

BANNING BIOLOGICAL WEAPONS

National legislation in Africa

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The Biological and Toxin Weapons Convention (BTWC) underpins the international regime to control biological weapons. The strength of the treaty however relies on national implementation. The first step for many states party to the Convention is drafting appropriate national laws and regulations. So far, 32 countries in Africa are signatory to the BTWC. More recently, in 2004, the United Nations Security Council adopted resolution 1540, which requires all UN Member States to put in place legislation to prevent the illicit trafficking of material that could be used to develop weapons of mass destruction. The need for such wide-ranging legislation is recognised African countries but its creation and implementation pose specific challenges.

Introduction

The cornerstone of the international biological weapons (BW) control regime, the 1972 Biological and Toxin Weapons Convention¹ (BTWC), prohibits the development, production, stockpiling, acquisition and retention of BW. Biological weapons are defined in Article I by a 'general purpose criterion' (GPC).² According to this criterion, biological or microbial agents and BW-related materials and equipment that cannot be justified as being for prophylactic, protective or other peaceful purposes are banned. The treaty also requires states parties not to transfer BW or to assist other states or an international organisation to produce them. It also bans the use of BW,³ as any state party engaging in biological warfare must have already engaged in treaty-prohibited activity.

On joining the BTWC, states need to ensure that they can fulfil all their treaty obligations to prevent the development, production and stockpiling of BW. Article IV of the treaty specifically requires states parties to adopt any national measures that are necessary to enable them to comply with the treaty's core prohibitions in Article I, in accordance with their constitutional processes. This enables states to choose from a range of national implementation measures, such as legislation, regulations, government decrees and administrative orders. However, it is widely accepted that legislation in particular is essential to ensure state compliance with treaty obligations. For example, legislation is necessary to translate the treaty's international law provisions into law that is enforceable in the state's territory.⁴ Criminal legislation will

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be needed to establish appropriate offences and penalties – together termed ‘penal sanctions’ – for violations of the core treaty prohibitions in Article I. Without such legislation, a state is vulnerable to a prohibited activity being carried out on its territory without being able to effectively prosecute and punish transgressors. Additional legislation and other national measures will also be necessary to provide a comprehensive national BW control regime on such issues as animal, human and plant health, including biosafety,⁵ biosecurity,⁶ import and export controls, and law enforcement. States will find it helpful to establish a national authority to coordinate national implementation activities, or to task existing personnel or agencies with these tasks through national legislation.

Aside from the BTWC requirement for states parties to adopt measures to implement the core prohibitions, the United Nations Security Council (UNSC) under UNSC Resolution 1540, adopted on 28 April 2004 now requires all states to enact and enforce a range of legal and other measures to prevent the development and acquisition of BW – as well as chemical and nuclear weapons – particularly by terrorists and other non-state entities. The resolution requires states to enact measures to ensure that WMD pre-cursor materials and delivery systems are accounted for and securely stored, to maintain effective import and export controls, and to operate stringent border controls to prevent WMD proliferation.⁷ The resolution also establishes a small monitoring committee (1540 Committee⁸) to assess reports that states are required to submit on their implementation efforts. Work to secure compliance with the resolution will commence with advocacy, demarches, and technical assistance activities. There is also a provision for bringing intransigent states to the attention of the Security Council, which may lead to enforcement action, including the possible use of force against determinedly non-compliant states.

This article examines the type of legislation that states need to adopt to ensure they are in compliance with their obligations under the BTWC and UNSC Resolution 1540 (2004) and assesses the status of such legislation in African states.

Obligations to prevent BW in African states

Of the 53 states in Africa, 60%, or 32 states, have joined the BTWC (see the accompanying box on the status of the BTWC in African states). These states are required by Article IV to adopt appropriate national measures to prevent the range of treaty-prohibited activity specified in Article I throughout their territory. This typically requires the adoption of criminal law that establishes penal sanctions. In practice, states will likely need to have additional legislation and other measures in place to enable them to fulfil obligations arising from the other articles – and therefore to comply with them – even though the adoption of these measures is not specifically mandated by the treaty.

