

Wildlife and Countryside Link briefing: Costs of invasive non-native species management and eradication

1. Introduction

This briefing outlines the extent to which Wildlife and Countryside Link's (Link) members contribute to the management and eradication of invasive non-native species (INNS) in Great Britain. The damage caused by INNS is far-reaching and varied, often difficult to trace and monitor, and causing considerable environmental and economic damage to the UK. A 2010 report by Commonwealth Agricultural Bureaux International (CABI) Bioscience, *The Economic Cost of Invasive Non-Native Species on Great Britain*, found that the total estimated cost of INNS to the UK economy is £1.7 billion per year.

Many of Link's 43 member NGOs are currently spending large amounts of their own resources on projects to mitigate the negative impacts of INNS and to help conserve our native species and habitats, which also support social wellbeing and economic growth. This briefing shows that Link members are spending over £650,000 on 264 management and eradication projects every year. This does not include a likely similar level of expenditure on American mink control, nor additional project costs, like feasibility studies and contractor work, which can add up to hundreds of thousands of pounds each year. In addition, the NGOs included in this report mobilise significant volunteer support for their work: 2,166 hours per year, which would cost £13,667 every year at minimum wage.

Figures from just six Link members are represented here, and even they are not a complete picture since estimating the costs of action taken on INNS can be very high.¹ This report should therefore be regarded as an underestimate of NGO spending on INNS work; the true cost is likely to be considerably greater.

2. Project costs

The Woodland Trust calculated that the average cost of plant control projects on their sites is £217,671 per year on 244 projects.² Wildfowl and Wetland Trust (WWT) data showed that they spend at least £4,960 per year controlling four species of invasive aquatic plants on their sites: New Zealand pigmyweed, water fern, floating pennywort and parrot's feather.



Figure 1 - New Zealand pigmyweed smothering native plants (©GBNNS)

Two clearance projects run by Plantlife and Dorset Wildlife Trust collectively aim to clear invasive *Cotoneaster* plants from 25 hectares of high quality, wildlife rich habitat on Portland, where

¹ The six organisations who were able to contribute were Buglife, National Trust, Plantlife, Woodland Trust, Wildfowl & Wetlands Trust and The Wildlife Trusts.

² Based on data from 2012, 2013 and a forecast for 2014.

200 hectares are currently threatened. The combined project costs are £293,333 per year, with follow-up work estimated to cost around £200,000 per year. The total cost of Plantlife's Gower project, also for *Cotoneaster* plants, will amount to £30,500 per year over two years (including in-kind contributions from the National Trust and Plantlife) for the clearance of eight hectares invaded by the plants.

The invasive American signal crayfish has been responsible for the widespread elimination of whole populations of the native white-clawed freshwater crayfish (which is listed on Annex II of the Habitats Directive) through predation, competition and transmission of crayfish plague. Since 2008, Buglife has spent an average of £60,000 per year on rescuing threatened populations of white-clawed crayfish and transferring them to secure 'ark sites' isolated from American signal crayfish. CABI estimated that the total cost incurred up to 2010 as a result of the invasion of American signal crayfish was £2,689,000 in the UK.

It should be noted that, signal crayfish apart, invertebrate INNS are not costing Link members significant amounts of money at the moment. There is, however, potential for significant costs to be incurred through the need to control them in the future. At present, this cost is being borne by Defra.

Several organisations implement and/or coordinate strategic and humane control of American mink. Many of these projects aim to protect remaining populations of water vole and aid their recovery. The CABI report estimated that 18 mink control projects were being run by just one NGO in 2010, and that each project trapped 85 mink and cost around £43,690 per year. However, costs will vary considerably depending on the extent of the area covered, the duration of the control project and the extent to which volunteers assist with schemes.

3. Staff costs

Data from WWT show that staff time spent on the control of just three invasive aquatic plants on their sites amount to 400 hours per year (New Zealand pigmyweed, water fern, parrot's feather) and a minimum of 150 hours a year controlling a number of other species (including mink, giant hogweed, Japanese knotweed, Himalayan balsam and orange balsam). Due to the sensitivity of control it is often unfeasible for volunteers to do this work. It is unlikely that WWT would be paying their staff only minimum wage (£6.31 per hour), and we have not included the likely additional cost for, example, National Insurance Contributions. However, if staff were being paid minimum wage, these hours would have cost the organisation around £3,500 per year.

