Introduction

1. In line with the request for background information for the Ninth Review Conference of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, in particular the request for background information demonstrating compliance with all obligations under this Convention, as contained in document BWC/CONF.IX/PC/2, the United Kingdom (UK) provides the following report to States Parties:

Article I

2. Since its ratification of the Convention the UK has not developed, produced, stockpiled, or otherwise acquired or retained microbial or other biological agents, or toxins, whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective, or other peaceful purposes. The UK continues to hold biological or toxin agents of types and in quantities justified for prophylactic, protective or other peaceful purposes under appropriate supervision or control in accordance with UK national implementation measures under Article IV of the Convention, which includes legislation, regulation and other measures related to biosafety and biosecurity – see further discussion below on Article IV.

3. Since its ratification of the Convention the UK has not possessed or developed, produced, stockpiled or otherwise acquired or retained any weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

Article II

4. The provisions of Article II impose obligations only upon those States Parties that possess or have under their jurisdiction or control, microbial or other biological agents, or toxins, weapons, equipment, or means of delivery specified in Article I.

Article III

5. The UK complies fully with the undertaking not to transfer to any recipient whatsoever, directly or indirectly, and not in any way to assist, encourage, or induce any state, group of states or international organisations to manufacture or otherwise acquire any of the agents, toxins, weapons, equipment or means of delivery specified in Article I of the Convention.
6. The UK continues to fulfil its obligations under Article III through legislation and a number of administrative arrangements and guidelines. The following legislation is the principal means of implementation within the UK:

- The Biological Weapons Act 1974
- The Chemical Weapons Act 1996 implements the provisions of the Chemical Weapons Convention and prohibits the transfer of chemical weapons including those based on toxins
- Retained Council Regulation (EC) 428/2009 for exports originating from Great Britain and Council Regulation (EU) 2021/821 for Northern Ireland for the control of exports, transfers, brokering and transit of dual use items, including biological-related dual-use items and technology. These lists are amended generally on an annual basis
- The Anti-Terrorism, Crime and Security Act 2001 – see below under Article IV

7. UK legislation is periodically reviewed and amended, when required, to ensure that it is relevant and fit for purpose in view of changes in technology, as well as new and emerging threats. Any amendments are reported annually in Form E of the UK's Confidence Building Measures (CBM) submission, which is publicly accessible on the official BTWC website.

Article IV

8. Information on national implementation by the UK has been supplied to States Parties in previous Review Conference compliance reports and in national Working Papers and statements submitted to various intersessional meetings held since 2003. In 2018, the UK informed States Parties about the publication of an overarching national Biological Security Strategy. The strategy brings together, and sets out in one place for the first time, the wide range of activity carried out across government departments and agencies to protect UK citizens and British interests from the risk of a significant infectious disease outbreak, no matter the source – natural, deliberate or accidental. In 2022, the UK will review and reinforce the cross-government approach to biological security, including refreshing the 2018 Strategy. As part of this, the UK will re-evaluate the risk landscape and consider the evolving priorities since COVID-19 and in light of rapid advances in science and technology.

9. In accordance with Article IV, the UK has taken the 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. Such measures apply to the territory of the UK and territory under the jurisdiction or control of the UK. The legislation includes the

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1 BWC /MSP/2018/MX.3/WP.4
Biological Weapons Act 1974, which makes the prohibitions under the Convention offences under domestic criminal legislation. The legislation also specifies penalties for the offences. The Chemical Weapons Act 1996 is also relevant here, and similarly makes the prohibitions of the Chemical Weapons Convention, as they apply to the development, production, stockpiling and acquisition of toxins, offences under domestic criminal legislation. There have been no new convictions under the 1996 Act, relating to toxins, since the 8th Review Conference in 2016.

10. In addition, Part 7 of the Anti-Terrorism, Crime and Security Act 2001 (ATCSA) provides for the security and control of specified, dangerous pathogens and toxins, which could be used in an act of terrorism to endanger life or cause serious harm. Facilities have a legal obligation to notify the Home Office that they are holding pathogens and toxins specified by Schedule 5 of the Act. The National Counter-Terrorism Security Office (NaCTSO) and Counter Terrorism Security Advisers (CTSAs) have the responsibility to review physical security measures relating to malicious breaches at laboratories holding Schedule 5 materials. CTSAs are specialist police officers trained in advising businesses and organisations that may be at risk from terrorism in safety and security of premises, personnel and assets. There is a classified guidance document available to CTSAs to maintain national consistency on the security measures required depending on the level of risk the agents pose.

