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## Executive Summary

- National implementation of the norms against biological weapons through the criminalization of violating these prohibitions in domestic law is important to ensure the effectiveness and applicability of the international norms. Without this implementation, the prohibitions against biological weapons are not binding on individuals and non-state organizations. In order to ensure national implementation international instruments have included provisions obligating states to develop effective national measures. These include Art. IV BWC, obligating states to develop national measures prohibiting the development, production, stockpiling, acquisition or retention of biological weapons, and United National Security Council Resolution 1540 requiring appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes.
- While certainly not all states have implemented all legislation that they are obligated to implement, many have developed or maintained legislation that they argue criminalized the prohibited activities. This has been done in divergent ways, but some common trends can be identified. Legislation criminalizing the acts referenced in Art. IV BWC often seeks to implement the whole of the BWC through transposing the text of the treaty into national legislation and expanding this with the necessary penal provisions, or alternatively through explicitly prohibiting the relevant activities in other broader forms of legislation.
- United National Security Council Resolution 1540 requires states to develop legislation specifically addressing the issue of terrorism and addresses biological weapons only from this context. Due to this many pieces of legislation seeking to implement this only address activities related to biological weapons when committed with terrorist intent. This is not necessarily an issue for those states that already have legislation criminalizing the activities referenced in Art. IV BWC. However, for those states that have not, implementing only Resolution 1540 is insufficient to address the full scope of biological weapons.
- While there is not an international obligation for states to have legislation criminalizing the use of biological weapons in a general sense, the majority of states do have provisions in their legislation that have been argued to prohibit the use of biological weapons. However, many of these provisions have not been developed to specifically deal with biological weapons and therefore will be unable to address the full scope of biological weapons and should be updated to provide better protection against them.

## 1 Introduction

The issue of national implementation of the international norms against biological weapons has been a consistent concern. It has been a consistent topic of discussion at the Review Conferences (RevCon) of the Biological Weapons Convention (BWC) and part of the focus of the 1540 Committee. There is a reason for such concern, since without adequate implementation of the international norms through national legislation, these will not be effective in reducing the threat of biological weapons. Although this concern exists, it is difficult to assess the degree of implementation due to a lack of comprehensive data collection and analysis. Much of the data relies on the reports some states submit in the context of the BWC confidence-building measures. However, these have not been consistently submitted by all states parties, or on the reports submitted to the 1540 Committee, which often only cover those measures related to terrorism. This gap in the data has made it difficult to identify common trends and best practices.

In response to this lack of data, a nearly comprehensive collection of national legislation criminalizing activities related to biological weapons has been conducted.<sup>1</sup> This working paper will, on the basis of this research, present some of the most common trends in implementing legislation and from this provide some best practices and approaches that can be used by states as a guideline to improve their legal framework on biological weapons.

To understand the importance of national implementation, the working paper will first discuss the underlying rationale that implementation is necessary for the effectiveness of the international prohibitions against biological weapons. The different international prohibitions as well as the obligations in international agreements to implement national measures will then be presented. The working paper will subsequently present the ways that states have chosen to criminalize the different prohibitions in their national legislation and due to the broad divergence, that exists will focus on the most common approaches that can be identified. On the basis of these common trends and the existing international obligations to implement national measures, it will then be possible to provide some guidance on what can be done to improve the level of national implementation.

## 2 The Need for Implementation of International Norms

As stated, national implementation has been a point of concern and as will be seen different international instruments establish an obligation for states to develop national measures. However, before turning to these obligations and the actual implementation, the importance of implementation needs to be recognized. The existence of a rule of international law in itself does not mean that this rule will be effective, in many instances the actual effectiveness is reliant on the incorporation of this rule within the national legal systems.

This need for national implementation to ensure effectiveness stems largely from the nature of international law. Public international law has been developed to govern the relations between states and therefore has traditionally only been binding on states. While there are exceptions to this, this has remained much of the core of public international law to this day.<sup>2</sup> As international law and therefore treaties such as the BWC are only binding on states, this means that for these to have an effect on individuals the rules in these agreements need to be implemented in the national legal system. Since the biological weapons threat does not only stem from state actors it is

<sup>1</sup> It was only in a few states that the relevant legislation could not be identified or accessed: Afghanistan, Bhutan, Lebanon and Saint Vincent and the Grenadines. This does not indicate either the existence or non-existence of relevant legislation.

<sup>2</sup> There are some exceptions to this concept, mainly with regard to specific rules of international criminal law and certain *ius cogens* norms, such as the prohibition of piracy, as well as certain aspects of human rights. Anne-Marie Slaughter & William W. Burke-White, 'The Future of International law if Domestic (or, The European Way of Law)' (2006) 47(2) *Harvard International Law Journal* 327; Pierre-Marie Dupuy, *International Law and Domestic (Municipal) Law* (Max Planck Encyclopedia of Public International Law 2011) par. 44.

therefore necessary for implementing legislation to exist to ensure that the prohibitions against biological weapons are also binding on non-state actors.

