ARPHA Conference Abstracts 9: e202397
doi: 10.3897/aca.9.e202397

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Conference Abstract

Evaluation of a structured approach to support non-native species management prioitisation

Olaf Booy[‡], Sarah Davy[§], Niall Moore[‡], Ben Rowland[§], Aileen Mill[§]

‡ GB Non-Native Species Secretariat, York, United Kingdom
§ Newcastle University, Newcastle upon Tyne, United Kingdom

Corresponding author: Aileen Mill (aileen.mill@gmail.com)

Received: 02 Jun 2026 | Published: 02 Jun 2026

Citation: Booy O, Davy S, Moore N, Rowland B, Mill A (2026) Evaluation of a structured approach to support non-native species management prioitisation. ARPHA Conference Abstracts 9: e202397. https://doi.org/10.3897/aca.9.e202397

Abstract

A fundamental challenge in the management of invasive alien species is that the number of species that require management far outweighs the available resource. Prioritisation of species and sites is essential to ensure management actions and resources are strategically focussed. The Kumning-Montreal Global Biodiversity Framework Target 6 acknowledges this stating *"preventing the introduction and establishment of priority invasive alien species" and "eradicating or controlling invasive alien species especially in priority sites, such as islands."* as key components of the target. In 2017 we developed the Non-Native Risk Management scheme (Booy et al. 2017) to evaluate aspects of management (including effectiveness, practicality, cost, negative impact, and acceptability) and assess overall eradication feasibility. The scheme evaluates available evidence and uses expert opinion where data are limited in a consensus building approach. The scheme can be applied across all taxa and environments providing a means to compare feasibility of management while accounting for differences in species population size and distribution. Since the scheme was introduced it has been adapted for use at a continental scale e.g. in the EU (Booy et al. 2020) and to assess different management options other than complete eradication e.g in Belgium (Adriaens et al. 2019). Our systematic review found the scheme has been applied in a range of countries, islands, regions and territories and local landscapes such as protected areas. Here we summarise and synthesise the findings from these studies to document the general

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patterns and trends in management feasibility that were reported and provide an overview of how the scheme can be adapted to different settings. We found a consistent trend of vertebrate species being predicted to be more feasible to manage than plants and invertebrates. Feasibility also scaled with area of management with some notable differences between island and mainland scoring.

The Non-Native Risk Management scheme can be aligned with species risk assessment to create a visualisation matrix of prioritisation. Species which present high risk and have a high management feasibility score should be clear priorities for management, however the matrix also highlights where species should be considered for other forms of long-term management. Strategic use of the scheme, including to guide contingency planning for horizon species, can inform decision making to support policy implementation in alignment with Target 6. We illustrate with examples where this approach has led to successful management action on the ground.

Presenting author

Aileen Mill, Niall Moore

Presented at

Neobiota 2026, the 14th International Conference on Biological Invasions

Conflicts of interest

The authors have declared that no competing interests exist.

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