11. Each notified site must have a list of designated persons who have access to Schedule 5 materials. ATCSA gives powers for a chief officer of police to see a list of persons with access to Schedule 5 substances and access to the premises. However, the legislation is effectively enforced by CTSAs. ATCSA also allows for a person to be denied access to substances or premises if they are of concern. Minimum monitoring equates to an annual visit from the local CTSA. Each institution/laboratory is responsible for training their biosecurity staff to meet the requirements of ATCSA with respect to personnel security.

12. On biosafety aspects, work with pathogens is covered by three sets of regulations. These are:

- The Control of Substances Hazardous to Health Regulations 2002 and the associated Approved List of Biological Agents\(^2\)
- The Genetically Modified Organisms (Contained Use) Regulations 2014
- The Specified Animal Pathogens Order 2008
- The Importation of Animal Pathogens Order 1980

\(^2\) The Control of Substances Hazardous to Health Regulations 2002 (COSHH) make reference to the ‘approved classification’ of a biological agent. The Approved List is the list of classifications of biological agents approved by HSE for this purpose. [http://www.hse.gov.uk/pubns/misc208.pdf](http://www.hse.gov.uk/pubns/misc208.pdf)
Since 2015, the Health and Safety Executive (HSE) has been the authority for issuing licences in relation to the contained use of specified animal pathogens, in addition to being responsible for inspection and enforcement.

13. There is close scrutiny by the HSE of all facilities working with pathogens, with particular focus on those holding Hazard Group (HG) 4 pathogens. This involves the appointment of a designated site inspector and regular visits (at least two per year) arranged according to an agreed intervention plan. In the case of facilities working with HG3 pathogens, routine visits take place every four or five years. HSE has a programme of proactive inspections and interventions in facilities undertaking work with the most hazardous pathogens. Moreover, all three pieces of biosafety legislation make it a legal requirement to notify HSE if there has been a breach of containment or a dangerous occurrence.\(^3\) Any breaches of legislation are enforced and addressed by HSE.

14. As noted above, the effectiveness of the necessary measures to prohibit and prevent the proscribed activities under the Convention is regularly reviewed. Legislation and Regulations are amended as appropriate, and amendments are reported annually in Form E of the UK’s Confidence Building Measures (CBM) submission, which is publicly accessible on the official BTWC website.

15. The UK also takes non-legislative measures that contribute to ensuring national implementation of the Convention:

- The UK Ministry of Defence has guidelines to ensure that its biological defence research and development programmes are in compliance with the BTWC. These guidelines codify existing approaches and practices and set out the procedures and responsibilities within the oversight mechanism to ensure that research is consistent with obligations under the Convention and with relevant domestic law.
- The Academic Technology Approval Scheme (ATAS), introduced on 1 November 2007, is an essential part of the UK’s commitment to counter proliferation. ATAS is designed to protect sensitive scientific and engineering-based technologies relating to advanced conventional military technology, WMD and their means of delivery from misappropriation. It applies to international academics applying for postgraduate study of or research positions in certain sensitive subjects at UK higher education establishments.
- The UK recognises the importance of activities for awareness-raising, education and oversight of science. In this context, the UK funded the development and launch of an open-access online biosecurity/biosafety resource.

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\(^3\) Under Schedule 2 of the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 2013 a dangerous occurrence involving a biological agent is defined as any accident or incident which results or could have resulted in the release or escape of a biological agent likely to cause severe human infection or illness. [http://www.legislation.gov.uk/uksi/2013/1471/schedule/2/made](http://www.legislation.gov.uk/uksi/2013/1471/schedule/2/made)
course, *Next Generation Biosecurity: Responding to 21st century biorisks*. The course has since registered some 3000 participants from 126 countries. The course is primarily aimed at public health professionals, biosafety officers and early career science scholars but is also relevant to those engaged in policy making and working in the security sector nationally and internationally.

16. In accordance with paragraph 18 of the Final Declaration of the Sixth Review Conference, the UK has designated a national focal point for coordinating national implementation of the Convention; contact details are posted on the secure area of the official BTWC website.

**Article V**

17. The UK supports fully the decisions of States Parties recorded in the Final Declarations of previous Review Conferences on consultation and co-operation mechanisms. The UK has not requested a formal Consultative Meeting of States Parties under the provisions of Article V between 2016 and 2022. In July 2022, the UK chaired the informal meeting convened in connection with a request by the Russian Federation under Article V.