The way in which states incorporate international law within their national legal system is not a topic of international law but remains the competence of the states themselves and subsequently, there is not a singular approach.<sup>3</sup> There have traditionally been two broad approaches, the exact way in which these have been interpreted diverges significantly but broadly speaking states are either 'monist' or 'dualist'. In 'monist' states it is viewed that international law and national law are part of a singular system and therefore international law becomes a part of the overall legal system in a state once it has been ratified.<sup>4</sup> In states that take a 'dualist' approach, international law and national law are seen as two separate systems of law and that for international law to be incorporated into the national legal system it needs to be transposed into national law.<sup>5</sup> Seeing these two broad approaches to international law would make it appear as though implementing legislation is only necessary in 'dualist' states. However, this is not the case because although the international legal instrument might become a part of the legal system in 'monist' states, this does not mean that it is directly applicable and only international law that can be considered as being directly applicable or 'self-executing' can have direct effect. The exact interpretation of what is and is not 'self-executing' is governed by domestic law and therefore differs from state to state.<sup>6</sup> However one of the main criteria that is commonly found is whether or not the instrument of international law is sufficiently clear and precise as to be capable of being directly applied without further implementation being necessary.<sup>7</sup> When applying this to the main international legal prohibitions on biological weapons it becomes clear relatively quickly that these would generally not be able to criminalize acts without implementing legislation, as these prohibitions do not incorporate the necessary criminal law aspects such as personal responsibility or penal sanctions. Consequently, implementing legislation is necessary in all states, regardless of whether they are 'monist' or 'dualist', in order to achieve criminalization, as these obligations are not self-executing in this regard.<sup>8</sup>

### **3 The International Norms and the Obligation to Develop Domestic Legislation**

As the importance of implementation for the effectiveness of international law has become more recognized, obligations for states to implement international legal instruments have become incorporated in these instruments and it is necessary to consider how this has been the case in the context of the international legal instruments addressing biological weapons.

The international legal framework prohibiting biological weapons includes the prohibition of use that was adopted in the 1925 Geneva Gas Protocol and the prohibition to develop, produce, stockpile or otherwise acquire or retain biological weapons that was adopted with the BWC. These general prohibitions are commonly regarded as customary international law and are therefore binding on all states.<sup>9</sup> However, as previously noted this only binds the states themselves and not individuals or non-state groups and consequently, requires states to adopt legislation implementing these prohibitions in their national legal system.

<sup>3</sup> Dupuy (n 2) par. 61.

<sup>4</sup> Pierre-Hugues Verdier & Mila Versteeg, 'International Law in National Legal Systems: An Empirical Investigation' (2015) 109 *American Journal of International Law* 514, 516.

<sup>5</sup> Ibid.

<sup>6</sup> Karen Kaiser, *Treaties, Direct Applicability* (Max Planck Encyclopedia of Public International Law 2013) par. 6.

<sup>7</sup> Kaiser (n 6); Verdier & Versteeg (n 4) 522-525.

<sup>8</sup> Dupuy (n 2) par. 53.

<sup>9</sup> William Boothby, *Weapons, Prohibited* (Max Planck Encyclopedia of Public International Law 2015) par. 33

This approach was not yet followed at the time the 1925 Geneva Gas Protocol was adopted and therefore there is no corresponding provision within this Protocol. The first arms control treaty that did include such an obligation was the BWC, which in art. IV states:

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, within the territory of such State, under its jurisdiction or under its control anywhere.

Although this obliges states parties to take necessary measures, it does not expand on what such measures should be. It has been through the RevCon that states have interpreted this article as requiring certain specific types of measure, which includes a need for states parties to provide penal provisions for violations of the prohibition in the BWC.<sup>10</sup> The obligation to provide penal provisions only concerns the acts mentioned in Article IV BWC and therefore does not include an obligation to criminalize the use of biological weapons, for while the RevCon has approached Art. I BWC as a comprehensive prohibition, which includes use, it has not done similarly for Art. IV BWC.<sup>11</sup> The BWC does not have a compliance or enforcement mechanism that can ensure that states parties actually implement the necessary national measures and the only information provided concerning national measures is provided in reports submitted as confidence-building measures. However, many states parties do not participate in these.

Article IV BWC requires national measures to address the development, production, stockpiling, acquisition or retention of biological weapons in any context. Beyond the BWC there are also two other obligations for states to develop national measures for specific contexts. The first of these is United Nations Security Council Resolution 1540. Resolution 1540 was adopted in response to the threat of nuclear, chemical and biological proliferation to terrorist organisations and consequently focuses specifically on this context. As such one of the main obligations in the resolutions obliges 'that all States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes.'<sup>12</sup> This focus on terrorist purposes narrows the national measures taken, since it only requires these measures to be terrorism-focused as will be shown later in this working paper. Even though there is this restriction, Resolution 1540 is very significant, since as a decision of the Security Council, this obligation is binding on all member states of the United Nations.<sup>13</sup> Consequently, all member states of the United Nations are required to adopt legal provisions criminalizing these activities.

The other contextual prohibition that exists in international law is the recently adopted amendment for the Rome Statute introducing art. 8(2)(b)(xxvii) and art. 8(2)(e)(xvi) ICC Statute:

Employing weapons, which use microbial or other biological agents, or toxins, whatever their origin or method of production;

These new paragraphs classify the use of biological weapons as a war crime in both international and non-international armed conflicts. As such this provision only addresses the use of biological weapons in the context of an armed conflict and not generally. With regard to individuals of states

<sup>10</sup> 'Final Document - Sixth BWC Review Conference 2006' (BWC/CONF.VI/6).

<sup>11</sup> Barry de Vries, 'Recent Developments in the National Implementation of Biological Weapons Convention: What Happened Since Resolution 1540?' (2023)28(3) *Journal of Conflict and Security Law* 569, 574.