For example, states may adopt measures to facilitate awareness-raising of the prohibition on the development and production of BW. These may require scientists and others who may deliberately or inadvertently contribute to the design of biological weapons in the normal course of their legitimate work to undertake training on the state’s criminal laws banning BW and the international norms against BW as embodied in the BTWC. States may also require scientists to adhere to a code of conduct that requires them to refrain from working on BW. To prevent the production of BW, import and export controls may be required to keep track of biological agents as well as dual-use materials and equipment that could be used to contribute to a BW programme. Customs and other enforcement activities may require regulation as well as appropriate training and education. In order to be able to detect and respond to disease outbreaks, whether deliberate or naturally occurring, states will require legislation on animal, human and plant health, and environmental protection. Other legislation on issues such as biosafety and biosecurity will also be necessary to ensure compliance with the treaty. States without a biotechnology or pharmaceutical industry or a bio-defence programme will probably not need to enact as comprehensive legislation and other regulatory controls as other states.

Ten states in Africa signed the treaty when it was open for signature in 1972, but have

subsequently failed to ratify it. In the period between signature and ratification, these states are subject to the customary international law obligation not to carry out activities that would defeat the object and purpose of the treaty,⁹ such as making or using BW. Adopting national measures and legislation to prevent treaty-prohibited activity from occurring on their territory would demonstrate their commitment to this obligation. Ideally, these states should urgently ratifying the treaty and adopt measures and legislation on other BW-control related issues to ensure full compliance with the treaty.

Eleven states in Africa remain outside the BTWC regime altogether. However, as with all states, including the ten signatory states, they are subject to the requirements in UNSC Resolution 1540 (2004) to establish and enforce specific controls over weapons of mass destruction, including legislation to prevent non-state entities acquiring BW.

The 21 countries which are not yet states parties to the treaty are encouraged to adopt national policies in support of the norm against BW and to complete the necessary procedures for ratification or accession to the treaty without delay. The treaty's Sixth Review Conference, due to be held in December 2006, is a realistic target date for these states to fulfil the requirements for joining the treaty, if they can muster the requisite political will to do so.

Transparency of BTWC-implementing legislation in Africa

There is currently little information available on what national legislation has been enacted by African states to prevent the development, production or use of BW, with the notable exception of South Africa. BTWC states parties have made little effort to collate or evaluate national measures collectively in meetings held under the auspices of the treaty since its entry into force in March 1975.

In 1986 these states agreed to provide the United Nations Department for Disarmament Affairs (UNDDA) with texts of their legislation, although to date no state from any region has done so. At the third of the five-yearly review conferences, in 1991, states agreed that they would inform each other about the existence of

basic implementing legislation using Form E of the confidence-building measure (CBM) declarations. South Africa is the only African state that regularly submits a CBM declaration. So far, little information about legislation is forthcoming through the CBM process, as the declarations are not made public and, in any event, Form E only requests states to declare whether or not certain measures have been adopted and few states volunteer substantive detail. Three African states are believed to have submitted one CBM report (Mali, Senegal and Togo) and one is reported to have submitted two (Tunisia). These may include reports that simply indicate 'nothing to declare', as the unnecessary secrecy over these reports, which do not reveal sensitive information, hinders opportunities for a detailed assessment.

Many states parties, in all regions, perceive reporting under the CBM process to be overly burdensome, technically difficult and time-consuming. Yet once the first report is completed, only annual updates are required and a few states have offered to share their reporting experience with others, or to provide assistance on request, to improve the quality and quantity of submissions by all states parties. In particular, Canada has produced a guide¹⁰ to assist states to report and the Netherlands has also offered assistance. Providing timely and accurate CBM reports is one way that states can demonstrate their compliance with the treaty and their support for the norm against BW. States may also choose to use the reports as a means of outlining specific technical or other assistance they require in order to implement and comply with the treaty.

Collectively states parties to the BTWC have been inconsistent in monitoring and reporting on the requirement to adopt national measures to implement the treaty's prohibitions. Between 1994 and 2001 states parties negotiated a protocol to the BWC to remedy the absence of verification arrangements in the treaty. The protocol was to establish a comprehensive treaty monitoring system and require those BWC states parties that joined it to adopt a plethora of new legislative and other measures to strengthen their implementation of the treaty. The process of negotiating the protocol text during this period significantly diverted states parties' attention

from the need to evaluate the implementation and effectiveness of the national measures that were already required under the treaty.

