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Executive Summary

- We provide evidence for this enquiry as individuals, but drawing on our experience of the research and policy associated with this topic within the UK and Europe. We limit our answers to those questions where we feel we can make a contribution.
- The rate at which invasive non-native species continue to arrive, establish and impact the UK is accelerating. The Government is a signatory to international agreements on this issue but is failing to meet the targets set. Appropriate infrastructure and processes are in place to manage these risks, but resources are insufficient. Investment and structures similar to those already in place for Animal and Plant Health are required to meet the challenge. The UKOTs need additional capability support.
- The four nations should prioritise funding for improved management. Firstly, improved preventative measures should include inspectorate functions, awareness raising and industry engagement. Secondly, improved surveillance and rapid response capabilities, including pre-identified lead agencies, contingency planning, a precautionary approach, and a dedicated funding route. Thirdly, for long-term management, improved availability of control methods, support for coordination activities and funding for appropriate on-going management through the farm payment system.
- In response to future risks associated with changing trade, we further recommend investment in inspectorate functions, horizon scanning of new risks and early engagement with new trading partners to identify emerging risks.
- The European Union’s Invasive Species Regulation has standardised approaches, raised awareness, built capacity and listed Species of Union Concern. However, we are concerned that the current approach to species listing is not well targetted geographically, being overly focused on Northern European states, and over-commits Member States to long-term management responsibilities when resources would be better devoted to prevention and rapid response activities. We suggest improved geographical targeting of species listing, an improved focus on species where prevention or complete removal are still feasible, and that risk management methods be used to prioritise long-term management to avoid ineffective and costly expenditure.
- In future, the existing GB Non-Native Species Programme Board is the appropriate forum to advise on species listing and its remit should be increased to include Northern Ireland. Future species listing should aim for alignment with European processes, but avoid ongoing commitments to long-term management unless shown to be cost-effective. Close future cooperation with the European Union on invasive species and wider biodiversity issues should be encouraged.

- How well is the UK and its overseas territories managing the impact of invasive species and controlling the risks of further invasion?

1.1 The number of invasive non-native species entering the UK continues to rise and this rate is accelerating. Species already present continue to spread and to have wider impacts. The impacts of these species on biodiversity, economic activity and health are already large and can be expected to increase further. The UK is a signatory to a number of ambitious international agreements which aim to reduce or halt the rising impacts of invasive non-native species. In particular, the Aichi Convention (Target 9) includes a commitment ‘to identify and prioritise invasive non-native species,
their pathways, and to then control or eradicate priority species.’ The Government’s position is that it is making insufficient progress to meet these commitments (JNCC 2019). Clearly, the current level of response is insufficient to deal with the scale of the problem and much more needs to be done.

1.2 Since the UK first published its strategy for invasive non-native species (2008, updated in 2015) a policy level infrastructure has been developed to focus on the issues. A coordinating body, The GB Non-Native Species Programme Board, with its supporting Non-Native Species Secretariat, has been established to promote coordination between the different branches of government, devolved administrations and stakeholders. Decision making is now built on evidence-based processes to assess the risks posed by different pathways, species and the feasibility of their management. The number of management responses to new invasions has also increased. Public awareness raising and engagement with industry is increasing. The last ten years have seen the UK develop effective infrastructure and methods to assess and prioritise the risks from invasive species, but they lack the resources needed for practical management.

1.3 In areas dealing with similar biological risks, such as Plant, Animal, Fish and Bee Health, supporting legislation, investment in inspectorates, engagement with industry, rapid response capabilities and prioritised management have greatly limited the number of new threats establishing in the UK. This is in sharp contrast to the problems posed by invasive non-native species where a lack of funding has allowed new species to enter the country, establish and spread at an increasing rate. Investment to bring the response to the invasive non-native species problem in line with that already committed to related areas such as Plant and Animal Health is needed to manage effectively.

1.4 The Overseas Territories have a high biodiversity and are similarly at risk from invasive non-native species. The lack of funding described above applies equally to them, but they also often lack the capacity and capability to respond. Particular support is needed to raise capability in the UKOTs and provide access to skills and expertise from the UK.

- Where should the four nations prioritise resources to tackle invasive species?

