Impact Case Study: Informing Implementation of Plans and Policies

Protecting Ireland's Biodiversity: A Strategic Approach to Invasive Alien Species Management

Prevention, Control and Eradication of Invasive Alien Species (IAS Prevention)

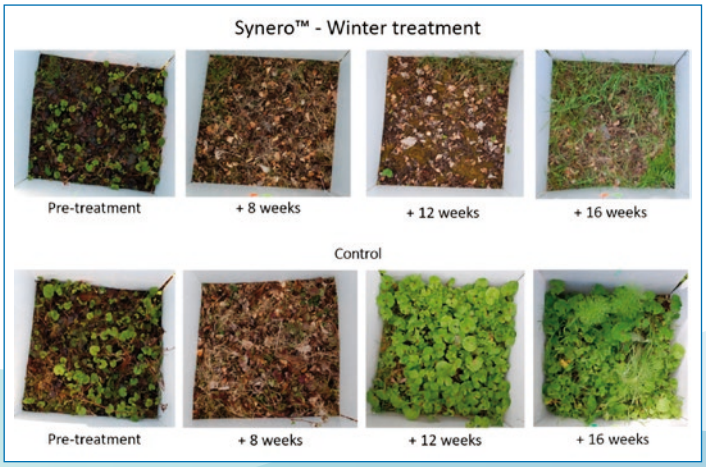
Dr. Frances Lucy

Impact Summary

- Informed national policy on invasive alien species (IAS) through horizon scanning and risk prioritisation of 40 high-impact species.
- Supported implementation of the EU Invasive Alien Species Regulation and the 4th National Biodiversity Action Plan.
- Developed communication strategies and citizen science tools to enhance public engagement and early detection of IAS.

Why Did We Fund the Research?

Invasive alien species (IAS) are one of the leading threats to biodiversity in Ireland, impacting ecosystems, agriculture, infrastructure, and public health. The EPA funded this project to support a strategic, evidence-based approach for the prevention and early detection of IAS as well as to develop rapid response tools to tackle them. The research aimed to identify high-risk species, inform national and EU policy, and develop tools to support implementation of the EU IAS Regulation and Ireland's biodiversity goals under the Convention on Biological Diversity.



Field plot trials evaluating control measures for invasive alien plant species.



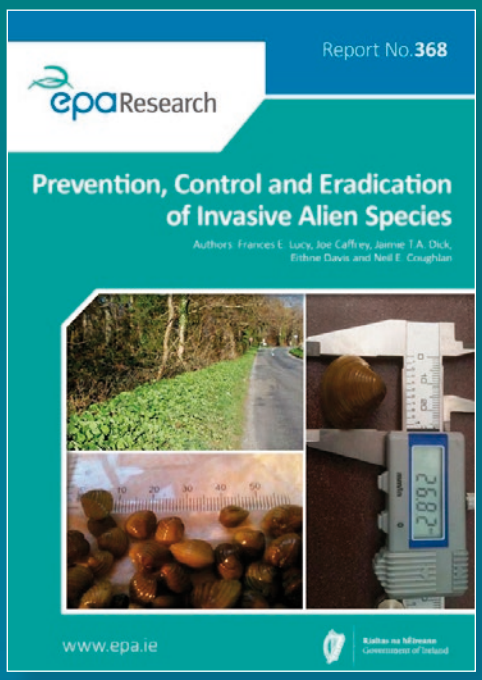
Winter heliotrope, an invasive alien species in Ireland.

What Did the Research Find?

The project used horizon scanning to identify 40 high-impact IAS likely to arrive and establish in Ireland within the next decade. It prioritised species such as the signal crayfish and roe deer for urgent action. The research highlighted the need for improved biosecurity, early warning systems, and coordinated response mechanisms. It also demonstrated the effectiveness of public engagement through citizen science and targeted communication strategies, including outreach to farmers and landowners. The project provided a framework for risk-based management of IAS aligned with international best practices.

What Was the Impact of the Research?

This research has significantly shaped Ireland's approach to IAS management. Its findings directly informed the 4th National Biodiversity Action Plan, particularly in relation to objectives to identify urgent conservation and restoration needs and to enhance the evidence base for action on biodiversity. The horizon scan results are now used by policymakers to prioritise surveillance and control efforts. The project also supported the implementation of the EU IAS Regulation by identifying species of concern and recommending practical biosecurity measures. Its communication strategies have been adopted by local authorities and NGOs to raise awareness and mobilise community action. The project's legacy continues through integration into national biodiversity governance and cross-border cooperation on IAS.



"The prevention, control and eradication of invasive species is fundamental to the conservation of biodiversity on the island of Ireland, with freshwater ecosystems being particularly vulnerable to invasions. In that light, the EPA funding for this project was particularly welcomed to support the research provision for a toolkit of IAS actions for all Ireland IAS policy and management."

Dr. Frances Lucy,
Lead Investigator, Atlantic Technological University

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