



Cabinet Office

Biological Security Strategy

Call for evidence

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Introduction

The COVID-19 pandemic has taught us that effective preparation against biological threats requires a combination of effective risk assessment, planning, generic capabilities to respond to crises and prior experience of any given risk. Learning from COVID-19, we will improve our ability to anticipate and respond to biological threats through effective surveillance, improve our national preparedness and readiness across the whole risk lifecycle, and exploit opportunities presented by these risks¹.

The UK's Biological Security Strategy² published in July 2018, brought together for the first time the work that takes place across Government to protect the UK and our interests from significant biological risks, no matter how these occur and no matter who or what they affect. The 2018 strategy noted that while the likelihood of many of the worst-case biological risks is low, their potential impact is significant. Factors such as globalisation and rapid advances in technology will affect our risk picture.

Background to this Call for Evidence

Published in March 2021 the Integrated Review of Security, Defence, Development and Foreign Policy (the Integrated Review) set out the vision for the UK's role in the world over the next decade. The Review set out the need to review and reinforce the cross-government approach to biological security, **including a refresh of the 2018 strategy**³. As part of this work to refresh the strategy in 2022, the Government will reevaluate the risk landscape and consider the evolving priorities since COVID-19 and in light of rapid advances in science and technology. The COVID-19 pandemic has altered the risk landscape and the UK's response capabilities - in some instances capabilities have been improved (for example, mRNA vaccine technology) which have wider potential applications, and in others we must learn lessons from the current pandemic to build a more effective system for handling these complex biological risks.

This Call for Evidence has been launched to inform a refresh of the Biological Security Strategy review by providing a platform for external input and challenge on the strategy and its delivery. The UK government is consulting with a wide range of stakeholders across and beyond government to inform its development. **Input from technical experts** on this Call for Evidence is encouraged,

¹ HMG Resilience Strategy Call for evidence. GOV.UK.

<https://www.gov.uk/government/consultations/national-resilience-strategy-call-for-evidence>

² HMG. (2020). CCS's National Risk Register 2020 . GOV.UK. Retrieved December 10, 2021, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/952959/6.6920_CO_CCS_s_National_Risk_Register_2020_11-1-21-FINAL.pdf

³ HMG. (2021). Global Britain in a Competitive Age: The Integrated Review of Security, Defence, development and foreign policy. GOV.UK. Retrieved December 10, 2021, from <https://www.gov.uk/government/publications/global-britain-in-a-competitive-age-the-integrated-review-of-security-defence-development-and-foreign-policy>

including those with a background in biological engineering, biological security, contingency planning, and other related technical fields. Please limit your input to the questions set out below.

This Call for Evidence is distinct from the recently concluded Resilience Strategy Call for Evidence⁴. The Resilience Strategy will set out a new vision and whole-of-society approach for the UK's resilience, providing an overarching strategy for how resilience is maintained and developed across Government. The Biological Security Strategy provides a comprehensive view and system-wide approach to biological risks.

The refreshed Biological Security Strategy will not affect the COVID-19 public inquiry. Once the terms of reference for the public inquiry have been published in draft, Baroness Hallett, the Chair of the COVID-19 inquiry, will take forward a process of public engagement and consultation.

Scope

The 2018 strategy identifies several significant biological security risks relating to human health, animal and plant health, the environment, accidental release, and deliberate attack. These include:

- a major health crisis (such as pandemic influenza or new infectious disease);
- antimicrobial resistance;
- a deliberate biological attack by state or non-state actors (including terrorists);
- animal and plant diseases, which themselves can pose risks to human health; and
- accidental release and dual-use research of concern

The 2020 National Risk Register (NRR)⁵ identified **a major human health crisis** (such as pandemic influenza and non-influenza infectious outbreaks) as one of the most significant civil emergency risks facing the UK (a Level E risk).

Antimicrobial Resistance is also included in the NRR. Lord O'Neill estimated, in his independent review on AMR, that if no action was taken, by 2050, AMR will account for an extra 10 million deaths a year globally.

The NRR assesses that **a deliberate biological (or chemical) attack** against the UK or its Armed Forces, and the proliferation of chemical, biological, radiological and nuclear (CBRN) technology to state and non-state actors, are aspects of this risk picture that may become more likely over the longer term. The UK's counter terrorism strategy, CONTEST, also sets out the importance of preparing for the highest impact terrorist risks, including those using biological agents.

The impacts of **major animal and plant diseases** are also far-reaching and such outbreaks are

⁴ HMG Resilience Strategy Call for Evidence 2021. GOV.UK.