<sup>12</sup> UNSC Resolution 1540, S/RES/1540 (2004).

<sup>13</sup> Art. 25 UN Charter.

that have ratified this amendment, this amendment does have a direct effect in that they can potentially be prosecuted at the International Criminal Court. However, many states also view ratifying this amendment as obligating them to incorporate a similar provision in their national legal system. Although the Rome Statute does not contain an explicit obligation to implement its provision, there is an indirect imperative to do so. The jurisdiction of the ICC is based on the concept of complementarity, which means that the ICC cannot exercise its jurisdiction except in those cases where a state party does not investigate or prosecute. A state is only able to investigate or prosecute if they have adequate domestic legislation allowing for prosecution and consequently, penal provisions need to exist. This has been interpreted by many states to require the implementation of the Rome Statute offences in their national legislation. At the moment only 15 states have ratified this amendment, however, more states will likely do so in the near future.

#### **4 Common Trends in National Implementation**

This shows that there are multiple obligations for states to implement national measures, including criminal legislation. The major outlier in this regard is that there is no specific obligation for states to criminalize the use of biological weapons in a general manner. The existing obligations are all broadly described and focus on the specific types of acts that should be criminalized. They do not prescribe a specific form or content of the provisions as this is left to the states themselves to allow them to develop these national measures in a way that is effective and fits within their legal culture. Consequently, states have sought to address the criminalization of acts related to biological weapons in different ways. This makes it prudent to consider how states have approached these issues to consider the extent to which common approaches can effectively address biological weapons. On top of that it is important to discuss the existence of national measures, as this evidences both state practice and *opinio iuris*, the notion that a state believes it is the law, and thereby gives increased credence to the customary legal status of the prohibition against biological weapons.

#### **5 Article IV BWC**

The majority of states are party to the BWC and therefore bound by Art. IV to implement national measures to prohibit and prevent the development, production, stockpiling, acquisition or retention of biological weapons, which includes the criminalization of such acts. While certainly not all states have implemented such measures, many have. The exact approach differs between states oftentimes significantly, however, there are some approaches that are commonly seen.

The first common approach is for states to adopt specific legislation implementing the BWC as a whole, either as part of their ratification process or subsequent to their ratification of the BWC. Belgium is an example where this was done in conjunction with the ratification of the BWC. Belgium adopted legislation which incorporated the whole of the BWC within their national legal framework and expanded upon the text of the BWC by incorporating a specific provision criminalizing the acts that are explicitly mentioned as being prohibited in Art. I BWC.<sup>14</sup> Not many states have gone as far as Belgium and made the entire text of the BWC part of their national legislation. More took the approach to incorporate the BWC in a way which translated and reformulated the BWC in a way to make it fit more with their legal system.

It is common that such legislation also includes specific penal provisions in case of violations.<sup>15</sup> An example of such a provision can be found in the Biological Weapons Act of Antigua and Barbuda:

<sup>14</sup> Art. 2 Wet houdende goedkeuring van het Verdrag tot verbod van de ontwikkeling, de productie en de aanleg van voorraden van bacteriologische (biologische) en toxinewapens en inzake de vernietiging van deze wapens, opgemaakt te Londen, Moskou en Washington op 10 april 1972, 06 July 1979.

<sup>15</sup> See for example: Czech Republic (section 21, 21a, 21b, 21c Zákon o některých opatřeních souvisejících se zákazem bakteriologických (biologických) a toxinových zbraní a o změně živnostenského zákona 28.06.2002); Japan (art. 10 Law

- 3.** Any person who develops, produces, stockpiles, acquires or retains  
**(a)** any biological agent or toxin of a type and in quantity that has no justification for prophylactic, protective or other peaceful purpose; or  
**(b)** any weapon, equipment or means of delivery designed to use biological agents or toxins for hostile purposes or in armed conflict, shall be guilty of an offence and shall be liable on conviction on indictment to a fine of fifteen thousand dollars and to imprisonment for life.<sup>16</sup>

This type of legislation generally closely resembles the BWC and therefore has the same definitions as well as scope as the treaty itself. This ensures that the provisions criminalizing the development, production, stockpiling, acquisition or retention of biological weapons fulfil the requirements of Art. IV BWC. Several other states have not necessarily reformulated the BWC but rather incorporated the implementation, including criminalization, of the BWC in broader legislation seeking to either address both the BWC and the Chemical Weapons Convention,<sup>17</sup> or weapons of mass destruction in general.<sup>18</sup> While these laws are generally broader, they still follow the same definition and scope with regard to biological weapons.

The other commonly seen approach is not to incorporate this in implementing legislation but rather through the inclusion of a provision criminalizing the development, production, stockpiling, acquisition and retention within other forms of legislation. This is often done through a provision in a state's criminal code on biological weapons,<sup>19</sup> or a broader provision on weapons of mass destruction.<sup>20</sup> An example of the former can be seen in Togo's criminal code:

**Art. 562 :** Est punie d'une peine de dix (10) à vingt (20) ans de réclusion criminelle et d'une amende de cinq millions (5.000.000) a cent millions (100.000.000) de francs CFA, toute personne qui se livre à la mise au point, la fabrication, le stockage, l'acquisition ou la conservation des:

on Implementing the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction and the Other Conventions, 8 June 1982 revised 16 December 2001); Trinidad and Tobago (Section 10 Act No. 4 of 2012 Act to give effect to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, Act No. 7948, 28 Apr. 2006); Ireland (Section 2 Biological Weapons Act 2011, No. 13 of 2011); Slovakia (Art. 24 218 ACT of 28 March 2007 on the Prohibition of Biological Weapons and on Amendments and Supplements to Certain Acts); Serbia (Art. 8-9 Law on the ban on the development, production and stockpiling of bacteriological (biological) and toxic weapons and on their destruction "Official Gazette of Serbian Republic", number 87 of 21 November, 2011); Mauritius (Art. 5, 7 The Biological and Toxin Weapons Convention Act 2004); Botswana (Art. 5 Biological and Roxin Weapons (Prohibition) Act 2018, No. 17 of 2018).