Also on Gower, National Trust has been carrying out management of Japanese knotweed for the last ten years. Work for the final few sites left to treat totals 20 person hours per year. National Trust has also been treating *Rhododendron* as part of their Higher Level Stewardship project. Staff costs associated with this project in 2013 totalled 40 hours for spraying and re-growth. On The Lizard, National Trust has been carrying out Hottentot fig management since 2008. Their staff costs are estimated at £833 per year (£5,000 since 2008). Assuming that the National Trust was only paying the staff on these projects minimum wage (and once again setting aside additional costs such as National Insurance and Pension Contributions); this work on Gower and The Lizard will have cost a total of £1,212 per year.

4. Volunteer hours

Plantlife is currently carrying out clearance projects on the invasive *Cotoneaster* plant group on Portland and Gower. Volunteer help on these projects totals 167 hours per year. The Gower project is expected to last for two years, Portland for three.

Volunteers belonging to The Wildlife Trusts spent a total of 1,099 hours per year over five years pulling Himalayan balsam as part of the New Forest Non-Native Plants Project.



Figure 2 - Himalayan Balsam pulling at Stile Pool (The Wildlife Trusts)

WWT has ongoing INNS projects on each of its nine sites in the UK. The data provided by the organisation showed that their volunteers are spending over 900 hours per year on controlling some of their problem invasive plants.

This snapshot of voluntary effort totals 2,166 hours of unpaid work per year. This would cost a total of £13,667 per year if all the volunteers had been paid at the national minimum wage (currently £6.31 per hour). This does not include staff training or equipment costs.

5. Other project costs

WWT reported that on top of their ongoing project costs, they pay for a contractor to spray herbicide on New Zealand pigmyweed in their Martin Mere site. This costs £1000 per session, with several visits necessary every year.

New Zealand pigmyweed is a problem at all WWT centres. Surveys carried out at WWT Llanelli Wetland Centre indicated that costs to carry out a five year control programme for the management of New Zealand pigmyweed would cost an estimated £236,646. The potential control of parrot's feather by pond dredging and follow on measures was estimated to cost £12,410, and control of water fern using the Azolla weevil could cost over £12,000.

National Trust, as part of their Higher Level Stewardship project, employed contractors to carry out cutting and spraying of *Rhododendron*, totalling 380 hours in 2013, and 8550 hours over the last four years.

National Trust has also engaged in Hottentot fig control on The Lizard. Total cost of contractor work on this project since February 2008 totalled £39,000. This includes contributions from National Trust as well as Natural England and Plantlife.

6. Data

The information provided by the NGOs for this report mainly comprises estimates from individual projects on single species, and is therefore not representative of, but rather an introduction to, their total expenditure on INNS work.

Many of our members spend more resources on INNS work than is accounted for in this briefing, either because it is work to manage the indirect effects of INNS and hence is not recorded as 'INNS work', or because organisations simply do not have the resources to carry out a thorough evaluation of what sums they are spending across the country and on what projects. While the data collected in this report point to significant level of NGO resources being spent on INNS, the true cost to Link's members will, in reality, be much higher.

7. About Wildlife and Countryside Link

Wildlife and Countryside Link (Link) brings together 43 voluntary organisations concerned with the conservation and protection of wildlife, countryside and the marine environment. Our members practise and advocate environmentally sensitive land management, and encourage respect for and enjoyment of natural landscapes and features, the historic environment and biodiversity. Taken together our members have the support of over eight million people in the UK and manage over 750,000 hectares of land.

The INNS Task and Finish Group has been set up to identify the current issues associated with INNS in Great Britain, and how these issues can be addressed in order to reduce the negative effects of INNS. The group's work to date has focused on influencing the GB INNS Strategy Review and the EU Invasive Alien Species Regulation.

This briefing is supported by the following nine organisations:

- Angling Trust
- Buglife – The Invertebrate Conservation Trust
- National Trust
- Plantlife
- RSPB
- Salmon & Trout Association
- The Wildlife Trusts
- Woodland Trust
- Wildfowl and Wetlands Trust

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