

## Biosecurity and infectious diseases threats: Briefing note

### Ahead of House of Lords debate on 18.01.24

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Lord Trees has secured a House of Lords debate on biosecurity, and the threat of infectious diseases for human, animal and plant health, in an age of globalisation and climate change. Ahead of that debate, Link highlights a number of disease threats to UK biosecurity and policy solutions to address them.

#### Horticultural imports & plant health

Invasive pests, pathogens and diseases are commonly spread through horticulture imports, travelling both in live plants and plant products, and the soil and packaging they are conveyed in.<sup>1</sup> This route for invasives to spread represents a significant breach in UK biosecurity.

These invasives can devastate plant health, to the detriment of both nature and the economy. The costliest invasive species in the UK so far is *Hymenoscyphus fraxineus*, otherwise known as Ash dieback. This fungal pathogen kills ash trees, harming woodland habitats and costing the forestry industry around £1bn a year.<sup>2</sup> While the fungal spores can travel on the wind, the spread of the disease was amplified through imported ash saplings. Such imports are now banned, but the disease is now firmly established in the UK.<sup>3</sup>

Further invasive threats to plant health are on the horizon. For example, the bacterial disease *Xylella fastidiosa* and its many sub species have been a cause for concern since it was found in Europe in 2013. This disease can infect at least 400 host plants and cause significant damage to the trees and to the industries dependent on them.<sup>4</sup> Plant-parasitic nematodes can spread easily via soils and soil products as just 1 square metre of soil could host 10 million nematodes with the potential to bring viruses and diseases such as Pine wilt disease and Fan-leaf virus.

Climate change is exacerbating these risks, as it makes it easier for invasive species from warmer regions to establish themselves in the UK, just as the resilience of domestic ecosystems decreases, making them more susceptible to invasion. Furthermore, as new trade routes and freeports open there is a greater chance of new species entering the UK as biosecurity measures at international borders have not kept pace with the growing volume, diversity and origins of global trade and travel.

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<sup>1</sup> [https://publications.parliament.uk/pa/ld5803/ldselect/ldhortcom/268/26806.htm#\\_idTextAnchor041](https://publications.parliament.uk/pa/ld5803/ldselect/ldhortcom/268/26806.htm#_idTextAnchor041)

<sup>2</sup> <https://link.springer.com/article/10.1007/s10530-023-03107-2>

<sup>3</sup> <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/tree-pests-and-diseases/key-tree-pests-and-diseases/ash-dieback>

<sup>4</sup> <https://www.efsa.europa.eu/en/efsajournal/pub/7356>

### **Policy solution: A permanent invasive species inspectorate & reduced reliance on imports**

The very essence of biosecurity is that preventing something arriving is much more effective, and cost-efficient, than trying to eradicate it once it's here.

In 2020, following an Environmental Audit Committee report recommendation<sup>5</sup>, the Government committed to a three-year trial of an invasive species inspectorate, tasked to prevent new invasive plant, animal and pathogen species from arriving via pathways such as in horticultural imports. Defra identified 51 potential duties of an invasive species inspectorate or enforcement functions, of which 39 are not covered by existing inspectorates.

With the trial nearly complete and inspections revealing high levels of noncompliance with the IAS Regulation within garden centres and online, the invasive species inspectorate should now be established on a permanent basis, with powers to carry out border inspections to prevent new invasives entering the UK, including in freeports. Link has estimated that this strengthening could achieve a 50-67% reduction in the number of new invasives, which could prevent £2.7 billion of economic damage by 2040.<sup>6</sup> That is a return on investment of £23 for every £1 spent.

There should also be action to reduce the UK's reliance on horticultural imports. 356,000 tonnes of plants and soil were imported to the UK in 2021,<sup>7</sup> and the next 'ash dieback' could be within any of them. The Government should encourage more 'home-grown' horticultural products, to reduce our reliance on overseas and further shore up biosecurity. Specifically, Government must address seed supply issues, aid with demand forecasting and investigate a labelling scheme for plants grown in the UK their entire life. Locally-sourced species are also better adapted to local environmental conditions.

