



Summary

- Invasive non-native species (INNS) constitute one of the five principal direct drivers of biodiversity loss globally. INNS are among the most significant pressures on Scottish biodiversity and there are substantial economic impacts, estimated at almost £500 million p.a.¹
- To date, the prevention, surveillance, eradication and control of invasive non-native species in Scotland has been inconsistent and best practice is not always followed.
- The upcoming Natural Environment Bill and the National INNS Plan signalled in the Scottish Biodiversity Strategy to 2045 represent important opportunities to improve effectiveness, efficiency, coordination and impact across Scotland.
- Scottish Environment LINK has developed a new report, *Invasive Non-Native Species in Scotland: A Plan for Effective Action*², which includes Ten Principles for Effective Action on INNS and lists Priority INNS Initiatives to maximise the effectiveness of future INNS action in Scotland.

Introduction

Scotland has suffered a high historic level of nature loss, losses are ongoing, and we face further risks and pressures in future. The intactness of Scotland's biodiversity is lower than most other countries worldwide³ and **1 in 9 species in Scotland are currently at risk of national extinction**⁴.

Invasive non-native species (INNS) are one of the five principal direct drivers of global biodiversity loss, alongside climate change, pollution, changes in land use, and natural resource use and overexploitation⁵.

Invasive non-native species are any species introduced beyond their native range by human actions, which cause environmental or socio-economic damage. Not all non-native species establish and when they do, not all have immediate or detectable environmental impacts – but many do.

INNS are one of the top drivers of overall biodiversity loss in Scotland⁶. The pressure of INNS on biodiversity is also intensifying across terrestrial, marine and freshwater environments⁷, and this is likely to worsen as new species arrive, climate change proceeds and conditions for the establishment and spread of species introduced by people become increasingly favourable⁸.

How do invasive non-native species spread?

INNS and climate change operate in synergy as drivers of biodiversity loss. The likelihood of non-native species establishing increases as the climate warms⁹.

International trade and the movement of people, goods and equipment are the most important vectors of non-native species across borders. As new trading relationships develop, new species will arrive. Political interventions such as Freeports, which cause the easing or delaying of checks and monitoring of goods, pose an additional risk of spreading INNS.

¹ [Direct costs of invasive non-native species to the UK. Cabi 2023](#)

² [Invasive Non-native Species in Scotland - a Plan for Effective Action.](#)

³ [The Biodiversity Intactness Index \(2021\)](#)

⁴ [The State of Nature Scotland Report \(2023\)](#)

⁵ [IPBES Global Assessment \(2019\)](#)

⁶ [State of Nature Report \(2019\)](#)

⁷ [JNCC Biodiversity Indicators \(2021\)](#)

⁸ <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1749-4877.2010.00193.x>

⁹ [IUCN: Invasive Alien Species and Climate Change \(2021\)](#)

Invasive non-native species in Scotland

In Scotland, INNS continue to have major impacts on biodiversity. The condition of our protected areas, for example, has not significantly improved over the past 15 years and invasive species constitute the single biggest pressure affecting these sites¹⁰.

Alongside the ecological impacts, **the financial impact of INNS in Scotland is estimated to be almost £500 million per year**¹¹. Invasive species have cost the UK economy over £5 billion over the past 40-50 years – one of the highest totals in Europe¹¹. Preventing or responding rapidly to new INNS is far cheaper than late action. Timely action at the right scale can deliver huge economic savings.

Several initiatives are tackling INNS in Scotland, including:

- *Saving Scotland's Red Squirrels* – a leading example of partnership working that is preventing the spread of the non-native grey squirrels into areas of Scotland where they are yet to establish.
- *Biosecurity for LIFE*, which has established advanced biosecurity measures to prevent the spread of INNS onto our most important island seabird colonies.
- The *Alliance for Scotland's Rainforest* – a partnership including several landscape-scale projects tackling invasive *Rhododendron ponticum* in our native rainforests.

However, the intensifying spread and impacts of INNS in Scotland¹² demonstrates that past and current efforts are currently insufficient. Eradications are not always seen to completion, success is not always assessed at the right ecological scale and best practice is not always followed. **Greater priority must be given to effectively tackling INNS as a prerequisite to successful nature restoration in Scotland.**

What needs to happen?

In accordance with the Kunming-Montreal Global Biodiversity Framework, Scottish Environment LINK members believe that the Scottish Government should adopt the target to reduce the rates of introduction and establishment of INNS by at least 50% by 2030¹³. We also support the adoption of the Kunming-Montreal target to eradicate or control INNS especially on priority sites.

The forthcoming Scottish INNS Plan, signalled in the draft Scottish Biodiversity Strategy, is a major opportunity for progress. It should specify best practice principles and a list of priority projects to tackle key INNS issues. The Plan should be specific to Scotland and must not simply mirror the structure and content of the existing Great British Invasive Non-Native Species Strategy: 2023-2030¹⁴. Scotland has unique context for INNS, with around 80% of the UK's islands (ecosystems especially vulnerable to INNS), some of the most un-invaded river catchments in Europe and growing specific problems like the invasive spread of non-native conifers onto peatlands and native woodlands. We need a national strategy that is designed for Scotland and **the forthcoming Natural Environment Bill should introduce statutory targets reflecting INNS impacts on species and ecosystems.**

In its report², Scottish Environment LINK proposes Ten Principles for Effect and identifies priority INNS issues in Scotland¹. The full report can be read [here](#).

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¹⁰ <https://www.nature.scot/doc/proportion-scotlands-protected-sites-favourable-condition-2023>

¹¹ <https://neobiota.pensoft.net/article/59743/>

¹² [JNCC Biodiversity Indicator B6](#)

¹³ [Kunming-Montreal Global Biodiversity Framework \(2022\)](#)

¹⁴ [The Great Britain Invasive Non-native Species Strategy \(2023-2030\)](#)