When the protocol negotiations collapsed in 2001, the focus shifted again, this time on to the role that domestic legislation can play in ensuring national compliance with BWC obligations until such time as a multilateral verification system is instituted to monitor and assess states parties' compliance. The 2003 meetings held under the inter-review conference meeting process, which was agreed at the Fifth Review Conference in 2002, considered the issue of appropriate national measures to enforce the treaty's prohibitions. This topic specifically required states parties to consider the importance of adopting penal sanctions for treaty violations and ensuring the security and oversight of pathogens.¹¹ Only one African state¹² provided a working paper to these meetings detailing its national legislation and other measures while only nine African states¹³ responded to the UN Department of Disarmament Affairs' request for information to inform states parties' discussions at the 2003 meetings. A non-governmental organisation, the Verification Research, Training and Information Centre (VERTIC), conducted a survey of the status of legislation to implement the BTWC prohibitions in BTWC states parties' and signatory states and released its analysis at the 2003 meetings.¹⁴

The accompanying website¹⁵ of legislative texts and summaries is the only comprehensive, publicly available collation of BTWC-implementing legislation.¹⁶ One African state party¹⁷ provided information for the survey, while information on a further eight African states parties¹⁸ and one African signatory state¹⁹ was collected through open sources.

Naturally, the 11 non-states parties to the BTWC in Africa fall outside the information-collection processes established by the treaty. As VERTIC's survey in 2003 assessed states parties' compliance with the Article IV obligation, it did not actively seek information on BW legislation in non-states parties.²⁰ However, all states are required to report on their establishment and enforcement of the WMD-control measures required under UNSC Resolution 1540 (2004). First reports were due on 28 October 2004 and it is anticipated that subsequent reporting will

be required. However, only six of the 86 states that had submitted a first report by 7 December 2004 were from the African region.²¹

As the reports submitted to the 1540 Committee will be made available on its website,²² there is an opportunity for public scrutiny of states' legislation, other measures and enforcement mechanisms in all states, regardless of whether they have joined the BTWC, which has not been available previously. It is to be hoped that researchers and other motivated individuals do take the opportunity to analyse the information provided in these reports.

Some information that relates to states national laws controlling BW is provided in the context of states reports to the Security Council committee monitoring implementation of UNSC Resolution 1373 on counter-terrorism, adopted on 28 September 2001. States' reports to this committee – the Counter-Terrorism Committee²³ – often only state the name and give a brief description of the national measure, however.

Status of BTWC-implementing legislation in Africa

There is currently no information available on the status of implementation legislation in 16 of the 32 BTWC states parties in Africa: Benin, Botswana, Burkina Faso, Congo (Brazzaville), The Gambia, Guinea-Bissau, Lesotho, Mali, Niger, Rwanda, São Tome and Príncipe, Sierra Leone, Sudan, Swaziland, Togo and Uganda. It is likely that this is because these states have not adopted such legislation and are perhaps unaware that they have not yet completed their national implementation obligations. These states may also require assistance to fulfil these obligations. Some legislation or other measures which partly implement the BTWC have been adopted in the remaining 15 states parties: Algeria, Cape Verde, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Ghana, Kenya, Libya, Mauritius, Nigeria, Senegal, Seychelles, South Africa, Tunisia and Zimbabwe.

A signatory state, Burundi, is understood to be drafting legislation, but no information is available on the other nine African signatory states: Central African Republic, Côte d'Ivoire, Egypt, Gabon, Liberia, Madagascar, Malawi,

Somalia and Tanzania. Where legislation has been identified, the amount of detail provided is limited, making it impossible to carry out a substantive assessment of how effective the legislation may be. As the remaining eleven states in Africa have not even signed the BWC, their obligation to adopt national legislation and other measures derives solely from UNSC Resolution 1540 (2004).

Implementation by states parties in Africa of the Article IV obligation to enforce the prohibitions has been patchy, with even less consistency in the adoption of measures on other BW-related issues that are essential to ensure treaty compliance. It is interesting that the two African states that have provided the most information on their measures formerly were pursuing clandestine BW programmes: South Africa, which has provided more information than many states parties and which clearly has the most comprehensive national measures in the continent, and Libya. This is likely due to these states' wish to proactively demonstrate their compliance with BTWC, as well as other disarmament agreements, in order to secure the economic and political benefits associated with their return to the international community, including the lifting of trade and other punitive sanctions and readmission to political blocs.

