup>	
G.7	<b>Transit</b> control {UNSCR 1540, OP 3(d)}	
G.8	<b>Trans-shipment</b> control {UNSCR 1540, OP 3(d)}	
G.9	<b>Re-export</b> control {UNSCR 1540, OP 3(d)}	
G.10	<b>Export</b> control {UNSCR 1540, OP 3(d)}	
G.11	<b>Import</b> control	
G.12	Control of <b>brokering</b> , trading in, negotiating, or otherwise assisting in the sale of dangerous biological agents and toxins or dual-use biological equipment and related technology and software {UNSCR 1540, OP 3(c)}	
G.13	Other	

<b>H. Enforcement</b>		
<b>National authorities and international cooperation</b>		
H.1	National <b>authority(ies) and/or national focal point</b> for coordinating national implementation of the Convention and communicating with other States Parties and relevant international organisations <sup>44</sup>	
H.2	<b>Other relevant national agencies</b> (e.g. trade licensing body, agency for biological emergency preparedness and response) {UNSCR 1540, OP 3(d)} <sup>45</sup>	
H.3	Measures to prepare and submit <b>Confidence-Building Measures</b> <sup>46</sup>	
H.4	<b>International cooperation and coordination</b> in the event of an incident involving dangerous biological agents and toxins, including cooperation with the World Health Organization <sup>47</sup>	
<b>Inspections</b>		
H.5	Measures enabling inspections in relation to dangerous biological agents and toxins <sup>48</sup>	
<b>Criminal proceedings</b>		
H.6	Measures enabling <b>surveillance</b> (e.g. electronic, physical) of individuals suspected of misusing dangerous biological agents and toxins	
H.7	Measures to facilitate a <b>preliminary enquiry</b> into the facts of an offence in B.11-B.21 { <i>Beijing Convention, Article 9(2)</i> ; <i>SUA 2005, Article 7(2)</i> ; <i>SUA PROT 2005, Article 1(1)</i> }	
H.8	Measures enabling <b>investigations</b> of suspected misuse of dangerous biological agents and toxins	
H.9	<b>Entry/warrant/seizure</b> procedures related to suspected misuse of dangerous biological agents and toxins	
H.10	<b>Evidence:</b> measures to ensure chain of custody and proper collection and sampling techniques; analysts	

H.11	Measures to facilitate taking an offender or alleged offender of an offence in B.11-B.21 into <b>custody</b> or taking other measures to ensure the alleged offender's presence <i>{Beijing Convention, Article 9(1); SUA 2005, Article 7(1); SUA PROT 2005, Article 1(1)}</i>	
H.12	Measures to assist any person in custody with respect to an offence in B.11-B.22 in <b>communicating</b> immediately with the nearest appropriate <b>representative of the State</b> of which that person is a national <i>{Beijing Convention, Article 9(3); SUA 2005 Article 7(3)(a); SUA PROT 2005, Article 1(1); ICSTB, Article 7(3)-(6)}</i> and be visited by a representative of that State <i>{SUA 2005, Article 7(3)(b); SUA PROT 2005, Article 1(1)}</i>	
H.13	Measure to guarantee <b>fair treatment</b> of any person taken into custody, or regarding whom any other measures are taken or proceedings are being carried out with respect to an offence in B.11-B.22 <i>{Beijing Convention, Article 11; SUA 2005, Article 10(2); SUA PROT 2005, Article 1(1); ICSTB, Article 14}</i>	
H.14	Measures enabling <b>prosecutions</b> of offences involving dangerous biological agents and toxins <i>{Beijing Convention, Article 10; SUA 2005, Article 10(1); SUA PROT 2005, Article 1(1); ICSTB, Articles 7(2), 8, 16}</i>	
H.15	Measures enabling <b>legal cooperation</b> and assistance with <b>law enforcement agencies</b> of other States in the event of an incident involving dangerous biological agents and toxins <i>{UNSCR 1540, OP 3(c); Beijing Convention, Articles 12 and 17(1); SUA 2005, Articles 11, 12(1); SUA PROT 2005, Article 1(1); ICSTB, Articles 7(2), 8, 9}</i>	
H.16	A measure to ensure that a request for <b>extradition</b> or for mutual legal assistance based on any of the offences in B.11-B.22 is not refused on the sole ground that it concerns a political offence or an offence connected with a political offence or an offence inspired by political motives <i>{Beijing Convention, Article 13; SUA 2005, Article 11 bis; SUA PROT 2005, Article 1.1; ICSTB, Article 11}</i>	
H.17	Protection of <b>confidential information</b>	
H.18	Measures facilitating <b>training of law enforcement personnel</b> in investigating biological incidents (including use of PPE, containment, biological hazard assessment, etc.) <sup>49</sup>	
H.19	Measures enabling <b>cooperation and coordination</b> with <b>public health officials</b> and other (law enforcement) agencies in the event of an <b>incident</b> involving dangerous biological agents and toxins <i>{UNSCR 1540, OP 3(c)}</i> <sup>50</sup>	
<b>Other enforcement measures</b>		
H.20	Other	

