DEFENDERS OF WILDLIFE

REPORT

by the Center for Conservation Innovation

U.S. Biodiversity in Crisis

Exploring threats to America's most imperiled species

Scientists are documenting an unprecedented decline in global biodiversity, mainly driven by human-related activities: land- and sea-use change, climate change, pollution, invasive species, and overexploitation. Although science has helped to identify the major threats at the global scale, there are gaps in our understanding of their potential impact in the United States. Defenders of Wildlife's Center for Conservation Innovation examined the threat that these global drivers pose to U.S. species listed under the Endangered Species Act and some of the areas on which they rely. The 2023 report showed that 99% of listed species are threatened by at least one of the five drivers of the global crisis, with climate change endangering the greatest number of them. Nearly half of areas of highest biodiversity importance in the contiguous U.S. face the greatest threats. Currently underway, the first National Nature Assessment can create a more comprehensive understanding of the current and future state of the nation's biodiversity as well as the opportunities for tackling the crisis here at home.

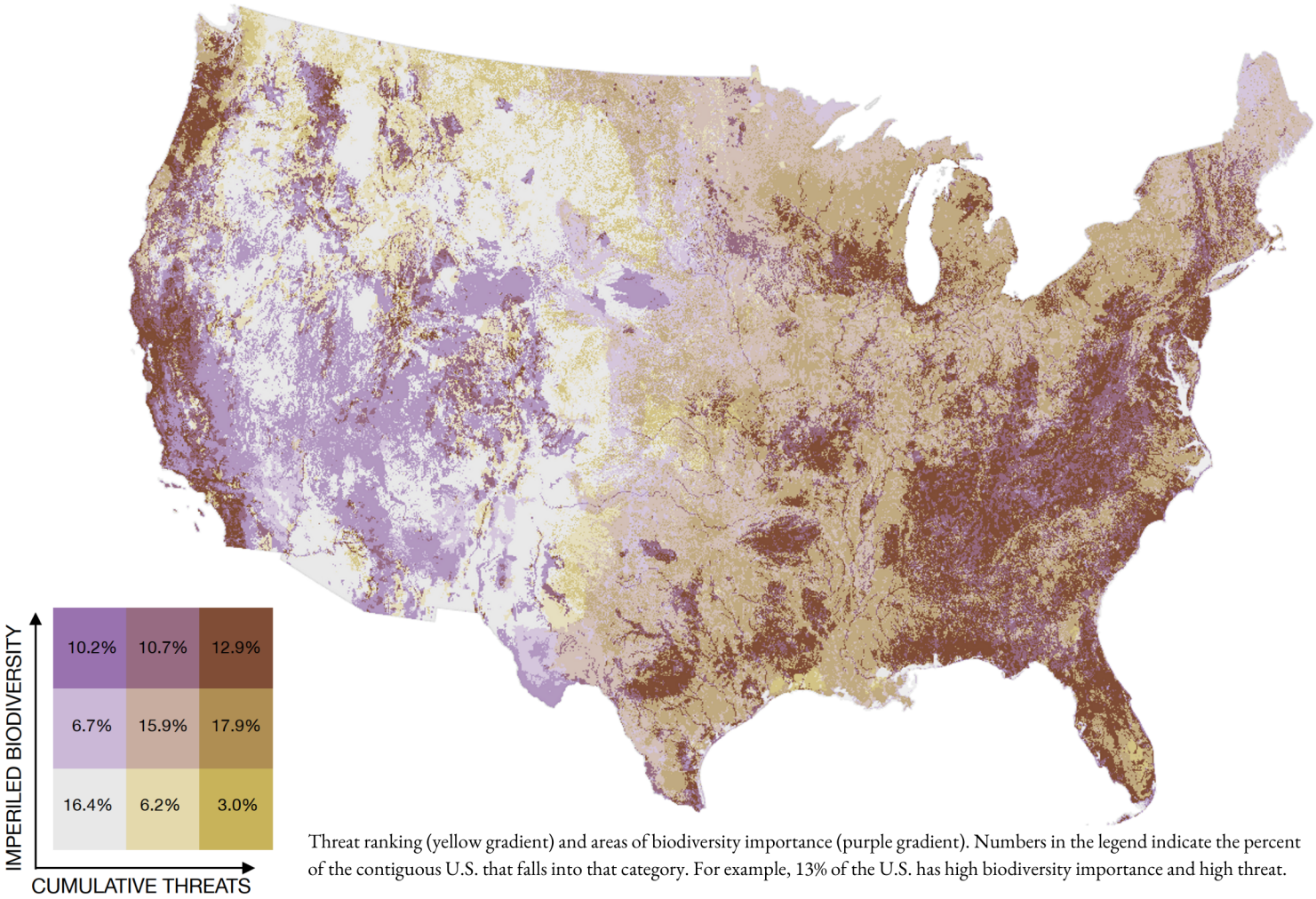
THE CHALLENGE

Today, we are witnessing extinction rates unprecedented in human history. Reports synthesizing the worsening trends focus at the global or continental scales and have identified five main underlying drivers: land- and sea-use change, climate change, pollution, invasive species, and overexploitation. While there is evidence to suggest that the United States is included in the global trend of decline, we lack a comprehensive understanding of how the global crisis is playing out on the national stage.

Through an Executive Order in 2022, the Biden Administration called for the first-ever National Nature Assessment to help fill the knowledge gaps in the status and trends in U.S. biodiversity and the drivers of change.

To help illuminate the potential threat that the five drivers of the global crisis pose to U.S. biodiversity, Defenders identified which threats contribute to the endangerment of each species listed under the Endangered Species Act and analyzed the spatial overlap between the threats and the areas important to imperiled species. The report aimed to answer the following:

- How much of our nation's important biodiversity areas are at risk?
- Which threat(s) are contributing most to species endangerment?
- Which species groups face the greatest risks?
- Where in the U.S. are these threats potentially having greater impacts on communities?



Threat ranking (yellow gradient) and areas of biodiversity importance (purple gradient). Numbers in the legend indicate the percent of the contiguous U.S. that falls into that category. For example, 13% of the U.S. has high biodiversity importance and high threat.

RESULTS & RECOMMENDATIONS

The data analyses revealed that:

- All of the contiguous U.S. and 99% of listed species are impacted by the five drivers of the global biodiversity crisis.
- Nearly half of areas of high biodiversity importance face the highest exposure to threats.
- Climate change endangers the greatest number of listed species, followed by land-use change.
- On average, a species is impacted by nearly three out of five threats and one fifth of its range falls into threat hotspots.
- Listed amphibians and reptiles face a larger number of threats and have a greater proportion of their range threatened.

An NNA is one of several building blocks announced by the administration. However, other national efforts generally only address two of the major threats to biodiversity - climate change and habitat loss. This focus would leave 77% of listed species with threats unaddressed, emphasizing the need for a more comprehensive approach, tailored local action and a strong national direction to stem U.S. biodiversity loss.

A National Biodiversity Strategy offers a way forward, elevating the national priority of the biodiversity crisis, building on the science in the NNA, promoting a more coordinated and comprehensive response, and providing the Administration, Congress, state legislators and Tribes with a roadmap for policy action.

FOR MORE INFORMATION:

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