With the exception of legislation on animal, human and plant health and biosafety, South Africa's BW-related legislation was, unsurprisingly, adopted once it had formally renounced its BW programme. The framework for enforcing the treaty prohibitions is contained in its flagship legislation, the 1993 Non-Proliferation of Weapons of Mass Destruction Act, as subsequently amended in 1995 and 1996. This act provides that government notices, a form of secondary legislation, may be issued from time to time declaring certain goods to be subject to controls which prohibit their manufacture, procurement, stockpiling, transport or use.²⁴ The Minister of Trade and Industry has authority to declare controlled goods.²⁵ Regulations can be enacted much more quickly than legislation as they are issued by government departments rather than parliament, under authority delegated by legislation.

The 1993 Act also establishes a national authority, the Non-Proliferation of Weapons

of Mass Destruction Council,²⁶ which is tasked with supervising implementation of all proliferation treaties which South Africa has joined and inter alia establishing and verifying controls on the import, export, transshipment and end-use of controlled goods,²⁷ promulgating codes of conduct²⁸ and creating a national inspectorate to investigate adherence to the Act.²⁹

Like some other states parties that have a common law system, South Africa has scheduled the treaty text to its primary penal legislation³⁰ to give this international legislation the force of domestic law. This facilitates its use as an interpretive aid in court cases involving prosecutions under penal and other BTWC-related legislation. States with a civil law tradition may consider treaty texts to be automatically enforceable as domestic law, even though the treaty does not lay down offences and penalties for treaty violations, which remains the sovereign power of states to determine individually. The fact that some civil law states, including Burkina Faso and Libya,³¹ have adopted specific implementing legislation for disarmament treaties supports the view that civil law states increasingly view that such legislation is necessary to ensure compliance with treaty obligations. It is clear that the incorporation of international obligations into domestic law is best achieved through the adoption of implementing legislation.

The prohibition on the use of BW – as well as other weapons of mass destruction – by non-state actors in South Africa is envisaged in draft anti-terrorism legislation.³² South Africa also has biosafety legislation concerning the classification, registration, control, handling and transport of pathogens and hazardous substances, including occupational health and safety.³³ Other legislation deals with animal,³⁴ human³⁵ and plant³⁶ health, including food safety issues.

Libya appears to have had at least three laws controlling aspects of BW production during the time it was conducting rudimentary research for a BW programme. This highlights the problem of enforcing BW penal law where the perpetrators are sponsored by the state and reinforces the importance of an international verification system for assessing states' compliance with the BTWC. A health act regulated the peaceful use of biological processes in the medical field and

of laboratory tests involving bacteriology and pathology.³⁷ There were further controls on the use of biotechnologies and the transfer of hazardous and toxic materials,³⁸ as well as measures for the use of hazardous and toxic agents and for plant protection.³⁹ Since Libya renounced an offensive WMD capability, it has adopted new legislation on BW, stipulating that biotechnologies, toxins and hazardous materials may only be used for peaceful purposes and require permits for certain activities.⁴⁰ This law also contains provisions requiring risk assessments relating to genetically modified organisms and prohibiting the transfer of hazardous materials that could pollute the environment.

Without having access to the texts of these laws, it is difficult to assess the comprehensiveness of their provisions. Certainly, law enforcement activities will need to be more robust to ensure that the strikingly similar provisions of the 2003 law are more effective than their predecessors of the 1970s and 1980s. Increasing cooperation by Libyan authorities with international verification regimes, as well as bilateral and multilateral confidence-building arrangements, suggests this is likely.

Summaries of legislative measures that other African states parties have made available indicate lacunae in their BW-control frameworks. If these states have fully implemented the Article I prohibitions in their national law, particularly through the adoption of penal legislation, they have not provided this information. Most of their legislation appears to relate to biosafety and biosecurity, although it is difficult to assess the legislations' substantive focus where the text has not been made available.