<sup>16</sup> Section 3 The Biological Weapons Act, 3 December 1975.

<sup>17</sup> See for example: Republic of Korea (Art. 4-2, 25 Act on the Prohibition of Chemical and Biological Weapons and the Control of the Production, Export, and Import of Specific Chemicals and Biological Agents); Chile (Art. 34 Ley 21250 implementa la convención sobre la prohibición del desarrollo, la producción, el almacenamiento y el empleo de armas químicas y sobre su destrucción y la convención sobre la prohibición del desarrollo, la producción y el almacenamiento de armas bacteriológicas (biológicas) y tóxicas y sobre su destrucción, 7 August 2020).

<sup>18</sup> Iraq (Art. 13 law of National Monitoring Authority on Non-Proliferation of Nuclear, Chemical and Biological Weapons, No. 48 of 2012); India (Section 8, 14 The Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act, Act No. 21 of 2005); Cambodia (Art. 7 Law on the Prohibition of Chemical, Nuclear, Biological and Radiological Weapons, 3 December 2009).

<sup>19</sup> See for example: Spain (Art. 566 Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal, Texto Consolidado 13 de julio de 2022, Boletín Oficial del Estado); Turkmenistan (Art. 167(3) Jenaýat Kodeksi); the Kyrgyz Republic (Art. 406 Criminal Code of the Kyrgyz Republic, 28 October 2021, no. 127); Tajikistan (Article 195 Criminal Code of the Republic of Tajikistan, as amended by Law of the Republic of Tajikistan dated 17.05.2004 and Law No. 35, dated 13.06.2013 No. 966); Albania (Art. 282c ligjin nr. 135/2015, datë 5.12.2015); Bolivia (Art. 141bis Bolivia, Código Penal, decreto ley 10426 de 23 agosto de 1972, as amended).

<sup>20</sup> Examples include: Russia (Art. 355 The Criminal Code of the Russian Federation No. 63-FZ of June 1996); Georgia (Art. 406 Criminal Code, LHG, 41(48), 13/08/1999).



- 1)** agents microbiologiques ou autres agents biologiques, ainsi que des toxines quels qu'en soient l'origine ou le mode de production, de types et en quantités qui ne sont pas destinés à des fins prophylactiques, de protection ou à d'autres fins pacifiques;
- 2)** armes, équipements ou vecteurs destinés à l'emploi de tels agents ou toxines à des fins hostiles ou dans des conflits armés.<sup>21</sup>

Togo is somewhat uncommon in the fact that this provision mirrors the definition of Art. I BWC when in most instances where these types of provisions are included in the criminal code the term biological weapons is left open. Other legislation where such provisions can be included is the legislation regulating arms and ammunition.<sup>22</sup> When such provisions are included within the legislation on arms and ammunition it is more common that this legislation also includes a definition of biological weapons.

However, while this shows that there are ways in which states have implemented the BWC within their national legal system it must be kept in mind that in many states there is no such implementation or at times there might be implementation in general but still a lack of criminalization.

## 6 Resolution 1540

United Nations Security Council Resolution 1540 requires states to adopt legislation criminalizing specific acts when committed in a terrorism context, this includes acts related to biological weapons. As such states that have implemented such provisions for biological weapons have generally done so by criminalizing it together with other acts that could be considered terrorism within the same provision. This has generally been done by either adopting specific anti-terrorism legislation or including anti-terrorism provisions in the existing criminal code. These provisions incorporate these acts within the definition of terrorist activities or separately criminalizing them when they are committed within a terrorist context. This can be exemplified by the Lesotho Penal Code:

96. Any person who does or threatens or omits to do anything that is reasonably necessary to prevent an act which -
- (a) may seriously damage a country or an international organization;
  - (b) is intended or can reasonably be regarded as having been intended to-
    - (i) seriously intimidate a population;
    - (ii) unduly compel the Government or an international organization to perform or abstain from performing any act;
    - (iii) seriously destabilise or destroy the fundamental political, constitutional, economic or social structures of a country or an international organization; or
    - (iv) otherwise influence the government, or international organisation; and
  - (c) involves or causes - (...)
    - (vi)** the manufacture, possession, acquisition, transport, supply or use of weapons, explosives or of nuclear, biological or chemical weapons, as well as research into, and development of biological and chemical weapons;<sup>23</sup>

<sup>21</sup> Art. 562 LOI N° 2015-10 du 24 novembre 2015 portant nouveau code penal.

<sup>22</sup> Guatemala (Art. 112, 120 Ley de Armas y Municiones, Decreto Número 15-2009; Denmark (Par. 5 Bekendtgørelse af lov om våben og eksplosivstoffer m.v. LBK nr 1736 af 26/08/2021); Cabo Verde (Art. 90 Lei de Armas e Munições Lei No. 31/VIII/2013); Cameroon (Art. 15 Loi No. 2016/015 du 14 Dec. 2016 Portant Regime General des Armes et Munitions au Cameroun).

