

Scientists find toxic forever chemicals in hundreds of animal species



Image via [Shutterstock](#).

[Kenny Stancil](#)

and

[Common Dreams](#)

February 22, 2023

More than 330 animal species around the world are at risk of harm from exposure to toxic "forever chemicals," according to an Environmental Working Group [analysis](#) published Wednesday.

EWG's examination of data from dozens of recent peer-reviewed studies shows that more than 120 unique per- and polyfluoroalkyl substances (PFAS) have been detected in a wide range of wildlife. This includes many types of fish, birds, reptiles, amphibians, and mammals large, small, and aquatic—from pandas and tigers to squirrels and cats to otters and dolphins—as well as plankton, oysters, and scorpions. Some of the affected creatures are already endangered or threatened.

"When species are tested for PFAS, these chemicals are detected," senior EWG scientist David Andrews said in a [statement](#). "This is not an exhaustive catalog of all animal studies, but predominantly those published from the past few years."

"PFAS pollution is not just a problem for humans," he added. "It's a problem for species across the globe."

PFAS are a class of hazardous synthetic compounds [used](#) in dozens of [everyday](#) household products, [including](#) purportedly "green" and "nontoxic" children's items, as well as [firefighting foam](#). They are called forever chemicals because they persist for years in the environment as well as the bodies of humans and animals.

EWG's analysis does not seek to quantify the impacts of PFAS on wildlife, but the detrimental effects of forever chemicals on human health have been [well-documented](#), and some of the research reviewed by the group includes evidence indicating that these substances are impairing animal health.

"It has taken six decades of research on humans to really understand how these chemicals impact our biology in so many different ways," Andrews [told](#) *The Guardian*. "There's no reason to believe those same impacts are not also occurring in wildlife."

EWG developed an [interactive map](#) detailing for the first time the global extent of "the contamination crisis facing wildlife—and suggesting PFAS likely pose a risk to wildlife everywhere."

"Polluted animals were found on every continent except Antarctica," EWG noted. "The absence of PFAS in species in Antarctica is not due to a lack of contamination but instead because of the absence of recent test results in the research we studied."

Moreover, "the lack of a point on the map does not indicate that the location is free from PFAS contamination," the progressive advocacy group stressed. "Wherever testing is done for these forever chemicals, they are found."

As senior EWG scientist Tasha Stoiber put it, "The map tells a story about these chemicals—that they're global, they're persistent and toxic, and they're being spread to animals and humans through the air, water, and soil."

According to EWG:

One [study](#) included in the... analysis suggests that cardinals are being exposed to PFAS from soil, groundwater, and air, with 12 different PFAS compounds found in their blood serum. Another [study](#), on sea turtles in the north Pacific, finds PFAS can affect the development of these animals at every stage, from their eggs to immune systems.

Tests of animals were conducted most often on blood serum and plasma; on organs like the liver, kidney, and muscle, where PFAS are most likely to bioaccumulate; and eggs and other tissue samples.

"There are still countless locations and species across the globe that are likely contaminated but have not yet been tested," said EWG president Ken Cook. "This map is just the beginning."

Dr. Patricia Fair of the Medical University of South Carolina said that "as the map becomes more comprehensive, it will continue to serve as guidance to close knowledge gaps and identify research needs for the harmful persistent chemicals found throughout our environment."

According to Stoiber, EWG's analysis "found that the most common [methods we have for getting rid of PFAS](#) may end up leading to further pollution."

"We can expect that contamination to ripple through the food chain, potentially affecting even more species, including humans," she warned.

EWG has long been at the forefront of publicizing the adverse health consequences associated with forever chemicals and demanding federal action to prevent polluting industries from recklessly [discharging](#) the substances into the environment. The group said that its new

compilation of the widespread ecological risks posed by forever chemicals underscores the need for government intervention.

"We need to accelerate—not delay—efforts to turn off the tap of PFAS pollution from industrial sources," said Scott Farber, the group's senior vice president for government affairs.

"For decades, polluters have with impunity dumped as much PFAS as they wanted into our air, rivers, streams, lakes, and bays," said Faber.

Referring to the U.S. Environmental Protection Agency's (EPA) recently unveiled plan for regulating wastewater pollution, [criticized](#) as inadequate last month by EWG, Farber said that the agency "would let many PFAS polluters off the hook and rely instead on cash-strapped state regulators to turn off the tap. That's unacceptable."

Researchers have [identified](#) more than 57,000 sites across the United States contaminated by PFAS. Solid waste landfills, wastewater treatment plants, electroplaters and metal finishers, petroleum refiners, current or former military facilities, and airports are the most common [sources](#) of forever chemical pollution. Industrial discharges of PFAS are a key reason why 83% of the nation's waterways [contain](#) forever chemicals.

The Clean Water Standards for PFAS Act, [introduced](#) in 2022 by Rep. Chris Pappas (D-N.H.) and Sen. Kirsten Gillibrand (D-N.Y.), would require the EPA to establish PFAS wastewater limitation guidelines and water standards for PFAS in nine distinct industry categories by the end of 2026.

"From the polar bear in the far reaches of the Arctic to the hawksbill turtle in the tropics of the Pacific Ocean, the world's most critically imperiled species have yet another danger to contend with: PFAS chemical pollution," Nathan Donley, director of environmental health science at the Center for Biological Diversity, said Wednesday.

"Our choice," he added, "is either to keep enabling extinction with widespread chemical contamination or take action to prevent it."