Senegal has established a national commission on nuclear, chemical and biological weapons to assist in policy development and in identifying strategies for combating the production, stockpiling and use of WMD in its territory. As with South Africa's national authority, the responsibilities and composition of the commission are outlined in national legislation.⁴¹ It is also believed to have a provision in its penal code that may serve to partially implement the prohibitions in Article I of the treaty.⁴²

The Mauritian legislation sets a precedent for other small common law states that wish

to set up BW prohibitions and which do not require elaborate legislation or control regimes due to the absence of a biotechnology and pharmaceutical industry and biodefence programme. It has – belatedly – adopted a specific act to implement the BTWC,⁴³ but it is to be applauded nonetheless. Mauritius has also enacted a counter-terrorism law⁴⁴ that was clearly triggered by the requirements of UNSC Resolution 1373 (2001), given its adoption in 2002. These Acts are short and simple, yet effective in response to the scale of the BW threat in this state's territory.

Algeria is known to have issued the Interministerial Decree on the Procedures for Control of Hazardous Substances on 5 November 1989, but it is unclear whether this relates to biosafety or biosecurity. Further legislation, including criminal provisions under penal code and penal procedure legislation, are believed to contribute to Algeria's implementation of the BTWC, although further clarification is required.⁴⁵

It is unclear whether the Cape Verde interministerial decree issued in 1991 relates to biosafety or biosecurity. It requires companies to declare any intended 'use' – which may refer to transportation, stockpiling, manipulation, treatment and elimination – of toxic or dangerous products to the Ministry of Industry and Energy, which must then outline preventive and security measures for the specified activity.⁴⁶

Ghana is understood to have adopted laws on plant health⁴⁷ and food and drugs.⁴⁸ Ghana has also enacted a decree that requires inspection and certification,⁴⁹ although it is not clear what materials are subject to these controls. However, Ghana views this decree as contributing to its national implementation of the BTWC, having reported this information to the BTWC 2003 meetings.

Kenya has adopted regulations and guidelines on biotechnology activities⁵⁰ and Nigeria has passed national measures on pre-cursor materials for weapons of mass destruction,⁵¹ food safety⁵² and biosafety.⁵³ Biosafety is also the focus of Zimbabwean legislation and guidelines.⁵⁴ Tunisia enacted a law in 1997 on the transport of dangerous materials, which provides guidelines on packing and transporting

gases and toxic substances, including requirements for appropriate warning marks.⁵⁵

Many states have provided information in reports to the Counter-Terrorism Committee on their national measures to enforce UNSC Resolution 1373 (2001), which may also serve to partially enforce the ban on BW in Article I of the BTWC. Examples in the African region include the Democratic Republic of the Congo, which has a law on the repression of the crime of genocide, crimes against humanity and war crimes that may prohibit the use of BW,⁵⁶ and Ethiopia, whose penal code⁵⁷ prohibits the use of means of combat that are expressly forbidden by treaties to which it is a state party. The Seychelles is also known to be drafting legislation on counter-terrorism.⁵⁸

Improving the rate and quality of BTWC-implementing legislation

Deficiencies in the existence and scope of national implementing legislation and other measures in African states parties – and states parties in other regions – need to be seriously addressed not only for these states to comply with the BTWC and UNSC Resolution 1540 (2004), but to effectively prevent the development, production, transfer and use of BW in the region. This applies equally to those states in other regions that have not yet fulfilled their obligations to ensure effective national implementation of BW disarmament and non-proliferation.

To date, there has been little incentive for states to seriously redress the deficiencies in their national measures, especially as there has no coordinated review of states' implementation or compliance has occurred within the BTWC framework. However, with the adoption of UNSC Resolution 1540 in 2004, all states are being monitored to ensure effective national measures to prevent BW are in place and are being enforced. States which do not comply, or which actively demonstrate a determined unwillingness to comply, risk the enforcement action envisaged in UNSC Resolution 1540 (2004). With compliance, or movements towards it, comes the opportunity for states to press others for incentives, such as technical cooperation and capacity-building.