## Notes

1. The survey template also refers to final documents of the **BWC Review Conferences**, which represent declarations by States that help guide interpretation of obligations under the Biological and Toxin Weapons Convention; see final documents of Review Conferences of the States Parties to the Convention on the Production of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction: *Fourth Review Conference Final Document*, 1996, BWC/CONF. IV/9; *Sixth Review Conference Final Document*, 2006, BWC/CONF.VI/6; *Eighth Review Conference Final Document*, 2017, BWC/CONF.VIII/4. In addition, the survey template refers to **non-binding documents** which provide guidance on the implementation of the binding instruments. Such documents include: *Laboratory biosecurity guidance*, WHO, Geneva, 2006, *Laboratory biosafety manual: Fourth edition*, WHO, Geneva 2020, ISO 35001:2019; *Biorisk management for laboratories and other related organisations*, International Organization for Standardization, Geneva, 2019, *Guidance on implementing regulatory requirements for biosafety and biosecurity in biomedical laboratories – a stepwise approach*, WHO, Geneva, 2020.
2. Article 7 of the **Beijing Convention** provides “Nothing in this Convention shall affect the rights, obligations and responsibilities under [...] the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed at London, Moscow and Washington on 10 April 1972, [...] of States Parties to such treaties.”
3. Article 2bis (3) of **SUA 2005** provides “Nothing in this Convention shall affect the rights, obligations and responsibilities under [...] the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, done at Washington, London and Moscow on 10 April 1972 [...] of States Parties to such treaties.”
4. Operative Paragraph (**OP**) 5 of the resolution provides “that none of the obligations set forth in this resolution shall be interpreted so as to conflict with or alter the rights and obligations of States Parties to [...] the Biological and Toxin Weapons Convention [...]”.
5. Also sometimes referred to as **laboratory biosafety**.
6. Also sometimes referred to as **laboratory biosecurity**.
7. This includes “a weapon or device that is designed, or has the capability, to cause death, serious bodily injury or substantial damage through the release, dissemination or impact of toxic chemicals, **biological agents or toxins** or similar substances or radiation or radioactive material”.
8. In this survey, “**transfer**” is understood to mean 1) international transfers (import, export, re-export, transit and transshipment), 2) national transfers (i.e. movement within the state) and 3) transfers of ownership either internationally or nationally. BWC Review Conferences have repeatedly affirmed that “Article III is sufficiently comprehensive to cover any recipient whatsoever at the international, national or sub-national levels” (e.g. *BWC Eighth Review Conference final document Article III*).
9. While the BWC does not explicitly mention the use of biological and toxin weapons, the BWC Review Conferences have confirmed that **under all circumstances the use of bacteriological (biological) and toxin weapons is effectively prohibited by the Convention** (e.g. *BWC Eighth review conference final document Article IV*).
10. The **prohibition to engage in military preparations** to use biological weapons draws from the Chemical Weapons Convention, Article I, which requires CWC States Parties to undertake never under any circumstances to engage in any military preparations to use chemical weapons.
11. The **prohibition to construct, acquire or retain any facility intended for the production of biological weapons** draws from the Chemical Weapons Convention, Article V(5), which provides that no CWC States Parties shall construct any new chemical weapons production facilities or modify any existing facilities for the purpose of chemical weapons production or for any other activity prohibited under this Convention.
