

# Manage biological invasions like natural disasters, biologists say

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Biological invasions get less prime-time coverage than natural disasters, but may be more economically damaging and warrant corresponding investments in preparedness and response planning, according to three biologists writing in the April issue of *BioScience*.

Anthony Ricciardi of McGill University and his coauthors point out that species invasions are becoming more frequent worldwide, largely because of international trade. Although many [alien species](#) establish themselves in a new location without causing harm, the worst biological invasions may cause multiple extinctions of native species, as when the Nile perch invaded Lake Victoria and contributed to the extinction of 200 [fish species](#). Biological invasions can also be hugely expensive: the destruction of ash trees by the emerald ash borer is projected to cost the United States \$10 billion over the coming decade.

Like [natural disasters](#), biological invasions are hard to predict and extremely difficult to control once they get under way. And like catastrophic events in high-tech industries, invasions are usually inevitable and can cause problems through unexpected interactions, as when floating mats of algae caused by invasions of [freshwater mussels](#) led to several emergency shutdowns of a nuclear reactor in New York State in 2007. Yet despite being slower in their onset, invasions have more persistent impacts and a greater scope of ecological and economic damage.

Hazard-reduction plans could minimize the impacts of [biological](#)

[invasions](#), the researchers argue, and at a cost that is low relative to the cost of a major event. Vulnerability reduction practices, rapid response and assessment, and systems for sharing of information and coordination among authorities are all potentially beneficial. New Zealand has passed legislation to coordinate management of threats to its biodiversity and natural resources under a central authority, but other countries have yet to follow its lead.

Provided by American Institute of Biological Sciences

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