It is recognised that technical and other forms of assistance will be required by some states and UNSC Resolution 1540 (2004) specifically requests states to assist each other to overcome certain states' lack of technical knowledge or experience in such issues. In the meantime, states parties should be prepared to share their expertise in adopting and enforcing legislation to prohibit BW with each other, as stipulated in UNSC Resolution 1540 (2004).⁵⁹ There should also be efforts within the framework of the BTWC to encourage ratification by the signatory states, to achieve universalisation, and to coordinate technical and other assistance for implementation, among other things, for the adoption of appropriate national measures.

There is therefore a need for increased advocacy and awareness-raising to inform states of the obligation to adopt appropriate measures. It is an anomaly in the WMD treaty regimes that the BTWC still does not have an international verification organisation. Such an organisation would include an office of legal affairs tasked with assisting states parties to draft and adopt effective national implementation laws. This organisation would have the expertise to assist states to implement all of their treaty obligations and not simply those to enforce the Article I prohibitions.

Regional forums, in particular the African Union (AU) and the Southern Africa Development Community (SADC), could play a role in fostering the adoption and harmonisation of national legislation in African states to prohibit and prevent BW, as they have done for small arms and light weapons. This would improve compliance with the BTWC and UNSC Resolution 1540 (2004) and might assist in securing benefits, such as improving the legitimate trade in controlled materials, in accordance with international obligations, as well as building personnel capacity for the implementation and enforcement of such measures within the region.

At present, the legal advisory service of the International Committee of the Red Cross (ICRC) responds to states' requests for assistance in implementing international humanitarian law, including the prohibitions contained in the 1925 Geneva Protocol and Article I of the BTWC, which reflects customary international

law prohibitions on BW. The ICRC service is available to all states, regardless of their status under the BTWC. In cooperation with VERTIC, the ICRC has devised a model law criminalising biological and toxin weapons. It will use this model law in its advocacy and advisory work with states.⁶⁰

Conclusion

Most BTWC states parties in the African region still require adequate legislation to enforce the BTWC and ensure that they are complying with all their treaty obligations. The high number of signatory states in the region should be encouraged to adopt national measures urgently, as a signal of their commitment to the treaty, and to conclude their ratification. Along with the 11 non-states parties, these signatory states must establish and enforce new controls over BW agents, materials and equipment in accordance with the UNSC Resolution 1540 (2004) requirements. The BTWC states parties must also assess the adequacy of their existing measures and consider the adoption of supplementary measures to ensure their compliance with UNSC Resolution 1540 (2004). The treaty's Sixth Review Conference, due to be held in December 2006, provides a timely and realistic goal for the completion of these activities.

BTWC status in African states (as of 7 January 2005)

States parties (32)

Algeria, Benin, Botswana, Burkina Faso, Cape Verde, Congo (Brazzaville), Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, The Gambia, Ghana, Guinea-Bissau, Kenya, Lesotho, Libya, Mali, Mauritius, Morocco, Niger, Nigeria, Rwanda, São Tome and Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Togo, Tunisia, Uganda and Zimbabwe.

Signatory states (10)

Burundi, Central African Republic, Côte d'Ivoire, Egypt, Gabon, Liberia, Madagascar, Malawi, Somalia and Tanzania.

Non-states parties (11)

Angola, Cameroon, Chad, Comoros, Djibouti, Eritrea, Guinea, Mauritania, Mozambique, Namibia and Zambia.

