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How a math formula could decide fate of endangered U.S. species

By Sharon Bernstein

The Trump administration is considering a proposal that could effectively let some plants and animals become extinct so cash-strapped agencies can use more of their funds to save others.

At a closed-door meeting last month, Arizona State University ecologist Leah Gerber presented a plan to U.S. Fish and Wildlife Service officials that would use a mathematical formula to direct government money away from endangered and threatened species she calls "over-funded failures" and toward plants and animals that can more easily be saved.

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Gavin Shire, a spokesman for the U.S. Fish and Wildlife Service, said in an email to Reuters that the agency is examining the controversial proposal.

"We have worked closely with this group of scientists as they developed this new conservation tool, and while we have not made any determinations yet, are impressed with its potential," Shire said. "We will be exploring further if and how we may best use it to improve the effectiveness of our recovery efforts."

Gerber's May 5 meeting with administration officials and their stated interest in her proposal have not been previously reported. The agency would not comment further.

The proposal comes at a time when the Trump administration is seeking to cut billions from the budgets of the Environmental Protection Agency and the Department of the Interior, which oversees the U.S. Fish and Wildlife Service.

The Endangered Species Act bars the government from deciding which animals and plants become extinct. But funding one species over another could let some decline or die out.

"I just don't think it's possible to save all species even though I would like to," said Gerber, a self-described Democrat and environmentalist. "That's an uncomfortable thing to say and I don't like it but that's the reality."

Gerber said as many as 200 additional species could be saved by directing funds away from species such as the iconic northern spotted owl - whose numbers have declined despite millions of dollars spent on conservation efforts - and toward those with a better chance of survival.

So-called conservation triage is already being used in New Zealand and the Australian state of New South Wales, but Gerber has developed a specific algorithm for the United States that considers the expense and needs of local species as well as rules laid out by the Endangered Species Act.

Gerber came up with the idea for a U.S. model while Democratic former President Barack Obama was in office, pitching the concept to U.S. Fish and Wildlife Service officials before her algorithm was developed. Given the proposed budget cuts, some proponents say it may have a better chance of adoption under the Trump administration.



PICTURES





The threatened Northern Spotted Owl is shown in this undated handout photo provided June 13, 2017. Courtesy Shane Jeffries/U.S. Fish and Wildlife Service/Handout via REUTERS

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To opponents, conservation triage is an impractical and immoral policy that effectively allows bureaucrats to play God.

"If we let species go extinct, there is no bringing them back," said Rebecca Riley, an attorney at the Natural Resources Defense Council. Increased funding would allow more species to be saved without sacrificing those that are costly to help, she said.

WINNERS AND LOSERS

In making her case to the U.S. Fish and Wildlife Service, Gerber flashed graphs and charts across brightly-colored monitors ringing the meeting room, but said she showed the names of species in code to avoid hot-button issues.

According to research she conducted in 2013, species that might be recommended for an increase in funding include an endangered western reindeer called the woodland caribou, the Indiana bat, the Hawaiian crow and others. She expects the new algorithm to show similar results.

Those that could be left with less government help include the Florida scrub-jay, California's marbled murrelet, Texas' golden-cheeked warbler, the West Coast's white sturgeon fish and Florida's gopher tortoise. Numerous plants could also lose funding.

Then there is the northern spotted owl, which in the 1990s became a symbol of the battle between conservationists and business when the government placed restrictions on the timber industry to protect its old-growth forest habitat.

Today, in struggling former lumber towns of the Pacific Northwest, some residents still blame the spotted owl in part for economic decline. Since 1990, amid habitat protections as well as unrelated economic pressures, the number of sawmills in California has dropped from 117 to 27, according to U.S. government figures.

"The county has never recovered from the Spotted Owl," said Keith Groves, a Trinity County Supervisor who spent his childhood in the Northern California area when it was logging country. Lumber-related work had sustained his father and grandfather, but Groves became a winemaker after the timber industry's collapse.

Locals do not blame the loss entirely on protections for the owl, but the abrupt halt to most logging on federal land connected with the animal's protection shook the region's economy, he said.

Tom Wheeler, a spotted owl expert with the Environmental Protection Information Center, said even with current levels of support the bird could become extinct by 2050.

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"We need to do everything within our power to stop that from happening," Wheeler said. "We have a legal obligation under the Endangered Species Act, but I think more forcefully we have a moral obligation to do it."

Despite protected habitat and about \$4.5 million, adjusted for inflation, that Gerber calculates has been spent annually between 1989 and 2011 to help the owl recover, federal statistics show its numbers have declined by about 4 percent per year. About 4,800 northern spotted owls are left in North America, according to the environmental group Defenders of Wildlife.

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Supporters of the triage idea prefer the term "strategic prioritization," saying there is a difference between actively deciding to let a species decline and choosing to spend more on those with better chances of recovery.

One proponent is Hugh Possingham, an Australian scientist and an architect of the policy in that country. Now the chief scientist for U.S. environmental group The Nature Conservancy, Possingham wants to see similar policies adopted in the United States.

"I'm always amazed that this is a contentious issue. I've had people discuss it with me and end up with a fit," he said. "But the mathematics and the economics of doing the best you can with the resources you have - I don't know why that's contentious at all!"

The Australian state of New South Wales, which in 2013 adopted a strategic prioritization algorithm, decided to keep funding recovery efforts for some species that the model ranked as low priorities, said James Brazill-Boast, senior project officer with the New South Wales Office of Environment and Heritage.

For example, he said, the koala would be ranked low, but Australians would never support letting the beloved creatures, listed as vulnerable by law, become extinct.

Gerber said U.S. officials could similarly decide to continue supporting species that her algorithm might reject - or non-profits could step in to help.

"I don't think the agency wants to let things go extinct," Gerber said. "I don't want to let things go extinct. ... But we can actually achieve better outcomes by being strategic."

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