18. In accordance with the relevant decisions of States Parties at the Second, Third, Sixth, Seventh and Eighth Review Conferences of the Convention the UK has submitted confidence-building measures to States Parties, via the Implementation Support Unit (ISU) within the UN Office for Disarmament Affairs Geneva office each year before the April 15 deadline. The information submitted by the UK in 2017, 2018, 2019, 2020 and 2021 is available at:


**Article VI**

19. The UK has not lodged any complaints with the United Nations Security Council concerning any other State Party acting in breach of its Article I or II obligations.

20. The UK continues to nominate experts and laboratories for the rosters available to the United Nations Secretary General’s Mechanism (UNSGM) for the timely, impartial and efficient investigation of alleged use under these procedures, and supports further strengthening of the mechanism. Since 2016, the UK has provided training courses for qualified experts nominated to the roster including on leadership; command and control; media training and pre-deployment training. The UK also provided funding to VERTIC to train UNSGM experts in Central Asia and is currently implementing a similar project for UNSGM experts in Latin America. The UK also supports the UN Office for Disarmament Affairs efforts to build up and strengthen the UNSGM’s operational capabilities.
Article VII

21. No State Party has requested assistance from the UK under Article VII. As reported during the discussion on Article VII issues at the 2018 Meeting of Experts the UK has established a Public Health Rapid Support Team (UK-PHRST). Consisting of public health experts, scientists and academics, UK-PHRST is on stand-by to tackle outbreaks of infectious disease anywhere in the world within 48 hours. The team became operational in November 2016, and since then has taken part in 23 deployments in response to disease outbreaks. Deployment of UK-PHRST is at the invitation of the host government or in response to requests made by the World Health Organization (WHO) or by the Global Outbreak Alert and Response Network (GOARN). UK-PHRST also conducts rigorous operational research to improve epidemic preparedness and outbreak responses, including on barriers to vaccine rollouts and the importance of addressing mental health and psychosocial support during outbreaks.

Article VIII

22. The UK ratified the 1925 Geneva Protocol on 9 April 1930. At the Third Review Conference of the BTWC in 1991, the UK informed States Parties of the withdrawal of the part of its reservation to that Protocol covering biological and toxin weapons and formally notified the Government of France, as Depositary, in writing on 8 November 1991. On 20 December 2002, the UK formally notified the Depositary that the UK had lifted its remaining reservations to that Protocol with respect to chemical weapons.

Article IX

23. The UK ratified the Chemical Weapons Convention (CWC) on 13 May 1996. The National Authority to implement the CWC in the UK forms part of the Department for Business, Energy and Industrial Strategy (BEIS), and is co-located in both BEIS and the Counter Proliferation and Arms Control Centre. Further information on the implementation of the CWC in the UK is available at

https://www.gov.uk/guidance/chemical-weapons-convention-guidance#cwc-legislation

24. The Annual Report to Parliament on the implementation of the Chemical Weapons Act 1996 in 2021 is available at

Article X

25. The UK both facilitates and participates in the fullest possible exchange of equipment, materials, and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes. The UK contributes individually and with other states, international organisations, non-governmental organisations, and other appropriate entities, to further the development and application of scientific discoveries in the field of bacteriology (biology) for the prevention of disease and for other peaceful purposes. Pursuant to paragraph 71 of the Final Declaration of the Eighth Review Conference, which encouraged States Parties to provide information, at least biannually, on how they implement Article X, the UK has provided detailed reports on its implementation of this Article during the intersessional programme 2017–2020. This includes information submitted with the Global Partnership⁴; and most recently nationally at the Meeting of States Parties in December 2017 and 2019.⁵

26. The UK implements the Convention in a manner designed to avoid hampering the economic or technological development of States Parties or international cooperation in the field of peaceful bacteriological (biological) activities. This includes the international exchange of bacteriological (biological) and toxins and equipment for the processing, use or production of bacteriological (biological) agents and toxins for peaceful purposes in accordance with the provisions of the Convention.

27. Specific examples of Article X related activities are summarised in the Annex to this report.

Article XII

28. The UK has provided a report on compliance at each Review Conference of the Convention along with papers on scientific and technological development; it submitted three working papers on S&T topics in the last intersessional programme 2017-2020. The UK fully supports periodic reviews of the operation of the Convention.

Article XIV

29. The UK acts as one of three Depositaries to the Convention and continues to fulfil its obligations as a Depositary Government in cooperation with the other two Depositaries, including providing advice to non-states parties and successor states

⁴ BWC/MSP/2018/WP.9 and BWC/MSP/2017/WP.17
⁵ See for example BWC/MSP/2019/MX.1/WP.5
on the procedures and documentation required in order to deposit instruments of ratification, accession and succession.