<https://www.gov.uk/government/consultations/national-resilience-strategy-call-for-evidence>

⁵ HMG. (2020). CCS's National Risk Register 2020 . GOV.UK. Retrieved December 10, 2021, from

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/952959/6.6920_CO_CCS_s_National_Risk_Register_2020_11-1-21-FINAL.pdf

likely to occur naturally as well as inadvertently (Foot and Mouth Disease 2007). Around 60% of all human diseases and 75% of all new and emerging infectious diseases are zoonotic diseases – that is, naturally transmitted from animals to people⁶. **Zoonoses are a major pathway** by which an emerging pathogen could arise. Alongside the continuous management of diseases endemic to the UK there were 22 outbreaks of exotic notifiable animal diseases in the UK between August 2000 and December 2017. These individual outbreaks are estimated to have incurred costs to the Government ranging from £300,000 to more than £3 billion. Plant and animal disease outbreaks can also have significant effects on the environment and on human health.

Accidental release and **dual-use research of concern** pose considerable risks to the UK such as those experienced when smallpox and Foot and Mouth diseases escaped from insecure labs⁷. The WHO assesses that dual-use research, where life science research is capable of being misapplied to do harm, has substantially increased in the past two decades⁸, and that there are large gaps in international oversight mechanisms for dual-use research.

Questions

Question 1

What are the key biological security opportunities, challenges, threats and vulnerabilities facing the UK:

- a. now?
- b. in five years?
- c. in 10 years?

Question 2

How can the UK capitalise on the identified opportunities?

- a. What are the key global, regional and domestic trends affecting UK biological security out to 2030?
- b. How should the Government prioritise its efforts to identify and respond to these?

⁶ UN Environment Programme (2020). Preventing the next pandemic - Zoonotic diseases and how to break the chain of transmission. Retrieved January 10, 2022, from: <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

⁷ HMG. (2008). Foot and mouth disease 2007: a review and lessons learned. GOV.UK. <https://www.gov.uk/government/publications/foot-and-mouth-disease-2007-a-review-and-lessons-learned>; HMG. (1980). Report of the investigation into the cause of the 1978 Birmingham smallpox occurrence. GOV.UK. <https://www.gov.uk/government/publications/report-of-the-investigation-into-the-cause-of-the-1978-birmingham-smallpox-occurrence>

⁸ WHO. (2021). Emerging technologies and dual-use concerns: a horizon scan for global public health. Retrieved 6 January, 2022 from <https://www.who.int/publications/i/item/9789240036161>

- c. How do new mitigations which emerged through the COVID-19 pandemic (such as mRNA vaccines) alter the risk landscape?
- d. How might surveillance tools⁹ and capabilities enhance our resilience to natural hazards and malicious biological threats?
- e. Are there successful examples of surveillance and/or wider approaches and capabilities for mitigating biological risks in other countries that we can learn from?
- f. What further steps should the UK take to maximise our resilience to and preparedness for natural hazards, accidental release, malicious biological threats, and emerging zoonotic pathogens?
- g. What role would health systems overseas (including in Low and Middle Income Countries) and their resilience play?
- h. Should research and laboratory standards, safety and security play more of a role (domestic and international), and what else should we be doing?

Question 3

What lessons can we learn from the UK's biological security delivery since 2018, including but not limited to COVID-19?

- a. Which are the key successes we should look to develop and build on, and where are areas for development?
- b. How can the future development and delivery of the strategy be improved by adjustments to UK systems, capabilities and the UK life sciences industry?
- c. Should the UK have a single accountable role or body responsible for meeting the full range of biological threats?
- d. What can we learn from other countries' biological security practises and experiences?
- e. How should the UK engage with, support or influence, existing multilateral and other international collaborative efforts towards biological security to improve the impact of our strategy?

Question 4

How should progress be monitored and evaluated, and how often should the strategy be refreshed?

- a. Are there successful approaches in other countries that we can learn from?
- b. How should UK collaborations, investments, and interventions be designed to assure the development and delivery of the strategy?

⁹ As defined in the World Health Organization's 2021 'Draft Genomic Surveillance Strategy': 'genomic data for pathogens with pandemic and epidemic potential (sic) inform risk assessments and can support development of vaccines, therapeutics, diagnostic assays, and decisions on public health social measures'. Retrieved 10 January, 2022 from <https://www.who.int/news-room/events/detail/2021/12/08/default-calendar/who-consultation-on-the-global-genomic-surveillance-strategy-for-pathogens-with-pandemic-and-epidemic-potential>

Response details

Submissions of evidence from all interested parties are invited as part of the Government's process to inform the current biological security risk landscape. You should note that any positions expressed do not necessarily represent current or future UK policy.

The deadline for responses to the call for evidence is 29 March 2022. Please note the following:

- Unless confidentiality is specifically requested, each representation could be made public.
- Please provide your response in a word document, and specify which question is being addressed.
- Early responses are encouraged where possible.

Further information

Information provided in response to this call for evidence, including personal information, may be published or disclosed in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the UK General Data Protection Regulations (GDPR), and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence. In light of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential.

If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding.

We will process your personal data in accordance with the Data Protection Act 2018. For more information, please see the [Privacy Notice](#).