Notes

- 1 1972 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 and entered into force on 26 March 1975.
- 2 The advantage of using a definition based on a 'general purpose criterion' is that it bans possible components of a biological weapon and materials that may be used to produce and deliver BW – 'dual-use' agents, materials and equipment – by their intended purpose. Had a definition based on specific defining characteristics been used, it would have become outdated by rapid advances in biotechnology.
- 3 In addition, Article 8 of the BWC refers to the 1925 Geneva Protocol, which explicitly prohibits the use of chemical and biological weapons.
- 4 States that have a common law system need to translate their international law obligations into national measures for the obligations to be enforceable in their domestic legal jurisdiction. Civil law states consider treaties to be enforceable as domestic law upon ratification.
- 5 Biosafety refers to the application of knowledge, techniques and equipment to prevent personal, laboratory and environmental exposure to potentially infectious agents or biohazards. Biosafety defines the containment conditions under which infectious agents can be safely manipulated.
- 6 Biosecurity refers to the effective implementation of measures to control access to pathogens and toxins and prevent unauthorised access
- 7 Operative paragraph 3, United Nations Security Council (UNSC) Resolution 1540, adopted 28 April 2004.
- 8 See the 1540 Committee's website at <<http://disarmament2.un.org/Committee1540/>>.
- 9 This customary international law provision has since been codified by Article 18 of the 1969 Vienna Convention on the Law of Treaties (VCLT). Only six of the ten signatory states to the BWC in the African region have joined the VCLT, however. In any event, it cannot be applied retrospectively to the BWC (the VCLT entered into force in 1980). These ten states are therefore considered, at a minimum, to be bound by the obligation at customary international law, which applies to all states.
- 10 Canadian Department of Foreign Affairs and International Trade (DFAIT), The Biological and Toxin Weapons Convention confidence building measures: a guide to their completion, DFAIT, Ottawa, Canada, 2003, <<http://www.opbw.org/>>.
- 11 The 2003 Meeting of Experts and 2003 Meeting of States Parties were required to 'discuss, and promote common understanding and effective action on i) the adoption of necessary national measures to implement the prohibitions set forth in the Convention, including the enactment of penal legislation, and ii) national mechanisms to

- establish and maintain the security and oversight of pathogenic microorganisms and toxins ...', Final Document, Fifth Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, BWC/CONF.V/17, 22 November 2002.
- 12 South Africa, BTWC and related legislation: prepared by South Africa, BWC/MSP.2003/MX/WP.30, 18 August 2003.
 - 13 Algeria, Cape Verde, Ghana, Kenya, Nigeria, Senegal, South Africa, Tunisia and Zimbabwe, BWC Information Repository, CD-Rom version 3.0, UN Department for Disarmament Affairs, 2003.
 - 14 VERTIC, Time to lay down the law: national legislation to enforce the BWC, Verification Research, Training and Information Centre (VERTIC), London, 2003, <<http://www.vertic.org>>.
 - 15 Biological Weapons Convention: collection of national implementation legislation, <<http://www.vertic.org/datasets/bwlegislation.html> <accessed 17 November 2004>.
 - 16 The International Committee of the Red Cross's International Humanitarian Law database publishes states' national legislation to enforce international humanitarian law, including the prohibition on BW. See <<http://www.icrc.org/ihl-nat>>. This database does not contain other BW-related legislation as the VERTIC's dataset does.
 - 17 Seychelles.
 - 18 Algeria, Equatorial Guinea, Ethiopia, Libya, Mauritius, Nigeria, Senegal and South Africa.
 - 19 Burundi.
 - 20 However, VERTIC began a new survey in October 2004 to assess implementation by all states of the WMD-related control measures required under UNSC Resolution 1540 (2004).
 - 21 Algeria, Angola, Ghana, Morocco, Namibia and Nigeria. South Africa had requested an extension for the deadline for submitting its first report. First report to the Security Council by the Chairman of the Security Council Committee established pursuant to resolution 1540 (2004), S/2004/958 Annex, 8 December 2004.
 - 22 See <<http://disarmament2.un.org/Committee1540/report.html>>.
 - 23 See the 1373 Committee's (Counter-Terrorism Committee) website at <<http://www.un.org/Docs/sc/committees/1373/>>.
 - 24 Section 13, 1993 Non-Proliferation of Weapons of Mass Destruction Act (No 87 of 1993) [South Africa]. See the control lists for biological pathogens, equipment and technology in Government Notice No 428, 10 April 2002 [South Africa] and for toxic chemicals in Government Notice No 152, 29 January 2003.
 - 25 Declaration of Certain Goods as Controlled Goods and the Determination of Control Measures Applicable to Such Goods, No R 1025, as amended 9 October 2001 [South Africa].
 - 26 Section 4, 1993 Non-Proliferation of Weapons of Mass Destruction Act (No 87 of 1993) [South Africa].
 - 27 Section 5, op cit.
 - 28 Section 7, op cit.
 - 29 Section 12, op cit.
 - 30 Proclamation of the President of the Republic of South Africa No R 16, 26 February 2002. This proclamation makes the BTWC treaty text a schedule to the 1993 Non-Proliferation of Weapons of Mass Destruction Act.
 - 31 Libya has adopted legislation to implement aspects of the BTWC (see notes 34 to 37). Burkina Faso has issued a presidential decree to implement the 1997 Ottawa Landmine Convention, Décret No 2001-180/PRES/PM/SECU, 2 May 2001 portant interdiction des mines antipersonnel au Burkina Faso [Burkina Faso].
 - 32 The Anti-Terrorism Bill 2002 [South Africa] was renamed during the parliamentary review process to The Protection of Constitutional Democracy against Terrorist and Related Activities Bill 2003 [South Africa]. As of 22 November 2004 this Bill had not been adopted.
 - 33 1973 Hazardous Substances Act (No 15 of 1973) [South Africa], 2001 Hazardous Biological Agents Regulations (No 22956 of 2001) [South Africa] and 1993 Occupational Health and Safety Act (No 85 of 1993) [South Africa]
 - 34 1984 Animal Diseases Act (No 35 of 1984) [South Africa].
 - 35 1919 Public Health Act (No 36 of 1919) [South Africa] (which will be replaced by the National Health Bill 2002 when it is adopted) and 1977 Health Act (No 63 of 1977) [South Africa]
 - 36 1983 Agricultural Pests Act (No 36 of 1983) [South Africa] and 1990 Agricultural Products Standards Act (No 119 of 1990) [South Africa].
 - 37 Law No 106 on Health, 1973 [Libya].
 - 38 Law No 7 on Protection of the Environment, 1982 [Libya].
 - 39 Law No 27 on Protection of Plants, 1986 [Libya].
 - 40 Law No 15 on Protection of the Environment, 2003 [Libya].
 - 41 Decree No 2000-839, 2000 [Senegal].
 - 42 See listing for Senegal on VERTIC, Biological Weapons Convention: Collection of National Implementing Legislation, accessed 7 January 2005.
 - 43 The Biological and Toxin Weapons Convention Act 2004 (No 2 of 2004) [Mauritius].
 - 44 The Prevention of Terrorism Act 2002 (No 2 of 2002) [Mauritius].
 - 45 See listing for Algeria on VERTIC, Biological Weapons Convention: Collection of National Implementing Legislation, accessed 7 January 2005.
 - 46 Ministerial Decree No. 1-F/91, 25 January 1991 [Cape Verde].
 - 47 Prevention and Control of Pest and Diseased Plant Act (year of adoption unknown) [Ghana].
 - 48 Food and Drugs Law 1992 (PNDL 305B) [Ghana].

