

Written evidence submitted by Dr Opi Outhwaite, Associate Professor in Law, St Mary's University

Executive summary:

- This submission supplements my previous submission, in October 2019. That submission elaborates on the limitations of the domestic regulatory framework.
- Biosecurity is an integrative concept, bringing together plant, animal and human health. This is important in the case of pandemics and emerging infectious diseases because of the significance of zoonotic diseases.
- It is not clear that a biosecurity approach has been followed in the UK: the recently formed Joint Biosecurity Committee does not obviously draw on biosecurity expertise beyond the parameters of a traditional public health body. The 2011 Pandemic Preparedness Report differs from a biosecurity approach particularly by disregarding the relevance of restricting the entry of a disease into the country. The reasons for this divergence – which might be wholly justified and well-known to concerned parties in government - are nevertheless not easy to locate in the public domain.
- The animal health sector has significant experience of managing disease risks including for diseases that arise outside of the UK's borders. Whilst differing in important respects, it is not clear whether these and other biosecurity perspectives, have been used to inform the response to Covid-19, where appropriate.
- Wild animals are a major source of emerging infectious diseases but current UK policy and regulation do not effectively incorporate them into biosecurity frameworks.
- The broader drivers of pandemics and emerging infectious diseases such as land use change, ecosystem degradation, climate change and increased human-wildlife contact, will drive the emergence and arrival of diseases in the UK, they should not be viewed as issues to be addressed elsewhere (globally).
- Trade restrictions relating to biosecurity have the potential to constitute non-tariff barriers to trade which, arguably, has a 'chilling effect' on the adoption of such measures and presents issues relating to global governance in this field. This should be recognised when developing trade deals and with reference to the World Trade Organisation.
- Greater policy and regulatory alignment with the One Health approach would complement an integrative biosecurity strategy.

Introduction:

I have worked in the field of international law and governance for over 15 years, focusing on the social and environmental implications of globalisation. I have worked extensively on biosecurity in the international, EU and domestic settings. My PhD, *Evaluating Biosecurity Law and Regulation in Developing Countries* was awarded in 2006.

I am the author of a number of publications on biosecurity and animal health including:

- Outhwaite, O. *Biosecurity, Invasive Species and the Law* (2017) in McManis and Ong (eds) *Routledge Handbook of Biodiversity and the Law*, Routledge;
- Outhwaite, O (2017), Neither fish, nor fowl: the parameters of current legal frameworks for animals, wildlife and biodiversity, *Journal of Environmental Law* (2)(3);

- Outhwaite, O. (2013), 'Legal Frameworks for Biosecurity' in Andrew Dobson, Kezia Barker and Sarah Taylor (eds), *Biosecurity: Theory and Politics in Practice*, by Routledge/Earthscan;
- Outhwaite, O. (2013), 'Preventing and mitigating the impacts of climate change and biodiversity loss through biosecurity' in Frank Maes, An Cliquet, Willemien du Plessis, Heather McLeod-Kilmurray (eds), 'Biodiversity and Climate Change', Edward Elgar/IUCN;
- Outhwaite, O. (2010), The International Legal Framework for Biosecurity and the Challenges Ahead, *Review of EC and International Environmental Law (RECIEL)*, 19 (2), 207-226;
- Outhwaite, O, Robert Black, Angela Laycock (2008), The Significance of Cost Recovery for the Regulation of Agricultural Health, *Journal of Law and Society*, Volume 35 Issue 1(s);
- Outhwaite, O. Robert Black, Angela Laycock (2007), The Pursuit of Grounded Theory in Agricultural and Environmental Regulation: a suggested approach to Empirical Legal Study in Biosecurity, *Law and Policy*, Volume 29, No. 4.

I have presented at numerous national and international conferences on the subject of biosecurity law and have been invited speaker at a number of policy and industry events. I have provided consultancy and research services to UK DEFRA, the Belize Agricultural Health Authority and the Tanzania Ministry for Agriculture as well as to non-governmental organisations. In 2012- 2013 I worked as a Social Research Fellow in DEFRA's Animal and Plant Health Agency, providing a detailed legislative review of the relationship between UK and EU animal health law.

The main drivers of biosecurity risks to human health in the UK, including from pandemics and emerging infectious diseases;

The 2015 Strategic Defence and Security Review correctly frames the risks as associated with increased international travel. Importantly, it should also expressly identify international trade one of the main drivers for the global spread of diseases and pathogens. This includes both the legal trade in animals and animal products and the illegal wildlife trade.

Despite recognising the risks as being associated with international travel, the Review frames the risks as particularly associated with countries with weak health systems or poor governance. It should now be quite clear that the ability of diseases to spread globally is not limited to any particular areas of the world and while Ebola is cited as the main example in the Review, other outbreaks such as SARS and H1N1 clearly demonstrated the potential reach for such diseases. This is not an issue that can be viewed as happening in 'other' parts of the world. It is not clear that this understanding was fully internalised prior to Covid-19. References in documents such as the 2018 Biosecurity Strategy to the role of the UK in assisting overseas, coupled with the subsequent response of the UK to the Covid-19 outbreak, lend the impression that there was not enough understanding of the real likelihood and implications of an outbreak reaching the UK.