<sup>23</sup> Art. 96(c)(vi) Penal Code Act 2010.

Although the exact approach diverges among states, what is common in most states is that this terrorist context relies on the existence of specific terrorist intent.<sup>24</sup> The exact way the definition of terrorist intent is phrased also differs between different states, however a good example of these provisions can be found in the previously quoted Lesotho Penal Code as well as the Samoan Counter-Terrorism Act, which states in section 3(1)(ix):

- (ix)** is intended, or, by its nature and context, is reasonably to be regarded as being intended:  
**(a)** to intimidate the public or a section of the public; or  
**(b)** to compel a Government or an international organisation to do, or refrain from doing, any act;<sup>25</sup>

Two criteria commonly form the basis of terrorist intent, namely 1) the intent to intimidate and 2) the intent to compel, either entirely<sup>26</sup> or in some cases the specific intent can be broader, as can be exemplified by the provision from the Lesotho Penal Code.<sup>27</sup> This need for a specific intent makes it only apply to a limited set of biological weapons-related acts and such legislation on its own would not be able to address the threat of biological weapons comprehensively.

Since Resolution 1540 was adopted in 2004 many states have passed legislation addressing terrorism-related offences. This has been the case for states that already had adopted legislation implementing the BWC as well as those that have not done so. Such new legislation can generally be considered as separate and complementary legislation to address the specific issue of terrorism while not diminishing the existing general prohibitions. However, for many states that have adopted such legislation, it currently is the only legislation capable of addressing proliferation-related acts, such as the transfer, development or acquisition of biological weapons.<sup>28</sup> While it is good that these states now at least have legislation in place addressing acts related to biological weapons within the specific terrorist context, this cannot be applied to any other context and thus does not address the whole scope.

<sup>24</sup> Examples include: Vanuatu (Section 10 Counter Terrorism and Transnational Organised Crime Act 29 of 2005, Laws of the Republic of Vanuatu Consolidated Edition 2006 Chapter 313); Samoa (Section 16 Act to Repeal the Prevention and Suppression of Terrorism Act 2002 and to implement United Nations Security Council Resolutions and Conventions dealing with terrorism, 7 April 2014); Malta (Art. 328A(2)(f) Criminal Code (Amendment) Act, Act No. VI of 06 June 2005); Benin (Art. 162 Loi No. 2018-16 portant code pénal, 4 June 2018); Eswatini (Art. 13, 16 Act to provide for the detection, suppression and deterrence of terrorism and for punishment of all forms of terrorist acts and persons engaged in terrorist acts in compliance with the Conventions and Resolutions of the United Nations, Bill No. 5 of 2008); Romania (art. 32(3)(a), 33(1)(a) LEGE nr. 535 din 25 noiembrie 2004 privind prevenirea și combaterea terorismului); Bahrain (art. 2 law no. 58 of 2006 with respect to protection of the community against terrorist acts); Nigeria (Section 1(2)(c)(iv) Terrorism (Prevention) Act, Act. No. 10 2011); Ghana (Section 13 Anti-Terrorism Act 2008, 10 October 2008); Saudi Arabia (art. 36, 37, 39 Law of Combating Crimes of Terrorism and its Financing, Royal Decree No. M/21 1 November 2017); Seychelles (art. 12 Prevention of Terrorism Act 2004, Act 7 of 2004).

<sup>25</sup> Section 3(1)(ix) Act to Repeal the Prevention and Suppression of Terrorism Act 2002 and to implement United Nations Security Council Resolutions and Conventions dealing with terrorism, 7 April 2014.

<sup>26</sup> Art. 328A(1) Malta Criminal Code (Amendment) Act, Act No. VI of 06 June 2005; Art. 161, République du Benin, Loi No. 2018-16 portant code pénal, 4 June 2018. Section 2 Eswatini, Act to provide for the detection, suppression and deterrence of terrorism and for punishment of all forms of terrorist acts and persons engaged in terrorist acts in compliance with the Conventions and Resolutions of the United Nations, Bill No. 5 of 2008. Art. 1 Romania, LEGE nr. 535 din 25 noiembrie 2004 privind prevenirea și combaterea terorismului

<sup>27</sup> Other examples include: Mauritania (Art. 1(3) Loi n°2010-035 du 21 Juillet 2010 Abrogeant et Remplaçant la loi n°2005-047 du 26 Juillet 2005 relative à la Lutte contre le Terrorisme); Nigeria (Art. 3 Art. 1(2)(b)(iii) Terrorism (Prevention) Act, Act. No. 10 2011); Bahrain (Art. 1 Law no. 58 of 2006 with respect to protection of the community against terrorist acts).

<sup>28</sup> De Vries (n 11) 589.

## 7 The Amendment to the Rome Statute

The amendment to the Rome Statute prohibiting the use of biological weapons in armed conflicts has currently only been ratified by 15 states, although it is likely that more states will ratify the amendment. As a consequence, there are still states in the process of ratification and this potentially includes altering their national legislation. However, for those states that have ratified the amendment thus far, there was little direct influence of ratification on the national legislation. This is largely due to the fact that a majority of ratifying states already prohibited the use of biological weapons during armed conflicts.<sup>29</sup> Only in some states did this actually lead to the adoption of new provisions in response to the amendment. This was generally done due to the belief of these states that ratification of the amendment obligated them to adopt such provisions.<sup>30</sup> Only two of the states that have ratified the amendment had no relevant legislation in place and did not alter this even after the ratification of the amendment.<sup>31</sup> While most states already had relevant legislation in place, the fact that most of the other states have adopted legislation in conjunction with ratification shows the importance of the inclusion of biological weapons in the Rome Statute as a motivator for states to take action on this issue. It is likely that a general prohibition on the use of biological weapons would suffice even though a majority of ratifying states opted to implement specific war crimes provisions.