- 49 Inspection and Certification Decree (year of adoption unknown) [Ghana].
- 50 National Regulations and Guidelines for Safety and Biotechnology (year of adoption unknown) [Kenya].
- 51 To prevent 'the illegal movement of nuclear, chemicals and other materials used in the manufacture of weapons of mass destruction', see sections 62-88, Criminal Code 1990 [Nigeria].
- 52 Decree No 10 on Food, Quality and Safety Regulations (year of adoption unknown) [Nigeria].
- 53 Guidelines for Biosafety for Nigeria (year of adoption unknown) [Nigeria].
- 54 Statutory Instrument on Biosafety Regulation, 2000 and Biosafety Guidelines and Procedures (year of adoption unknown) [Zimbabwe].
- 55 Act No 97-37 on Road Transport of Dangerous Materials, 2 June 1997 [Tunisia].
- 56 See listing for Democratic Republic of Congo on VERTIC, Biological Weapons Convention: Collection of National Implementing Legislation, accessed 7 January 2005.
- 57 Section 288, Penal Code (year of adoption unknown) [Ethiopia].
- 58 See listing for Seychelles on VERTIC, Biological Weapons Convention: Collection of National Implementing Legislation, accessed 17 November 2004, and Letter dated 23 December 2003 from the Permanent Representative of the Seychelles to the United Nations addressed to the Chairman of the Counter-Terrorism Committee, S/2003/1218 Annex, 30 December 2003.
- 59 Operative paragraph 7, UNSC Resolution 1540 (2004).
- 60 A Model Law, The Biological and Toxin Weapons Crimes Act, drafted by VERTIC and the International Committee of the Red Cross, 2004, <<http://www.vertic.org>>.Silium es no. Andam