The drivers of pandemic and EID risks in the UK cannot be neatly separated from the drivers of those risks outside of the UK: damage to ecosystem services – which include disease resistance – an increase in the vectors and range for diseases and pathogens driven by global climate change, and increased human-wildlife contact, drive the emergence and spread of diseases including zoonotic diseases and this aspect of biosecurity in the UK is inter-dependent on biosecurity elsewhere in the world. It will be important for the UK to engage

globally in efforts to address these risks. This is as distinct from the drivers of virus transmission once a virus has become established domestically.

Zoonotic disease risks, as is well established, do not respect regulatory or territorial boundaries. They are not restricted to occurrence within the animal health framework, though this is most commonly the locus of regulatory control. Wild animals have been identified as a major source of emerging diseases and can act as vectors and reservoirs for diseases affecting livestock and human health [this is currently thought to describe the emergence of Covid-19 and describes the emergence of other influenza outbreaks of international concern such as h1N1 and H5N1]. While disease emergence has so far taken place outside of the UK, before transmission to humans, this might not be always be the case.

How, and how effectively, these risks are monitored and assessed by the UK Government, and by whom; and whether the specific type of risk to the UK represented by Covid-19 fell within such monitoring and assessment processes;

Biosecurity is a concept that refers to the management of pests, diseases and pathogens in order to minimise the likelihood of their introduction and spread to an area and the negative impacts that occur as a result of that spread. It incorporates plant health, animal health and human health and food safety. Biosecurity generally focuses on pre-border controls, point-of-entry controls and post-entry control, with each of these representing increased levels of risk, with respect to a disease being introduced or becoming established, and associated risk-management costs.¹ It is not clear, from public communications, that a biosecurity approach has been adopted in the UK, with respect to Covid-19 (or why such an approach was not thought appropriate).

Government policy often does not recognise biosecurity as an integrative concept. An important limitation in the UK's approach is that it has maintained a distinction, in both policy and practice, between public health and animal health. This is reflected in the limited interaction between the 2011 Pandemic Preparedness Report and the 2016 Biosecurity Strategy. This distinction is contrary to the way that pandemics and EIDs are emerging and spreading and drives very different response strategies.

In responding to Covid-19 it has not been obvious that the UK drawn on the expertise of the animal health sector which has extensive experience of responding to diseases outbreaks and putting in place biosecurity strategies which aim to first prevent the entry of a disease into the country, then to limit the spread of the disease and, finally, where containment is no longer an option, to implement management and eradication measures. The Joint Biosecurity Centre appears, based on its membership and governance structure, to be a traditional public health body, rather than a biosecurity body. It does not obviously reflect a biosecurity approach or spectrum of expertise.

In elaborating biosecurity responses it will be increasingly important to ensure that the term 'biosecurity' is used and communicated in a consistent way especially so that the general public, as well as various experts and interest groups, are able to understand the aims and implications of biosecurity. There is frequently uncertainty or inconsistency in the use of the term to denote either a practice ('on-farm biosecurity'), a strategy or an outcome ('a biosecure facility').

¹ Outhwaite, O. (2013), 'Legal Frameworks for Biosecurity' in Andrew Dobson, Kezia Barker and Sarah Taylor (eds), *Biosecurity: Theory and Politics in Practice*, by Routledge/Earthscan

The 2015 Review recognises a major public health event as a tier 1 risk and ‘environmental events such as animal diseases’ as tier 3 risks. In reality, animal health outbreaks can become public health events and risk assessment, surveillance and disease management plans need to recognise that. Animal health and human health are not distinct fields when it comes to EIDs and pandemics.

To a significant degree, the focus of UK policy on global health and biosecurity risks to date has been on antimicrobial resistance (AMR).² Whilst this is a recognised risk that must also be addressed, other aspects of biosecurity, namely the control and management of zoonotic diseases, has received far less attention despite the recognised potential risk for the UK and the reality of outbreaks, globally, in the past two decades.

Of crucial concern in the management of disease and pathogen risks is disease detection and surveillance capacity. This includes the ability to detect emerging outbreaks in the domestic setting and also to become aware of outbreaks in other countries and to respond accordingly.

The 2011 Pandemic Preparedness Report considers that “it almost certainly will not be possible to contain or eradicate a new virus in its country of origin or on arrival in the UK” and that the expectation must be that the virus will spread. Point-of-entry controls, the Report notes, may only delay the peak of a pandemic wave by a short time. This presumably informed the decision not to adopt point-of-entry controls to travellers coming from, initially Wuhan, and subsequently other areas where Covid-19 was known to be present. This approach is at odds with the first phases of a biosecurity strategy, which aim to restrict the arrival of a disease into the country so far as possible and then to contain the spread of a disease through appropriate measures. The 2018 Biological Security Strategy “recognises the importance of intervening early to prevent biological threats from emerging, or from spreading once they emerge.”

