

Call for Evidence – Control and impact of invasive non-native species

May 2024

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Environmental Standards Scotland (ESS) is inviting interested parties to submit evidence to support a review of the control and impact of invasive non-native species (INNS). This is part of ESS' ongoing scrutiny of the effectiveness of environmental law.

The deadline for submissions is **11 July 2024**. Please fill in the [online survey form](#) or you are welcome to email your response to callforevidence@environmentalstandards.scot.

Scotland has made various commitments to manage invasive non-native species:

- [Scotland's Biodiversity Strategy](#) outlines an objective that by 2045, 'harmful invasive non-native species will be managed so that established INNS no longer degrade native habitats and species or impede their restoration and regeneration and new introductions are managed quickly and effectively'
- [Great Britain's Invasive Species Strategy](#) aims to 'reduce establishments of INNS by at least 50% compared to 2000 levels' by 2030
- Scotland is committed to the [Global Biodiversity Framework](#), which includes a target to 'reduce the introduction of invasive alien species by 50% and minimise their impact'

Despite these commitments, the threat and impact of INNS is intensifying in Scotland.¹ We want to understand the challenges faced in controlling INNS in Scotland, and the barriers to the successful delivery of management targets.

This call seeks to gather insights into the impact of INNS, particularly regarding existing data gaps. To best inform our assessments, it would be appreciated if relevant evidence is submitted using the online form by **11 July 2024**.

The information and responses submitted will help inform and evidence our work on these issues.

Background

The Scottish Government has committed to addressing the challenges posed by INNS through various targets and initiatives in the past. Notably, the Convention on Biological Diversity Aichi 2020 Targets contained a goal that ‘by 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment’. However, NatureScot’s progress report on the 2020 Aichi targets concluded that there was insufficient progress towards this objective.²

Despite ongoing actions to control the most problematic INNS, the spread of INNS and their impacts on biodiversity is a present and growing threat. Recent studies have estimated that 10 to 12 new non-native species become established in the UK annually, with approximately 10 to 15% of these species causing significant adverse effects.³ A 2023 study conducted by the Scottish Government identified 30 invasive non-native species with a high risk of arriving, establishing and impacting biodiversity in Scotland in the next decade.⁴

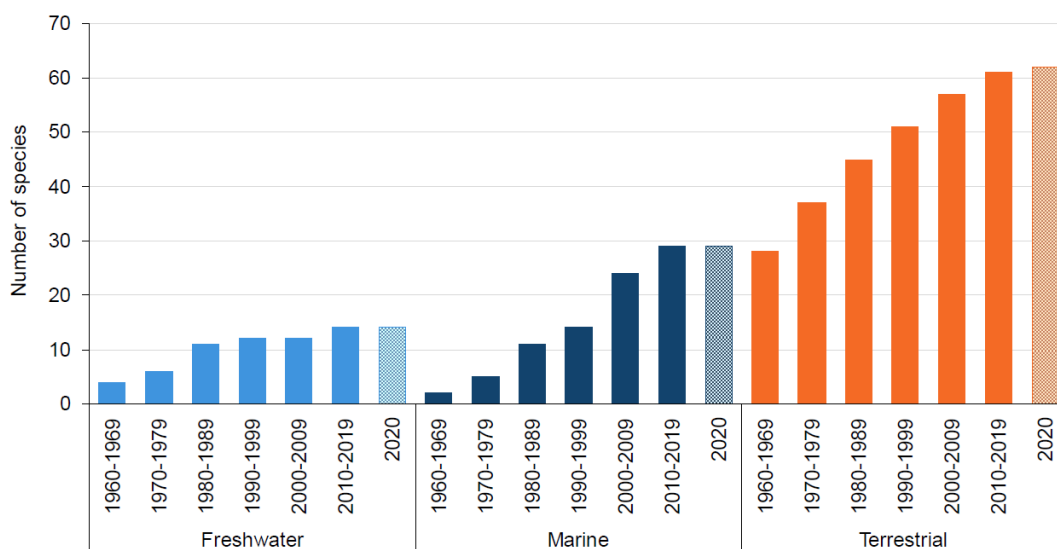


Figure 1 - Number of invasive non-native species established in or along 10% or more of Great Britain’s land area or coastline, 1960 to 2020 (contains public sector information licensed under the Open Government Licence v3.0. Source: DEFRA, Welsh Government and Scottish Government, 2023. The Great Britain Invasive Non-Native Species Strategy, 2023 to 2030).

