## Pathways and contingency planning

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## **Pathways**

The processes that result in the introduction of non-native species from one location to another































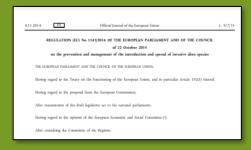


## **Drivers**



## GB Strategy, Key Action 3.3:

 "develop PAPs for priority pathways in partnership with relevant stakeholders"



### Retained EU IAS Reg, Article 13:

"implement ... a set of action plans to address the priority pathways"

#### 203 HM Government A Green Future: Our 25 Year Plan to Improve the Environment

#### 25 Year Environment Plan:

"develop plans to reduce the risk from all high priority pathways"

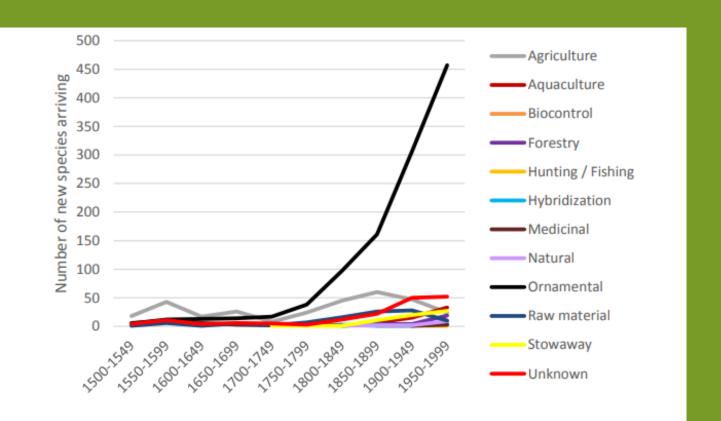








# Pathway data

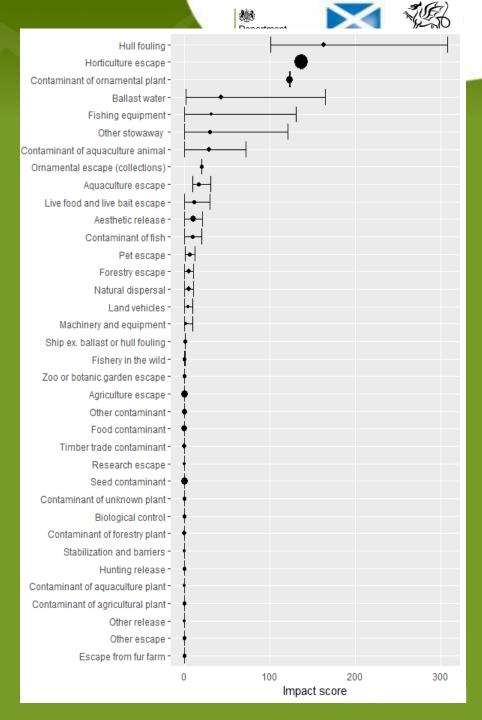


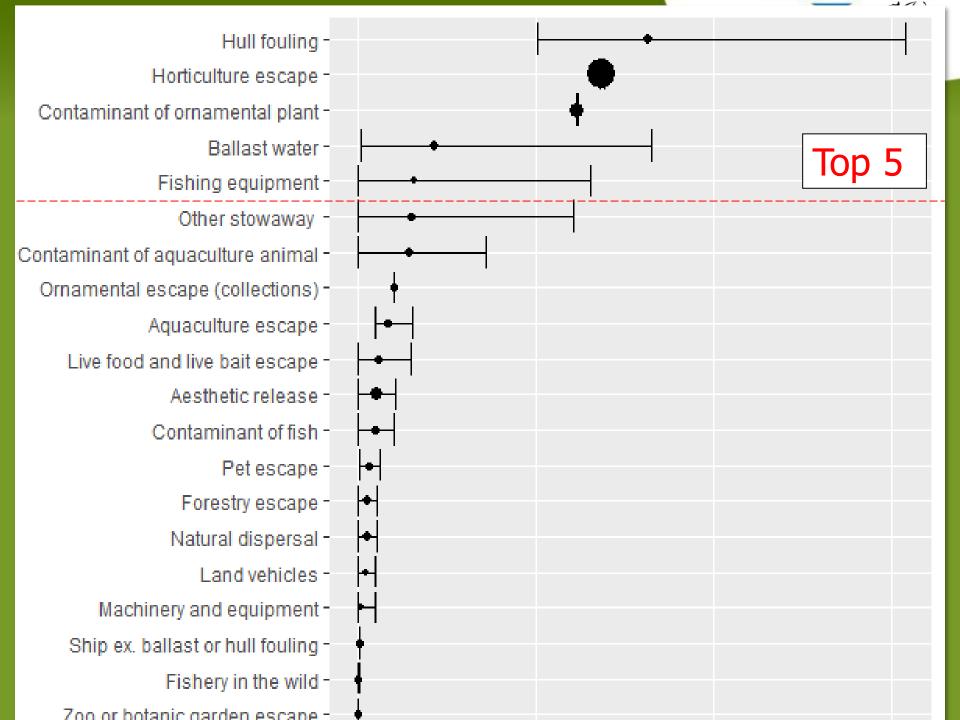
Number of established non-native species arriving through different pathways against date of first arrival