In animal health, this [pre-entry and point-of-entry control] is a standard part of biosecurity. It is more easily facilitated in animal health than for human health because individual animals can be subjected to careful transparency and tracing rules, pre-entry to the UK. With human transmission this is unrealistic but border control or pre-entry measures – in other words requiring health checks, testing or quarantine before a person is admitted through an international border – form part of a surveillance strategy, providing more information about the presence of the virus within the UK. Rapid assessment of first cases and their contacts, as set out in the 2011 Preparedness Report, is more difficult to achieve without surveillance at point of entry. This approach was not adopted early on as part of the UK strategy for Covid-19.

Pre-entry or border control measures can also be important because, as recognised in the 2011 Preparedness Report, the phases of WHO notification may not line up with the real-time transmission and effects of a disease outbreak.

The extent to which the Government has supported domestic preparedness against biosecurity risks

Domestic regulatory capacity

² See Veterinary Medicines Directorate (2019) UK One Health Report - Joint report on antibiotic use and antibiotic resistance, 2013–2017, New Haw, Addlestone: Veterinary Medicines Directorate; and Public Health England (2015), UK One Health Report, Joint report on human and animal antibiotic use, sales and resistance, 2013.

Regulatory capacity is limited by the separation of public health from biosecurity and animal health, as described above. There are further limitations with the domestic legislative and regulatory framework that undermine the ability of the UK to prepare for and respond effectively to biosecurity risks, specifically with respect to EIDs and pandemics:

Zoonotic disease risks have not been integrated in regulatory or policy frameworks. In particular wildlife and the risks associated with disease emergence from wild populations has not been brought coherently into biological security frameworks.

Wild animals can act as vectors and reservoirs for diseases affecting livestock and human health [this is currently thought to describe the emergence of Covid-19 and describes the emergence of other influenza outbreaks of international concern such as H1N1 and H5N1].

In most current legislative and regulatory provisions, the necessary legal basis to control disease outbreaks as they relate to wild animal may simply not be there or may be patchy. This means that passive surveillance related to this risk (if zoonotic disease emergence took place in the UK) is limited and could necessitate the adoption of emergency powers if such a disease event did occur in the UK.

Wildlife disease surveillance has not been strategically or coherently integrated into animal health or other disease management provisions. Instead it is undertaken through a fragmented range of requirements and agencies. Disease surveillance in wild animals is undertaken by a patchwork of organisations and to the limited extent that it does occur, surveillance and monitoring is often based upon voluntary projects and initiatives.

There is no overarching recognition or strategy governing the relationship between kept animals, wild animals and public health as regards disease surveillance, monitoring and response or of management of ecosystem services including disease mitigation.

International coordination, regulation and policy

Efforts at the international level and in supranational fora have advocated a more systematic move away from a fragmented approach to biological security, towards an integrated and more holistic approach.³ Most notably, One Health has emerged as an approach which seeks to unite veterinary medicine and public health as well as wildlife and ecosystems health.⁴

The UK government has to some extent expressed a willingness to adopt a One Health approach and indeed this is noted in the 2018 Strategy. The 2019 Veterinary Medicines *UK One Health Report-Joint report on antibiotic use and antibiotic resistance, 2013–2017* focuses on antibiotic resistance. The report does not address broader One Health objectives or priorities.

Closer alignment with and more express commitment to a One Health approach would align the UK's biosecurity approach with the approach at international level and provide a further means to review and revise biological security arrangements for emerging infectious diseases in a strategic and integrated way.

³ See Outhwaite, O. (2010), The International Legal Framework for Biosecurity and the Challenges Ahead, *Review of EC and International Environmental Law (RECIEL)*, 19 (2), 207-226;

⁴See http://www.oie.int/fileadmin/Home/eng/Current_Scientific_Issues/docs/pdf/FINAL_CONCEPT_NOTE_Hanoi.pdf

The other key international legal framework relevant to biological security is that of the multilateral trading system, governed through the World Trade Organisation. Under this framework, particularly with reference to the Agreement on Sanitary and Phytosanitary Measures, measures to address animal health and disease control have the potential to constitute non-tariff barriers and are not permissible where they constitute an unjustified barrier to trade. This is an important consideration when considering point-of-entry (import and border) restrictions but arguably this concern has had an unnecessary chilling effect on the willingness of countries to adopt restrictions aimed at disease control.⁵ The implications of WTO rules will need to be kept in mind with respect to a 'no-deal' exit from the EU and in future trade deals.

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⁵ See also Cunningham, A. A., Daszak, P., & Wood, J. (2017). One Health, emerging infectious diseases and wildlife: two decades of progress?. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, 372(1725), 20160167. doi:10.1098/rstb.2016.0167