INNS threaten biodiversity, ecosystems and the economy. INNS are recognised as one of the top five drivers of global biodiversity loss and have been implicated in

60% of recorded global extinctions.⁵ INNS threaten our ability to achieve broader environmental targets and respond effectively to climate and nature emergencies. The direct costs incurred by the Great Britain economy due to the impact of INNS are estimated to be nearly £1.9 billion annually.³

Evidence suggests that climate change will exacerbate the establishment of some INNS and will be a major cause of future proliferation and spread.⁵ INNS tend to be highly adaptable opportunists, with rapid growth and reproductive rates, and can tolerate a broad range of environmental conditions.

Call for Evidence

INNS has been identified as a priority in the ESS [Strategic Plan](#). To inform the development of our work in this area, we are issuing this Call for Evidence seeking information on the control and impact of INNS on biodiversity and ecosystem resilience.

For the purposes of this Call for Evidence, an invasive non-native species is defined as ‘a species intentionally or unintentionally introduced outside its native range by human actions that has the ability to spread causing damage to the environment, the economy, our health, or the way we live’.³ We are interested in freshwater, marine and terrestrial species. While the primary focus is on invasive non-native species, we recognise the complexity of assessing whether a species is ‘invasive’. Therefore, contributions that discuss non-native species with perceived or potential harmful impacts, as well as those that may become invasive in future are also welcome.

On control measures, we are particularly interested in evaluating the effectiveness of the current legislative and policy framework in place. We are also interested in the practical management of INNS. In the context of this Call for Evidence, ‘management’ refers to specific measures put in place to manage the presence and impacts of INNS. The Convention of Biological Diversity (CBD) emphasises a hierarchical approach to the management of INNS. It prioritises actions in the following order: (i) prevention, (ii) early warning and rapid response, and (iii) long-term management and control.⁶

The term ‘duty bearers’ refers to organisations or other entities with specific roles in effectively managing INNS. Key public bodies tasked with roles to manage invasive

species in Scotland are NatureScot, Marine Scotland, Scottish Environment Protection Agency (SEPA), Scottish Forestry and Local Authorities.

On impacts, we aim to establish an evidence base that details the effects of INNS on the environment. Identifying key data gaps will be essential for informing future research to mitigate these impacts effectively. 'Impacts' refers to the diverse effects that INNS have on Scotland's biodiversity and ecosystem resilience.

As a Scottish organisation, ESS is particularly focused on understanding and addressing the control and impact of INNS within Scotland. However, we acknowledge that INNS are a transboundary issue, and welcome evidence pertaining to the control and impact of INNS across the UK.

Your views matter

Through this Call for Evidence, ESS aims to review the control and impact of INNS on biodiversity and ecosystem resilience in Scotland. The information and responses submitted will help inform and evidence our work on these issues. We are particularly interested in your experience and evidence in relation to the following questions below.

Control of INNS

Terminology and awareness of invasive non-native species:

- a) Is the terminology used to describe invasive non-native species, as understood by duty bearers and the public, sufficiently clear? Is further clarification needed?
- b) Do you support the current criteria used by Scottish public bodies to define an invasive species? If not, what improvements are needed? What level of impact must a species have to be considered invasive?
- c) How effective are current awareness campaigns and public engagement efforts in educating the public about the risks and impacts associated with invasive non-native species? Are there any notable gaps in public understanding regarding INNS?

Management strategies:

- d) How well-defined and understood are the roles for duty bearers in managing INNS?
- e) How effective are the current management strategies at addressing INNS?
How could management of INNS be improved?
- f) Is the current allocation of effort and resources across the categories of (i) prevention, (ii) early detection and rapid response and (iii) long-term management and control appropriate in effectively managing INNS in Scotland? What improvements are needed?
- g) Are there any gaps in the management efforts targeting particular INNS species, such as marine species, freshwater species and pathogens?