2.1 Improve prevention measures. It is generally accepted that prevention is the most cost-effective route to tackle invasive species – preventing their entry into the country in the first place. However, prevention is not always effective, and significant numbers of new species will continue to enter and establish despite best efforts. There is need for specialist border inspections for invasive species, and better coordination between different arms of government (Plant Health in particular). Alongside this, investment is needed to raise public awareness (to decrease tolerance and increase reporting) and for the production of codes of practice with key industries.

2.2 Improved surveillance and support for rapid response capabilities. Once species have arrived, the best outcome is for their populations to be completely removed through eradication. This is a one-off cost that removes their potential impacts for the future. However, the costs and feasibility of eradicating a species are heavily dependent on the nature of the species and the environment in which it lives (Booy et al 2017), and the area over which it has spread (Robertson et al 2017, IUCN 2018). Investment in effective surveillance will increase the likelihood of rapidly detecting new arrivals, increasing the probability of successful eradication. Adopting a precautionary approach for new arrivals is also recommended – deal with them rapidly rather than awaiting reports of damage. In this light, government should identify lead agencies to be responsible for the rapid response to particular species or environments, and support the production of generic contingency plans before species arrive. The funding of rapid responses to species is also problematic. Few agencies have the
resources to respond to the unpredictable nature of invasive non-native species arrivals, and applications for grants or between-year bids for funds can lead to significant delays. **A central fund for rapid responses to invasive species should be established**, held or facilitated by a coordinating agency, which can then support rapid responses at short notice.

2.3 **Support methods and coordination of long-term control measures.** Once species become too widely established for eradication to be feasible, the on-going management of their impacts becomes the priority. In many cases, this results in the responsibility for management devolving to landowners to locally reduce damage to biodiversity, crops, forestry and fisheries, or to developers to reduce the risks of spread (as occurs with Japanese Knotweed). In these cases, government should **ensure that appropriate methods are available and licensed** to support cost-effective local control, for example the availability of approved traps, off-label use of pesticides etc. In many cases, local control will be more effective if there is coordination of activity between different landowners and other stakeholders to manage species at ecologically meaningful scales. **Government support for species management coordination activities**, as seen in support for the Deer Initiative, Squirrel Accord and regional control programmes such as that on the Tweed, is an effective route to support long-term management. **Support for selected forms of long-term management through the farm payments system** could ensure continuity of long-term management where appropriate.

2.4 National coordination is undertaken by the Non-native Species Programme Board. This body should do more to **promote coordination of action between the devolved administrations** and to reduce cross border issues where the response to a risk differs due to administrative boundaries.

**How can the risk of trade and future trading relationships bringing non-native invasive species to the UK be mitigated?**

3.1 The number of new species entering the UK is already heavily influenced by international trading patterns. If patterns of trade change following Brexit, sensible precautions include

- **Investment in an inspection function dedicated to the interception of invasive species at the border.**
- **A programme of horizon scanning of new and emerging risks associated with changing patterns of trade.**
- **Early engagement with new trading partners to help identify and manage high risk pathways of introduction.**

- **How effective have the European Union’s Invasive Alien Species Regulations been at addressing and tackling invasive species?**

4.1 The EU’s implementation of their Invasive Alien Species Regulation has focused on the standardisation of approach across Europe, raising awareness, building capacity and the listing of Species of Union Concern. The ambition is to be applauded, but there are a number of shortcomings to current implementation, particularly in the selection of species for listing and subsequent support for their effective management.
4.2 To date, the listing of Species of Union Concern has focused on species seen as particular risks by individual member states, identified as future risks through horizon scanning, and those where there are existing member state specific risk assessments. There are currently 49 Species of Union Concern listed by the European Commission. From the information provided by the Commission on their website, we extracted data on the reports of presence or absence of each Species of Union Concern in each EU Member State to document how these species are distributed across Europe and the scope for an effective management response (expanding on Robertson et al 2019).

4.3 We examined how many listed species had been recorded in each EU member state (Fig 1). The countries with the highest number of Species of Union Concern were concentrated in Northern Europe, with lower numbers in many Eastern and Mediterranean countries, and particularly low numbers on island states. The responsibilities for management are unevenly distributed across Europe and this does not well reflect the risks. The low numbers of species associated with many Mediterranean countries is a particular concern as this area is particularly valued for its biodiversity, contains many islands and is vulnerable to new invasions.