## 8 The Prohibition of Use

Having addressed the way states have implemented the obligation to criminalize acts related to biological weapons, it is necessary to turn to the one act that does not have an international obligation for national criminalization, the general use of biological weapons. By considering the national approaches to biological weapons use it can be determined to what extent there is a global taboo on the use of biological weapons. It is also important to consider the fact that in the case of biological weapons use the effects will likely not be confined to a single state and to ensure protection against biological weapons it is necessary that there is a comprehensive framework against their use, especially in light of the lack of an international obligation to implement national measures.

The first thing that becomes clear when considering the approach taken by states is that in most states the use of biological weapons is addressed separately from the acts in Art. IV BWC, a clear distinction is generally made between provisions on proliferation-related activities and use.<sup>32</sup> The fact that these two types of acts are separated also makes it possible for more states to have provisions that can be used to address use rather than proliferation.

An approach that can commonly be found is the inclusion of a provision prohibiting the use of biological weapons, either explicitly or implicitly. An example of the former is art. 680 of the Rwandan Penal Code:

<sup>29</sup> Czech Republic (Par. 411 Zákonník trestní zákoník); Slovakia (Par. 426(1)(a) Trestný Zákon); Norway (Paragraph 107 Lov om Straff (Straffeloven)); Uruguay (Modificación Al Código Penal. Estatuto De Roma De La Corte Penal Internacional. Genocidio. Crímenes De Lesa Humanidad. Crímenes De Guerra); Switzerland (Bundesgesetz über die Änderung von Bundesgesetzen zur Umsetzung des Römer Statuts des Internationalen Strafgerichtshofs); Sweden (Lag (2014:406) om straff för vissa internationella brott).

<sup>30</sup> Netherlands (Wet Internationale Misdrijven); Luxembourg (Loi du 29 mars 2019 portant approbation des amendements à l'article 8 du Statut de Rome de la Cour pénale internationale adoptés le 14 décembre 2017 par l'Assemblée des États Parties au Statut de Rome de la Cour pénale internationale, lors de sa 12<sup>ème</sup> séance plénière, à New York, et portant modification de l'article 136quater du Code pénal); New Zealand (section 4(2) of the International Crimes and International Criminal Court Amendment Act 2020 (2020 No 39)).

<sup>31</sup> Mexico and Romania.

<sup>32</sup> Examples of these include: Armenia, Belgium, Benin, Cameroon, Canada, Dominican Republic, Luxembourg, Malta, Monaco the Netherlands, New Zealand, Russia, the United Kingdom, the United States.

Any person who uses nuclear, chemical, biological and toxic weapons shall be liable to a term of imprisonment of twenty (20) years to twenty-five (25) years.<sup>33</sup>

This is a relatively common approach that clearly stipulates the prohibition.<sup>34</sup> Many states however do not include this prohibition by explicit reference to biological weapons but prohibit the use of weapons prohibited by international law<sup>35</sup> or by a treaty to which the State is party.<sup>36</sup> While this would generally be understood to criminalize the use of biological weapons, it is reliant on outside interpretation. This could potentially be an issue, as it would need to be determined and accepted by national courts that the use of biological weapons is prohibited by customary international law or on the basis of a treaty to which the state is party. This would normally not be difficult, however, it does create a situation where it is reliant on the interpretation of the court, which makes the explicit reference to biological weapons preferred over such a general provision. This issue can be exemplified by the case of Belarus, which is not party to any treaty explicitly prohibiting the use of biological weapons, as it is only party to the BWC and not to the 1925 Geneva Gas Protocol.

Even though a majority of states have provisions that can address the use of biological weapons, this does not mean that they were explicitly developed for biological weapons and therefore in many instances might prove insufficient to address all uses of biological weapons. The most common way states argue that they address biological weapons without a specific provision on them is through penal provisions on the intentional or negligent spreading of disease. Such provisions can be seen in the criminal code of many states and are generally not really intended as such to address biological weapons specifically. These provisions are often older provisions that have long been included in a state's criminal code. As they are not designed to specifically address biological weapons, they are generally insufficient to cover all forms of biological weapons since they are in most cases restricted to specific types of targets. In most instances there are only provisions addressing the spreading of disease to human beings<sup>37</sup> or in some cases there is also a separate provision addressing the spreading of disease to animals, at times specifically focused on livestock.<sup>38</sup> An example of a state that has provisions for both humans and animals is Kenya, which states in its criminal code:

**186** Any person who unlawfully or negligently does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, is guilty of a misdemeanour.

<sup>33</sup> Art. 680 Rwanda Organic Law Instituting the Penal Code No. 01/2012/OL.

