

# Study shows invasive species in waterways on rise due to climate change

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One of the most serious threats to global biodiversity and the leisure and tourism industries is set to increase with climate change according to new research by Queen's University Belfast.

Researchers at Queen's have found that certain [invasive weeds](#), which have previously been killed off by low winter temperatures, are set to thrive as global temperatures increase.

The team based at Quercus, Northern Ireland's centre for biodiversity and conservation science research, predicts that invasive waterweeds will become more widespread over the next 70 years.

The researchers say that additional management and legislation will be required if we are to stop the spread of these pest species.

Four species in particular could establish in areas on average 38 per cent larger than previously thought due to projected climatic warming. The water fern, parrot's feather, leafy elodea and the water primrose, are already highly problematic throughout warmer parts of Europe. Invasive species are considered to be one of the most serious threats to [global biodiversity](#), along with climate change, habitat loss and nutrient addition.

The estimated annual cost of invasive species (plants and animals) to the UK economy is £1.8 billion, with £57 million of impact on waterways including boating, angling and waterway management.

Funded by the Northern Ireland Environment Agency (NIEA), the research has been published in the journal *Diversity and Distributions*. It looked at the global distributions of 15 [invasive plant species](#) over a 69 year period.

Dr Ruth Kelly, from the School of Biological Sciences at Queen's, who led the study, said: "Traditionally upland areas have been protected by low winter temperatures which kill off these invading weeds. Now these are likely to become increasingly vulnerable to colonisation.

"On the island of Ireland currently about six per cent of the island is unsuitable for these [invasive species](#) but we think this will drop to less than one per cent by 2080. This type of research from Queen's is an example of how we are creating a more sustainable future and shows how monitoring the impact [climate change](#) is having is important for many reasons. This project will allow the NIEA and other agencies to begin their planning on how to address future issues and ensure our waterways remain a valuable economic and recreational resource."

Dr Kelly added: "It's not all bad news, however, as our most common invasive waterweed, the Canadian pondweed, is likely to become less vigorous perhaps allowing space for restoration of waterways and native plant communities."

Dr Michael Meharg, from the NIEA, said: "Invasive waterweeds can be a major problem in lakes and rivers throughout Britain and Ireland. Such plants are fast growing and often form dense mats of vegetation which may block waterways and cause problems for boating and fishing, and, therefore, to the leisure and [tourism industries](#). Dr Kelly's research is crucial in planning for the future as we know invasive waterweeds will also out-compete native aquatic plants species and alter habitats for insects and fish."

**More information:** [onlinelibrary.wiley.com/doi/10 ...  
1/ddi.12194/abstract](https://onlinelibrary.wiley.com/doi/10.1111/ddi.12194/abstract)

Provided by Queen's University Belfast

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