12. The **prohibition to provide false or misleading information** to enforcement authorities/agencies and penalties draws from the Chemical Weapons Convention, Verification Annex Part II (46), and Article VII (1).
13. While the BWC does not explicitly require penalties for **legal persons**, the BWC Review Conferences have successively called upon States Parties to adopt legislative, administrative, judicial and other measures, including penal legislation, designed to apply, if constitutionally possible and in conformity with international law, to actions taken anywhere by natural or legal persons possessing their nationality.
14. The **prohibition to encourage** anyone to engage in any activities prohibited in (B) draws from the Chemical Weapons Convention, Article I, which requires CWC States Parties to undertake never under any circumstances to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.
15. The **prohibition to induce** anyone to engage in any activities prohibited in (B) draws from the Chemical Weapons Convention, Article I, which requires CWC States Parties to undertake never under any circumstances to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.
16. The BWC Review Conferences have successively called upon States Parties to adopt legislative, administrative, judicial and other measures, including penal legislation, designed to apply **within their territory, under their jurisdiction** or under their control anywhere and apply, if constitutionally possible and in conformity with international law, to actions taken anywhere by natural or legal persons possessing their nationality.
17. The BWC Review Conferences have successively called upon States Parties to adopt legislative, administrative, judicial and other measures, including penal legislation, designed to apply within their territory, **under their jurisdiction** or under their control anywhere and apply, if constitutionally possible and in conformity with international law, to actions taken anywhere by natural or legal persons possessing **their nationality**.
18. While the BWC does not explicitly require the adoption of specific biosecurity measures, the BWC Review Conferences have successively called upon States Parties to adopt legislative, administrative, judicial and other measures, including penal legislation, designed to ensure **the safety and security of microbial or other biological agents or toxins in laboratories, facilities, and during transportation**, to prevent unauthorised access to and removal of such agents or toxins. The Review Conferences have also noted the value of national implementation measures, as appropriate, in accordance with the constitutional process of each State Party, to implement voluntary management standards on biosafety and biosecurity.
19. Measures to account for include **record and inventory keeping and reporting**. See for example *WHO Laboratory biosafety manual fourth edition* section 8.2 page 85 “A comprehensive programme of accountability is necessary to establish adequate control of at-risk biological agents, and to discourage theft and/or misuse”.
20. See for example *WHO Laboratory biosafety manual fourth edition* section 8.2 page 85.
21. For examples of **storage** measures see *WHO Laboratory biosafety manual fourth edition* section 3.4.2 page 35 and section 5.4 page 63.
22. For guidance on transport of dangerous goods, including infectious substances, please see the **2019 UN Model Regulations on the Transport of Dangerous Goods**. See also the *WHO Laboratory biosafety manual fourth edition* sections 6.1, 6.2, 6.3, 6.4 pages 65-77 and 8.6 page 87.
23. Measures to secure include **controlled access, packaging, labelling, tracing**. See also *WHO Laboratory biosafety manual fourth edition* section 8.5 page 86.
24. See also *WHO Laboratory biosafety manual fourth edition* section 8.5 page 86.
25. See *WHO Laboratory biosafety manual fourth edition* section 3.4.2 page 35 and section 5.4 page 63.