<sup>34</sup> Other examples include: Andorra (Article 266, Llei 9/2005, del 21 de febrer qualificada del Codi Penal) Tajikistan (Art. 399 Criminal Code of the Republic of Tajikistan, as amended) Colombia (Art. 367 Código Penal Colombiano, Ley 599 de 25 juli 2000, as amended), Norway (Art. 142 Norway Lov om straff, Lov-2005-20-28 as amended) San Marino (Art. 337 quater san Marino, Legge 25 febbraio 1974 nr 17 Emanazione del Nuovo Codice Penale as amended) Uzbekistan (Art. 255<sup>1</sup> Uzbekistan Jinoyat Kodeksi as amended) Panama (Art. 7 Panama Ley 14 de 30 de octubre de 1990 Por la cual se desarrolla el Artículo 307 de la Constitución Política, se modifican algunos Artículos del Código Fiscal y se dictan otras disposiciones).

<sup>35</sup> Such as Bosnia and Herzegovina (Art. 193a Krivični Zakon Federacije Bosne i Hercegovine) Poland (Art. 120 Poland Kodeks karny, 6 czerwca 1997 as amended).

<sup>36</sup> Such provisions can be found for example in Belarus (Art. 134 Уголовный Кодекс Республики Беларусь 9 июля 1999 г. № 275-3), Kyrgyzstan (Art. 406 Criminal Code of the Kyrgyz Republic dated October 28, 2021 No. 127), Russia (Art. 356 Criminal Code No. 63-FZ of 13 June 1996 as amended) Ukraine (Art. 439 Criminal Code of Ukraine 5 April 2001 as amended) Spain (Art. 566(2) Spain Código Penal Ley Orgánica 10/1995) Hungary (Art. 155 and art. 326 2012. évi C. törvény a Büntető Törvénykönyvről) and Moldova (Art. 140<sup>1</sup> Codulul Penal, Nr. 872-III 6 septembrie 2002 as amended).

<sup>37</sup> Such as Austria (Art. 178 Österreich Strafgesetzbuch, Fassung vom 19.06.2022), Cook Islands (Art. 223 Cook Islands Crimes Act 1969), Brunei (Art. 270-271, Penal Code Chapter 22 Consolidated Laws of Brunei 216 Revised Edition), Pakistan (Art. 270 The Penal Code 1860 as amended), Nepal (Art. 104 The National Penal (Code) Act 2017).

<sup>38</sup> Examples of these include: Sao Tome and Principe (Art. 337, 338 Código Penal Lei 6/2012), Seychelles (Art. 176 and 327 The Penal Code 1 February 1955 as amended), Malawi (art. 192 and 346 Penal Code as amended), Tanzania (art. 179 and 328 Penal Code 28 September 1945 as amended), Uganda (Art. 171, 337 Penal Code Act 15 June 1950 as amended).

**341** Any person who willfully and unlawfully causes, or is concerned in causing or attempts to cause, any infectious disease to be communicated to or among any animal or animals capable of being stolen, is guilty of a felony and is liable to imprisonment for seven years.<sup>39</sup>

Even in the case where there are provisions for both humans and animals, these would not address the use of biological weapons which affects plant life and it is quite uncommon that penal codes specifically address the spreading of diseases or pests to plant life, which neglects an important category of biological weapons.<sup>40</sup> As the example of Kenya also shows, these provisions are not intended for biological weapons and it can thus be argued that in some cases they do not convey the seriousness of using biological weapons due to a lesser punishment than would perhaps be considered as appropriate.

These are the most common approaches, however, there is significant divergence between the exact implementation of these approaches between different legal systems and therefore there are also many other states that follow entirely different approaches. These approaches are, however, less common or at times even unique to specific legal systems. Such approaches include the classification of biological weapons use under the release of dangerous materials,<sup>41</sup> or through the setting up of an authorization regime and prohibiting any acts related to specific biological agents occurring without proper authorization.<sup>42</sup> These however generally are also incapable of addressing all uses of biological weapons or provide exceptions for state-sponsored use and are therefore not preferred.

## 9 Lessons Learned and Best Practices

While not all states have incorporated all necessary prohibitions of biological weapons in their national legislation, it is clear that for many states it is considered important to have provisions to address biological weapons. This oftentimes goes beyond just the international obligation to implement such measures. The way these provisions are currently designed could in many states be improved and for states that are in the process of improving or designing their national legislation some lessons can be learned and best practices can be identified from the comparative analysis of existing national legislation. This does not mean that there is a singular best approach, as the exact way in which this issue is best handled can differ on the basis of the legal culture of a state. However, it is possible to provide some general considerations that can assist states.

Although Art. IV BWC obliges states parties to implement the BWC, which includes criminalization of development, production, stockpiling, acquisition or retention of biological weapons, many states parties have not done so. While criminalization of these acts alone is not sufficient to ensure full implementation of Art. IV BWC, it also creates a potential issue for the criminalization itself. The term biological weapon is commonly left without a definition in the criminal provisions. If there is then no further implementing legislation the exact definition of biological weapons is left open and

<sup>39</sup> Art. 186 and 341 Penal Code Revised Edition 2012.

<sup>40</sup> These include Angola (art. 284 Lei No 38/20 de 11 de Novembro 2020), Chile (art. 289 Código Penal Versión - 12-OCT-2022), Eritrea (art. 264 2015 Penal Code of the State of Eritrea), Sweden (Chapter 13 section 8 SFS 1962:700 Brottsbalken), Ethiopia (art. 517-518 Criminal Code of the Federal Democratic Republic of Ethiopia May 2005), Mongolia (Art. 19.6 Criminal Law 3 December 2015 as amended), Libya (Art. 362 Penal Code 1953 as amended), Somalia (Art. 388 Xeerka Ciqaabta, Legislative Decree No. 5 of 1962 as amended).

