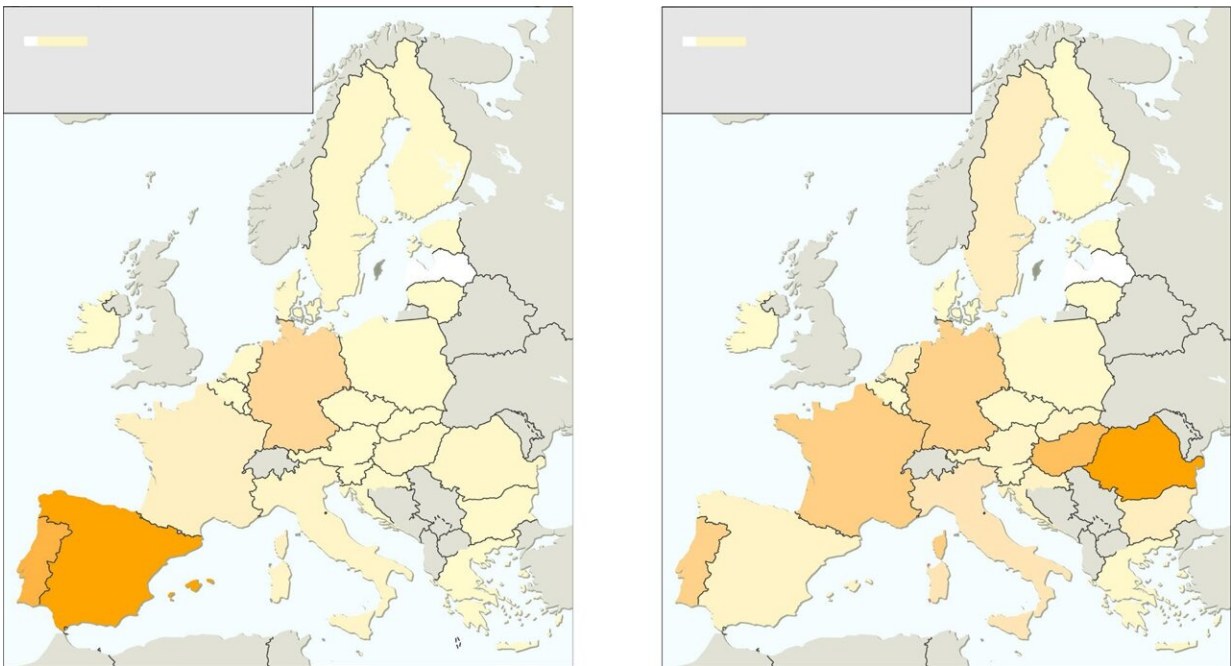


New study reveals alarmingly massive economic costs of biological invasions to the European Union

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Total invasion costs across European Union member states. b Highly reliable, observed cost subset across European Union member states. Note the different scales. Credit: *Environmental Sciences Europe* (2023). DOI: 10.1186/s12302-023-00750-3

Biological invasions are a major threat to ecosystems, biodiversity, and human well-being, resulting in ecosystem degradation and causing

economic costs in the multi-trillions of euros globally.

A study published in *Environmental Sciences Europe* sheds light on the stark economic cost resulting from biological invasions in the European Union.

The European Union continues to be exposed to thousands of invasive alien species—noxious species introduced by humans from outside of their natural range. The EU is particularly vulnerable because high economic activity itself increases the risks of biological invasions via trade and the transportation of goods among member states without substantial border control.

Most invasive alien species are not adequately assessed for their actual and potential economic impacts, and thus most [cost estimates](#) are grossly underestimated. To fill this gap, the research team quantified the [economic costs](#) of biological invasions to the European Union, while highlighting and filling knowledge gaps by correcting observed costs, and estimating future [invasion](#) costs using predictive models

Their findings are alarming—of the approximately 13,000 invasive alien species known to have established populations in the European Union, only 259 (around 1%) have reported costs, showing substantial knowledge gaps in cost assessments regionally.

The researchers' models projected unreported costs to be potentially 501% higher than currently recorded, reaching a staggering €26.64 billion (US\$28.0 billion) in the European Union, led by countries such as Lithuania, Malta, and Czech Republic.

The study's projections for future estimates revealed a substantial increase in costs and costly species, with estimates soaring to more than €142.73 billion (US\$150 billion) by 2040 in the absence of effective

management.

These findings underscore the urgent need for improved cost reporting to accurately assess the economic impacts of invasive alien species in a borderless system such as the EU.

Coordinated international action to prevent and mitigate the consequences of these invasions in the European Union and globally are therefore paramount. Countries must work together to stop new damaging [invasive species](#) from arriving, and to manage existing ones.

The lead researcher of the study, Morgane Henry from McGill University in Canada, commented, "Our study reveals a shocking underestimation of the economic costs of biological invasions in the European Union. These costs are not only a huge burden for the European Union's economy, but also jeopardize the ecological balance and well-being of societies."

"It is imperative that we take immediate action to enhance cost reporting, identify the most concerning economic impacts, and work together on a global scale to address the threat posed by [invasive alien species](#)."

Research collaborator and Matthew Flinders Professor of Global Ecology in Australia, Professor Corey Bradshaw, says biological invasions will create an insurmountable financial burden unless the EU and its governments take swift action to address the devastating ecological impact that's happening.

"The [economic damage](#) is huge and will only continue to grow exponentially unless European biodiversity agencies are provided with stronger resources to implement prevention strategies and establish controls that get on top of biological invasions early," says Professor

Bradshaw.

"The EU has a unique opportunity to address the economic carnage being inflicted because its funding model enables a cohesive approach on projects across national borders. These figures should be a wakeup call that the current strategy isn't working, and a new continent-wide strategy needs to be looked at immediately."

This study improves our understanding of the economic consequences of [biological invasions](#) in the European Union. Policymakers, scientists, and stakeholders are encouraged to take heed of its implications and collaborate to protect our ecosystems, safeguard biodiversity, and ensure the well-being of our communities.

More information: Morgane Henry et al, Unveiling the hidden economic toll of biological invasions in the European Union, *Environmental Sciences Europe* (2023). [DOI: 10.1186/s12302-023-00750-3](#)

Provided by Flinders University

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