- 26 For guidance on transport of dangerous goods, including infectious substances, please see the **2019 UN Model Regulations on the Transport of Dangerous Goods**. See also *WHO Laboratory biosafety manual fourth edition* sections 6.1, 6.2, 6.3, 6.4 pages 65-77 and 8.6 page 87.
- 27 See *WHO Guidance on implementing regulatory requirements for biosafety and biosecurity in biomedical laboratories - a stepwise approach*, page 37: "the safe decontamination and **disposal** of laboratory waste, being a potential reservoir of pathogens, represents a further important area of activity that should be addressed by any regulatory framework." The *WHO Laboratory biosafety manual fourth edition*, section 8.2 page 85, suggests: "A comprehensive programme of accountability is necessary to establish adequate control of at-risk biological agents, and to discourage theft and/or misuse. Procedures that can be used to achieve this include [...] any inactivation and/or disposal of the materials." See also *WHO Laboratory biosafety manual fourth edition* section 3.5 pages 35-41, section 4.5 page 51 and 5.5 page 63.
- 28 The *BWC Fourth Review Conference final document Article IV(3)* noted the importance of "Legislation regarding the **physical protection of laboratories and facilities** to prevent the unauthorised access to and removal of microbial or other biological agents, or toxins." The *WHO Laboratory biosafety manual fourth edition*, section 8.5 page 86 also suggests: "An effective physical security system incorporates a variety of elements to enhance a facility's capability to deter, detect, assess, delay, respond to, and recover from a security incident".
- 29 See *WHO Laboratory biosafety manual fourth edition* section 8.5, pages 86 and 87.
- 30 *BWC Eighth Review Conference final document Article IV 11(c)* noted the need to "[...] ensure the safety and security of microbial or other biological agents or toxins in laboratories, facilities, and **during transportation**, to prevent unauthorised access to and removal of such agents or toxins." See also *WHO Laboratory biosafety manual fourth edition* sections 6.1, 6.2, 6.3, 6.4 pages 65- 77 and 8.6 page 87.
- 31 The *WHO Laboratory biosafety manual fourth edition* section 8.3, page 85 suggests: "Within the scope of the biosecurity programme, it is important to identify, label and protect sensitive information against unauthorised access". See also for example *ISO standard 35001: 2019*, section 7.5.4 page 18; *WHO Laboratory biosecurity guidance*, section 5.1 page 19.
- 32 The *WHO Laboratory biosafety manual fourth edition* section 8.6 page 87 suggests: "Procedures may include ensuring that biological agents are ordered from legitimate providers and that they reach their intended destination using approved couriers." For guidance on transport of dangerous goods, including infectious substances, please see the **2019 UN Model Regulations on the Transport of Dangerous Goods**.
- 33 See for example *WHO Laboratory biosafety manual fourth edition* section 8.4 page 86.
- 34 The BWC Review Conferences have noted the value of national implementation measures, as appropriate, in accordance with the constitutional process of each State Party, to promote amongst those working in the biological sciences **awareness** of the obligations of States Parties under the Convention, as well as relevant national legislation and guidelines; and to promote the development of **training and education programmes** for those granted access to biological agents and toxins relevant to the Convention and for those with the knowledge or capacity to modify such agents and toxins. See also *WHO Laboratory biosecurity guidance*, section 7 page 29 and *WHO Laboratory biosafety manual fourth edition* section 8.4 page 86.
- 35 The BWC Review Conferences have noted the value of national implementation measures, as appropriate, in accordance with the constitutional process of each State Party, to encourage the promotion of a **culture of responsibility** amongst relevant national professionals and the voluntary development, adoption and promulgation of codes of conduct. See also *WHO Laboratory biosecurity guidance*, sections 2 page 7 and 5.3 pages 20-21 and *WHO Laboratory biosafety manual fourth edition* section 7.1 page 79 and section 8.8 page 88.
- 36 See *WHO Laboratory biosecurity guidance*, section 6.3 page 26: "**Access controls** are used to limit access to restricted areas to individuals who have proper authorisation and to keep track of traffic in and out of these areas". See also *WHO Laboratory biosafety manual fourth edition* section 8.4 page 86.
- 37 See *WHO Laboratory biosafety manual fourth edition* section 8.1 page 84.