<sup>41</sup> Such as China (Art. 114-115 Criminal Law of the People's Republic of China), Azerbaijan (Art. 248 Azərbaycan Respublikasının cinayət məəcəsi), Costa Rica (Art. 1(2)(c) Ley de Fortalecimiento de la Legislación contra el Terrorismo, No. 8719 de 4 de marzo de 2009) and the Netherlands (Art. 173, 173a Wetboek van Strafrecht 3 Maart 1881 as amended).

<sup>42</sup> These include Canada (Human Pathogens and Toxins Act) Thailand (Pathogens and Animal Toxins Act BE 2258(2015)) Denmark (Lov om sikring af visse biologiske stoffer, fremføringsmidler og relateret materiale, LOV nr 474 af 17/06/2008; Bekendtgørelse om ændring af bekendtgørelse om sikring af visse biologiske stoffer, fremføringsmidler og relateret materiale BEK nr 1159 af 22/11/2019) Singapore (Biological Agents and Toxins Act 2005 (No. 36 of 2005)).

for the courts to interpret. Although it appears likely that the courts would follow the definition of the BWC, there is still possible ambiguity. It is therefore to be preferred that the content of the BWC is transposed into the domestic legal system either to support criminalization provisions in the criminal code or to include criminal provisions in the implementation legislation. The exact way this should be done cannot be generalized as this needs to be done on the basis of the legal culture of the state. However, the transposition of the content of the BWC is generally possible and should be pursued.

As United Nations Security Council Resolution 1540 is binding on all members of the UN, a significant number of states have implemented the necessary national measures. Among these are also a significant number of states<sup>43</sup> that do not have measures in place for the criminalization of acts prohibited by the BWC. For these states, the existence of anti-terrorism legislation is not sufficient to comply with Art. IV BWC as it generally does not address acts related to biological weapons that are not committed with the necessary terrorist intent. The anti-terrorism legislation and general criminalization of the acts referred to in Art. IV BWC should be considered entirely separate and requiring separate approaches. However, what can be seen is that the efforts that are made in the context of the 1540 Committee in assisting states to adopt necessary anti-terrorism legislation have been successful in multiple instances, which indicates that a lack of necessary national measures generally does not stem from an unwillingness to adopt these.<sup>44</sup>

Although there are very few states that have ratified the amendment to the Rome Statute incorporating biological weapons use in armed conflict in Art. 8 ICC Statute, most states do have provisions addressing the use of biological weapons to some extent and these would be sufficient in most cases of biological weapons use during armed conflicts to preclude the jurisdiction of the International Criminal Court. It is not necessary for these provisions to specifically address the use of biological weapons as a war crime to comply with complementarity and therefore this should not be a hurdle for most states in their decision to ratify this amendment. The symbolic effect of having the use of biological weapons be explicitly included as a war crime within the jurisdiction of the International Criminal Court is significant and efforts should therefore be made to motivate states to ratify this amendment.

One of the most common ways that many states are capable of prosecuting the use of biological weapons is through penal provisions on the intentional spreading of disease, however, these generally would not address all potential biological weapons and could therefore not be employed in all circumstances. Specific penal provisions explicitly prohibiting biological weapons are to be preferred as these would be more generally applicable and consistent. Such provisions are also to be recommended over provisions criminalizing the use of weapons that are prohibited by either international law or treaties to which the state is party, as these still allow for some ambiguity. In order to avoid such ambiguity, it is best for the provisions to explicitly reference biological weapons and that the state also has general BWC implementing legislation that clearly defines what is considered as a biological weapon within the state's legal system.

An aspect that might improve the way in which the use of biological weapons is addressed in domestic legislation is if the interpretation of Article IV BWC is revised during the next Review Conference to clearly incorporate the use of biological weapons in a similar way as has been done with Article I BWC. This would allow for a clear obligation for states to comprehensively address the use of biological weapons and might motivate states reliant on archaic provisions focused on the spreading of disease to modernize these provisions or to adopt separate provisions to address the use of biological weapons.

<sup>43</sup> 29 of 65 states adopting relevant legislation in the last 20 years. De Vries (n 11) 589.

<sup>44</sup> De Vries (n 11) 590-592.





## **The CBW network for the comprehensive strengthening of norms against chemical and biological weapons (CBWNet)**

The research project CBWNet is carried out jointly by the Berlin office of the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH), the Chair for Public Law and International Law at the University of Gießen, the Peace Research Institute Frankfurt (PRIF) and the Carl Friedrich Weizsäcker-Centre for Science and Peace Research (ZNF) at the University of Hamburg. The joint project aims to identify options to comprehensively strengthen the norms against chemical and biological weapons (CBW).

These norms have increasingly been challenged in recent years, *inter alia* by the repeated use of chemical weapons in Syria. The project scrutinizes the forms and consequences of norm contestations within the CBW prohibition regimes from an interdisciplinary perspective. This includes a comprehensive analysis of the normative order of the regimes as well as an investigation of the possible consequences which technological developments, international security dynamics or terrorist threats might yield for the CBW prohibition regimes. Wherever research results point to challenges for or a weakening of CBW norms, the project partners will develop options and proposals to uphold or strengthen these norms and to enhance their resilience.

The joint research project is being funded by the Federal Ministry of Education and Research for four years (April 2022 until March 2026).

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