Other activities that support compliance with the BTWC

30. The UK co-operates with other States Parties to the BTWC and other states, intergovernmental organisations, and non-governmental organisations to fulfil its obligations under the Convention. Examples of the co-operation and activities undertaken include:

- Contribution to the G7 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP) in the biological area, including by Chairing the Global Partnership and its Biological Security Sub-Working Group in 2021.
- Activity to support the effectiveness of UK export licensing and export control procedures via participation in the Australia Group.
- Support for UN Security Council Resolution 1540 (2004), including serving as Vice-Chair of the UNSCr1540 Committee.
1. The UK is one of six original donors to Gavi, the Vaccine Alliance, and the largest sovereign donor to Gavi’s core programmes, pledging the equivalent of £330 million per year until 2025. The UK has also pledged in 2022 £160 million to the Coalition for Epidemic Preparedness Innovations (CEPI) to speed up vaccine development for the deadliest infectious diseases, like COVID-19, and enable equitable access to these vaccines globally. The pledge to CEPI builds on the £1.3 billion in UK aid committed to the international health response early in the pandemic, supporting vaccines, health systems and economic recovery in developing countries. The UK has also invested more than £88 million to support the development of the Oxford AstraZeneca vaccine and, to date, has donated 32.2 million COVID-19 vaccine doses. 26.7 million doses have gone to COVAX, a global scheme to get vaccines to developing countries.

2. The Fleming Fund is a UK aid programme supporting up to 25 countries across Africa and Asia to tackle antimicrobial resistance. The Fund is managed by the Department of Health and Social Care and invests in strengthening surveillance systems through a portfolio of country and regional grants, global projects and fellowship schemes. The UK Government established the programme in 2015 in response to the UK AMR Review and the WHO Global Action Plan on AMR, which called for funding to improve AMR surveillance, public awareness and responsible drug use. The programme focuses on LMIC because they are expected to bear the heaviest consequences of the spread of AMR. More than £6 million will be invested to strengthen existing surveillance systems tracking AMR trends across Africa and Asia, while a further £12 million was announced to improve collaborations on health systems research between low and middle income countries, for example in sub-Saharan Africa, and the UK.

3. The UK Public Health Rapid Support Team (UK-PHRST) was created after the Ebola outbreak in West Africa in 2014-16 to support LMICs to prepare for and respond to public health outbreaks. In the six years of operation of the UK-PHRST, the team has led 23 deployments in response to disease outbreaks and over 40 research projects. The onset of the COVID-19 pandemic meant the team had to adapt to the needs and concerns of LMICs and the unique challenges COVID-19 has presented to these nations. UK-PHRST has ensured the team continues to provide multidisciplinary support, in-person and remote, to aid many nations such as;
   • providing infection prevention, control programmes and sero-surveillance guidance at Africa CDC
   • multidisciplinary support to the Rohingya camps in Bangladesh
   • supporting the Partnership for Evidence-based Response to COVID-19 across continents
• running a Multiple Open Online Course in COVID-19 at the beginning of the pandemic
• supporting SARS-CoV-2 diagnostics inside labs

4. In February 2022, UKRI announced £10 million to combat potential epidemics in developing countries. 22 research projects were selected by the government’s UK Vaccine Network (UKVN) and will help tackle viruses such as Ebola, Lassa Fever and Zika. The projects will conduct research into vaccines and innovative new vaccine platforms to tackle some of the world’s deadliest diseases in LMIC.

5. A UK-West Africa collaboration has been established to tackle Schistosomiasis, a major neglected tropical disease (NTD) of both people and animals, with over 220 million people and untold millions of livestock infected worldwide. While over 200,000 people die from schistosomiasis each year, its major effects are disabling. In children it causes, among other things, anaemia and stunting. The disease also has profound economic and wellbeing impacts for poor livestock-keeping communities. In Africa, despite almost 20 years of mass administration of an anti-parasite medication targeting, predominantly, school-aged children, schistosomiasis remains extremely high in some regions. The research was led by a team at the Royal Veterinary College (RVC) in partnership with teams from Senegal and Niger in West Africa and was jointly funded by UKRI, Foreign Commonwealth and Development Office and Dstl under the Zoonoses and Emerging Livestock Systems (BBSRC) programme. Scientists combined parasitological, epidemiological, molecular, clinical and environmental data to determine the occurrence and distribution of the different fluke species that lead to disease.