- 38 See for example *WHO Laboratory biosafety manual fourth edition* section 8.8 page 88.
- 39 The Eighth BWC Review Conference has noted the value of national implementation measures, as appropriate, in accordance with the constitutional process of each State Party, to "strengthen methods and capacities for **surveillance and detection of outbreaks of disease** at the national, regional and international levels, noting that the **International Health Regulations (2005)** are important for building capacity to prevent, protect against, control and respond to the international spread of disease". The Conference also called upon States Parties to "continue establishing and/or improving national and regional capabilities to survey, detect, diagnose and combat **infectious diseases** as well as other possible biological threats and integrate these efforts into national and/or regional emergency and disaster management plans". See IHR 2005, Article 5(i) and Annex 1; VERTIC Survey Template of National Implementation Measures for the International Health Regulations.
- 40 See *WHO Laboratory biosecurity guidance*, section 2 page 8 and *WHO Laboratory biosafety manual fourth edition* section 7.7.1 pages 81 and 82.
- 41 See *WHO Laboratory biosecurity guidance*, section 8.7 page 80 and *WHO Laboratory biosafety manual fourth edition* section 3.8 pages 45-47 and section 8.7 pages 87 and 88.
- 42 The BWC Review Conferences have successively called upon for appropriate measures, including effective national export controls, by all States Parties to implement Article III of the Convention, in order to ensure that direct and indirect **transfers** relevant to the Convention, to any recipient whatsoever, are authorised only when the intended use is for purposes not prohibited under the Convention.
- 43 See UNSCR 1540, OP 3(d) and UNSCR 1540 matrix template section VII. 11.
- 44 While the BWC does not explicitly require States Parties to designate a national authority and/or a national focal point, the BWC Sixth Review Conference and subsequent review conferences encouraged States Parties to designate a **national focal point** for coordinating national implementation of the Convention and communicating with other States Parties and relevant international organisations.
- 45 See *WHO Laboratory biosafety manual fourth edition* section 9 pages 91-94 for guidance on national biosafety oversight.
- 46 The BWC Second Review Conference agreed to the exchange of **Confidence-Building Measures (CBMs)** "in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions and in order to improve international cooperation in the field of peaceful biological activities". The CBMs have been continually expanded and improved. They consist of **six forms** that are to be submitted to the BWC Implementation Support Unit in the Geneva Branch of United Nations Office for Disarmament Affairs no later than 15 April each year.
- 47 See for example the **International Health Regulations 2005**, Articles 6, 7 and 8 and VERTIC Survey Template of National Implementation Measures for the International Health Regulations. International cooperation may also include cooperation with the **UN Secretary-General's Mechanism for investigation of alleged use of chemical and biological or toxin weapons** (see UN General Assembly resolution 42/37 C and UNSCR 620 (1988)). The BWC Eighth Review Conference reaffirmed "the undertaking of each State Party to cooperate in carrying out any investigations which the Security Council initiates".
- 48 National (or international) **inspections** are not explicitly foreseen in the BWC. This measure draws from the Chemical Weapons Convention, Article VI (9). For guidance, see *WHO Laboratory biosafety manual fourth edition* section 7.7.2 page 82.
- 49 See *WHO Laboratory biosecurity guidance*, section 6.2 page 25.
- 50 See *WHO Laboratory biosafety manual fourth edition* section 5.8 page 64.

# Overview

## State name:

Survey of National Implementation Measures for the 1972 Biological and Toxin Weapons Convention and biological weapons-related provisions of relevant international instruments

Date of BWC survey	
Laws and regulations included in the survey	
Laws and regulations necessary to complete the survey	
<b>Summary of survey and recommendations</b>	
A. Definitions	
B. Offences and penalties	
C. Participation in offences in (B)	
D. Jurisdiction over offences in (B) and (C)	
E. Control lists	
F. Control measures to account for, secure and physically protect dangerous biological agents and toxins	
G. Measures to control transfers of dangerous biological agents, toxins, dual-use biological equipment and related technology and software	
H. Enforcement	
<b>Other recommendations</b>	



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