Legislation/policy:

- h) Is the existing legislation used/enforced? What challenges exist in application and enforcement?
- i) Are national policies in Scotland for INNS coherent across sectors (e.g. forestry, agriculture)? Is there efficient co-ordination among sectors on INNS control?
- j) How does the approach in Scotland compare internationally? Is Scotland keeping pace with the EU and the global community on these issues?
- k) What improvements are needed in current legislative/policy frameworks to enhance the prevention, detection and management of INNS?

Impact of INNS

Understanding of impacts:

- a) What do you consider are the key environmental impacts of INNS in Scotland across freshwater, marine and terrestrial species? Please provide specific examples with evidence where possible.
- b) Are there specific species for which more impact information is needed? How could further information be gathered on these species?

- c) Is there sufficient evidence on the potential cumulative impacts or risks from the combined effects of INNS and pressures such as climate change and other anthropogenic activities?

Data gaps:

- d) What are the key data gaps in understanding the impact of INNS in Scotland?
- e) How can these gaps be addressed, and what are the key challenges/barriers to filling these gaps?
- f) How accessible and comprehensive are publicly available databases on known and potential invasive non-native species? What improvements could be made?
- g) What challenges and opportunities exist in making more information publicly available and how might they be addressed?

In addition to the above, you are welcome to provide any other information you consider is relevant to this Call for Evidence.

How to respond to this Call for Evidence

Please fill in the [online survey form](#) or you are welcome to email your response to callforevidence@environmentalstandards.scot by **11 July 2024**.

If required, please use this email address to submit queries or additional evidence. To help us prioritise analysis and manage responses, please keep responses less than 30 pages.

We welcome submissions of evidence in various forms, including signposting to existing written materials such as reports and academic literature, as well as personal perspectives and insights. When providing your views, please reference any evidence that informs them. This will help ensure that the assessment process is transparent and credible.

How your information will be used

Information received will not be quoted and attributed to individuals or organisations for official publication without your prior permission. However, we may publish or disclose the information you provide, in accordance with the access to information

regimes. These are primarily the 'Freedom of Information (Scotland) Act 2002' (FOISA) and the 'Environmental Information Regulations 2004' (EIRs).

ESS – as a public authority – has obligations under FOISA and EIRs to disclose information in response to a request made under these Acts unless an exemption applies. If you want the information you provide to be treated as confidential, it would be helpful if you could provide an explanation of this when you provide the information.

ESS will take full account of your explanation if receiving a request for disclosure of the information. Despite consulting with you, ESS cannot give an assurance that confidentiality can be maintained in all circumstances.

Please do not provide any information that relates to an identified or identifiable individual. If this is unavoidable, please anonymise in such a way that individuals are not identifiable. Further information regarding the anonymisation of personal data, and the issues you need to consider to ensure anonymisation is effective, can be found at the ICO's website.

Where personal data is provided, ESS will hold and process this in accordance with our privacy notice on ESS website.

Providing information to ESS is not intended to affect either party's ownership of its intellectual property rights.

Reference material

¹ State of Nature Partnership (2023). State of Nature Report 2023. Retrieved from: [TP25999-State-of-Nature-main-report_2023_FULL-DOC-v12.pdf](#)
([stateofnature.org.uk](#))

² Nature Scot (2021). Scotland's Biodiversity Progress to 2020 Aichi Targets. Retrieved from: [Scotland's Biodiversity Progress to 2020 Aichi Targets - Final Report | NatureScot](#)

³ DEFRA, Welsh Government, and Scottish Government (2023). The Great Britain Invasive Non-Native Species Strategy, 2023 to 2030. Retrieved from: [GB Strategy » NNSS \(nonnativespecies.org\)](#)

⁴ Scottish Government (2023). Provision of horizon scanning and analysis of pathways of spread of invasive species into Scotland. Retrieved from: [Spread of invasive species into Scotland: study - gov.scot \(www.gov.scot\)](#)

⁵ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (2023). Summary for Policymakers of the IPBES Assessment Report on Invasive Alien Species and their Control. Retrieved from: [Thematic Assessment Report on Invasive Alien Species and their Control | IPBES secretariat](#)

⁶ Convention on Biological Diversity (2002). COP 6 Decision VI/23: Alien species that threaten ecosystems, habitats or species. Retrieved from: [COP Decision \(cbd.int\)](#)