#### **Further policy action: Update the GB Invasive Species list & reform the process of listing/delisting species**

Rapid responses are essential to prevent an invasive species from establishing. However the current process of listing and delisting species from the [GB invasive species list of concern](#) is inefficient and leaves the UK vulnerable to invasions.

With new trade routes being established, Government must establish an updated, comprehensive UK list of species of concern, which reflects the scale of the threat invasive non-native species pose to UK biodiversity and the economy. Other countries such as New Zealand have a 'white-list' approach, with non-native species assumed to present a threat unless a scientific risk assessment demonstrates otherwise.

<sup>5</sup> <https://publications.parliament.uk/pa/cm201919/cmselect/cmenvaud/88/88.pdf>

<sup>6</sup> [https://www.wcl.org.uk/docs/Prevention is Better than Cure Report 2020.pdf](https://www.wcl.org.uk/docs/Prevention%20is%20Better%20than%20Cure%20Report%202020.pdf)

<sup>7</sup> <https://www.buglife.org.uk/news/ban-foreign-soil-imports-to-help-save-british-wildlife-warn-nature-experts/>

### Exotic pet imports & human health

Research undertaken by the RSPCA and Born Free has highlighted that zoonotic disease spread by the import of exotic pets in the UK is an overlooked risk to human health.

In the words of their 2021 report:

*“Examples of zoonotic pathogens that are known to cause disease in people include Chlamydia psittaci, which appears to be widespread among pet psittacine birds (parrots) and can cause serious respiratory disease, endocarditis and hepatitis in people, and Salmonella species which are found in the gastrointestinal tracts of most reptiles and can result in serious gastroenteritis in people. Close contact with their pets puts owners at risk of infection... as systematic pathogen testing for zoonotic pathogens is not carried out for all imported exotic pets, the risk of importing zoonotic diseases remains high.”<sup>8</sup>*

### Policy solution: A ‘positive list’ for exotic pets

A number of European countries have adopted a positive list covering all taxa to establish a list of species which can be kept, providing their conditions meet a range of welfare and safety criteria.<sup>9</sup> There could be exemptions for zoos engaged in conservation work.

The UK should adopt this approach, with the risk of zoonotic disease used as one of the criteria when determining which species are permitted. This precautionary approach could reduce the zoonotic disease risk posed by exotic pets. However this is just one action of many that are needed. Government must support increasing public awareness of the pathogen risks of the exotic pet trade and how to mitigate these risks. Government also must ensure the same level of sanitary protection to apply to imported wildlife as applies to our livestock and fish industries with improved border controls, quarantine and testing for pathogens identified as threats to UK biodiversity.

### Wider imports & animal health

Wildlife diseases, which enter the UK from a range of imports, are increasingly impacting UK biodiversity, as well as being of great relevance to wider livestock health, as well as public health and wellbeing.

Diseases due to the inadvertent importation of pathogens include 2 chytrid fungi from Asia which have devastating impacts on amphibian populations. *Batrachochytrium dendrobatidis* is an OIE-listed pathogen which has caused 200 amphibian extinctions globally and continues to be imported into the UK with the amphibian trade.

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<sup>8</sup> <https://www.rspca.org.uk/documents/1494939/7712578/The+Exotic+Pet-demic%3A+UK%27s+ticking+timebomb+exposed.pdf/075754a7-fa68-f9bf-66b4-cbc0d559db28?t=1631617196174>

<sup>9</sup> <https://en.aap.eu/qa-positive-list/>

*Batrachochytrium salamandrivorans* is widespread in captive (hobbyist) amphibian collections, presenting a high risk of spread into wild amphibian populations with potentially devastating effects to susceptible species such as the great crested newt.

Other examples of imported pathogens adversely affecting British biodiversity, including those affecting invertebrates such as the crayfish plague which is transferred by invasive species and represents a major threat to our native endangered species. *Gyrodactylus salaris* presents a major threat to our native endangered salmon populations, an economically valuable keystone species to Great Britain. Scandinavian countries have resorted to adding rotenone to their rivers to manage this parasite with devastating consequences for the entire freshwater ecosystem.

The policy solutions set out above, including establishing a permanent invasive species inspectorate, would help address these risks to animal health.

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*Wildlife and Countryside Link (Link) is the largest nature coalition in England, bringing together 82 organisations to use their joint voice for the protection of the natural world.*

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