## **Prioritisation**

- Based on species that established between 1950-2000
- The pathway(s) that introduced them
- ... and the impact they went on to have

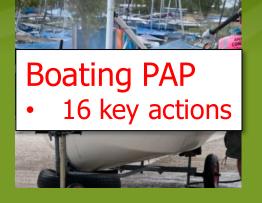












1. Hull fouling



2. Hort. escapes

3. Hort. contaminants



4. Ballast water



5. Angling gear



6. Zoos









## Pathway action





In drafting this code the authors used ideas and texts from the Council of Europe's publication European Code of Conduct on Zoos and Aquaria and IAS prepared by Riccardo Scalera, Piero Genovesi, Danny de man, Bjarne Klausen and Lesley Dickie, on behalf of the Bern Convention.

Invasive non-native (alien) species (INNS) are one of the most important drivers of biodiversity loss worldwide. Prevention is acknowledged as the best means of tackling the threat they pose. Controlling the key potential pathways by means of codes of conduct can be a highly effective way of preventing their arrival or spread. The CBD Strategic Plan for Biodiversity 2011–2020 and the EU biodiversity strategy to 2020 both aim to tackle pathways of INNS introductions and call for: invasive alien species and pathways to be identified and prioritised, priority species to be controlled or eradicated, and measures to be put in place to manage pathways to prevent their introduction and establishment.

Zoos and aquaria are key players in global conservation programmes, and have an important role in public outreach. They host millions of visitors each year and, as such, can contribute to raising awareness to prevent INNS introductions and spread. At the same



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## **Future**

Finalise PAPs

Consultation

 Deliver action and monitor effectiveness



Pathway Action Plans

Pathways are the routes and mechanisms of the introduction and spread of in (PAPs) aim to prevent or manage the risk posed by particular pathways using contamination of goods, commodities, vehicles and equipment by invasive not The development of PAPs is important to ensuring high biosecurity standards, part of our GB Non-native Species Strategy from its inception, now forming pa

Following the comprehensive analysis of pathways of introduction and spread are: (1) hull fouling; (2) horticulture escapes; (3) contaminants of ornamental p (6) zoo or botanic garden escapes. The PAPs developed so far are presented sequentially, and we welcome comments from all as they are being developed comments received via the website have been considered.

Links to the plans and their associated documents are provided below.

To comment on any of the plans, please email: nonnativepathways@apha.gov

#### Angling Pathway Action Plan

The UK Angling Pathway Action Plan is divided into separate documents for G Ireland.

Great Britain

Angling Pathway Action Plan for Great Britain IPDF version HTML ve

http://www.nonnativespecies.org/index.cfm?sectionid=135









# Contingency planning

 Preparing for action we will take in advance of an incursion





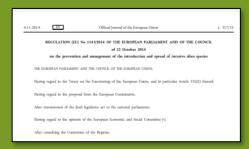






## **Drivers**







#### GB Strategy, Key Action 3.7 & 3.8:

• "produce contingency plans for priority species in advance of incursions ... foster expertise and capacity"

#### Retained EU IAS Reg, Article 17:

"after early detection ... apply eradication measures"

#### 25 Year Environment Plan:

"implement contingency plans to rapidly eradicate"











# Asian hornet













# Generic contingency plans



**Terrestrial** plants



Freshwater plants



Terrestrial vertebrates



Freshwater animals













# Generic contingency plans



















## Species specific plans – Raccoon Dog









## **Terrestrial inverts**













## Inspectorate

 Potential step change for both pathways and contingency responses



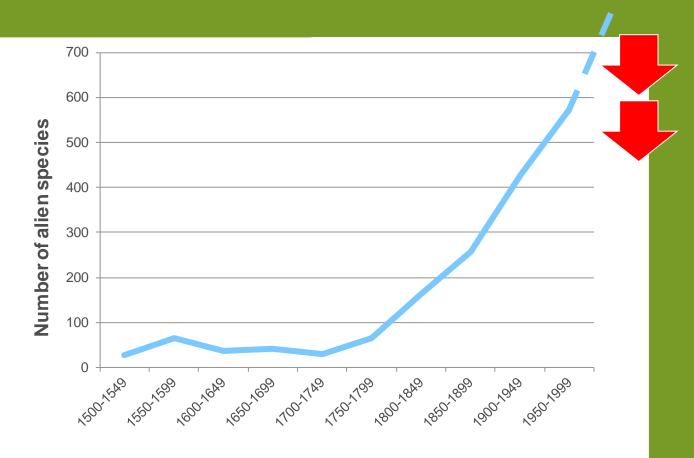








# **Evaluating success**



Pathway action

Contingency responses









# **Thanks**

