

## The Economic Cost of Invasive Non-Native Species on Great Britain Headline figures

### Overall costs:

- Invasive non-native species (INNS) cost the British economy at least £1.7 billion per annum. This is likely to be significantly less than the full economic cost since many indirect costs resulting from INNS, such as the damage to ecosystem services and loss of biodiversity, cannot be readily quantified.
- This report focused on direct costs as these were most readily and/or reasonably estimable. An analysis of previous studies of the economic cost of INNS to the economies of various countries revealed that, on average, direct costs constitute only a small proportion of the estimated total INNS costs. Taking into account these indirect costs, it is likely that the full value of the economic costs would be significantly higher.
- The annual costs to the 3 countries are estimated to be:
  - English economy - £1.3 billion
  - Scottish economy - £245 million
  - Welsh economy - £125 million
- The significantly higher costs to England are likely to be due to the fact that England has proportionately more agricultural land (which is the sector with the highest measurable direct costs). In addition, England has more (and busier) international transport gateways than the other two countries and is therefore more likely to be the entry point for invasive species. Consequently, more invasive non-native species have become established in England and some species that are widespread in England have a limited distribution in Scotland and Wales.

### Highest sectoral impacts:

- The cost to the agriculture and horticulture sectors (including the effects of plant pathogens) amounts to just under two thirds of the total estimated cost (approximately £1 billion to Great Britain, £839 million to England, £156 million to Scotland, £71 million to Wales).
- The construction, development and infrastructure sector has the 2nd highest direct cost at approximately £212 million for Great Britain, £194 million to England, £7 million to Scotland, £11 million to Wales). Costs in this sector arise from very few species. Japanese knotweed is by far the most costly species, followed by the brown rat.
- Plants as a group inflict the highest costs to the economy, with plant pathogens and mammals also causing considerable costs across sectors.

### Highest impact species:

- The top 20 non-native species inflicting the highest annual direct costs to the British economy are:

Species	Cost £m
Rabbit	263
Japanese knotweed	166
Common field-speedwell/ wild oat	100
Rat	62
Potato cyst nematodes	50
Non-native deer	35
Varroa mite	27
Floating pennywort	25
House Mouse	18
Grey squirrel	14
Rhododendron	9
Slipper limpet	6
Mink	5
Geese/swans	4
Green spruce aphid	4
Signal crayfish	3
Giant hogweed	2
Himalayan balsam	1
Buddleia	1
Edible dormouse	0.4

### Case studies – cost-benefit analysis of intervention:

- Using five detailed case studies, the report also examines the cost-benefit relationship of tackling INNS at different stages of the invasion process. The case studies were on Asian long-horned beetle, carpet sea squirt, water primrose, grey squirrel and coypu. These case studies revealed an exponential increase of the cost of control as an invasion progresses, and demonstrated the benefits of intervention at an early stage, as well as the long-term cost savings if eradication is undertaken early in the invasion process.

- It estimated that the early eradication of the aquatic plant water primrose will cost £73 thousand compared to the £242 million that it might cost if the plant was to become fully established as it has on the continent in countries like France and Belgium.