4.4 We then used this data to examine how widespread each species was in Europe. We placed species into three categories (Fig 2)

- Those not yet present in Europe, where prevention is the recommended management approach.

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**Fig 1 The number of Species of Union Concern recorded as present in each EU Member State.**

4.4 We then used this data to examine how widespread each species was in Europe. We placed species into three categories (Fig 2)

- Those not yet present in Europe, where prevention is the recommended management approach.
• Those present in five or fewer member states, where there may still be opportunities for eradication or preventing further spread, although on-going management of impacts will also be appropriate.

• Those present in more than five member states, where on-going management of impacts is probably the only realistic option for their management.

Fig 2 Classifying Species of Union Concern by the number of EU Member States in which they have been reported.

4.5 For at least two thirds of the species on the list, it is likely that an on-going commitment to the long-term control of their impacts is the only realistic prospect for their future management. One of the guiding principles for invasive species management from the Convention on Biological Diversity (CBD) is that effort should be prioritised towards prevention, then eradication, and only then long-term control. The current EU list has committed Member States to the opposite.

4.6 If we are to use resources wisely, and avoid over-committing Member States to open-ended commitments to the management of already widespread species, an expensive and often ineffective process, then future listing should include three criteria that are currently missing.

• The geographic coverage of listed species should better reflect the regional risks of invasion and the biodiversity resources that we aim to protect.

• The selection of further species should increase the emphasis on those where prevention or the complete removal of populations at an early stage is still a reasonable proposition, as recommended by the CBD guiding principles.

• For species that are already widespread in Europe, the decision to respond should include the assessment of the ability to cost-effectively manage the species (the process of risk management, Booy et al 2017) if we are to effectively prioritise the use of limited resources.
4.7 These same issues are reflected in the funding available to support management within the EU. The EU have devolved management responsibility to Member States, with no central budget for these activities. Although the EU LIFE programme has funded a large range of relevant projects, this funding route is slow and does not facilitate rapid responses to new species establishing, an area recognised to be particularly cost-effective. There is **no effective European level mechanism available to coordinate or support prevention or rapid responses to new invasions.**

- **In the event of EU exit, how should the UK establish its replacement for the European Commission’s scientific forum to update the species list of concern?**

5.1 Within GB, the existing Non-Native Species Programme Board provides the coordinating mechanism across the devolved administrations and this group. **The Non-Native Species Programme Board is the appropriate forum to advise on species listing at a national level.**

5.2 A UK exit will raise the issue of the representation of Northern Ireland. Currently the Non-Native Species Programme Board is a GB function, with Northern Ireland contributing to the All-Ireland Forum, reflecting its close ecological links with the Irish Republic. An option for the future might be to **broaden the remit of the existing GB Programme Board to include Northern Ireland,** with them also maintaining a dialogue with the Irish Republic through the All-Ireland Forum.

5.3 Non-native species are by definition an international issue and close collaboration between states is key. In the event of a UK exit, maintaining close alignment with the EU and the species list is to the benefit of both the UK and the EU. Thus **the UK could maintain the same species list, but make their own choices as to whether taking management action is appropriate** based on a case by case risk management assessment to avoid ineffective expenditure on long-term management. EU member States also currently have the option to add their own species to their national lists, so **the UK could include additional species while maintaining an overall alignment.**

- **How should the UK work with the European Commission and others internationally to reduce the risk of invasive species?**

6.1 Europe is taking this issue seriously and their new policy is increasing awareness, robustness and volume of actions to reduce the risks. The UK has been a significant contributor to support the new EU Regulation to develop and implement its processes. Maintaining this collaboration is to the advantage of both sides. **Close cooperation with the European Commission is to be recommended, seeking observer status on key committees would be a valuable element of this.**

6.2 Both the UK and EU are committed to international agreements on invasive species in support of the CBD’s Aichi Target 9, and wider commitments to support biodiversity. This includes a range of inputs to supporting groups such as SBSSTA and IPBES. Maintaining a **close working relationship with the EU in support of global targets is to be encouraged.**

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**References**


