

Amphibians In Decline Fund Program



In the last five years, there has been a drastic decline in the number of amphibians around the world. About a third of the 6,771 identified species of amphibians in existence are threatened with extinction or are extinct. However, about 200 new species are also being discovered each year. Nearly 6,800 species may seem like a large number, however, most of these creatures live in small, concentrated populations with scarce resources. An overwhelming number of these amphibians are in desperate need of conservation strategies to prevent their extinction. Amphibians In Decline is the only dedicated federal government fund that protects amphibians such as frogs, toads, salamanders, newts, and caecilians.

In the Central American cloud forests, Harlequin frogs are mysteriously disappearing from their habitat. So are toads and salamanders in Colombia and Western India, and the underground Caecilian, a species found in Western and Eastern Africa. Caecilians are often mistaken for snakes or earthworms. Without thorough investigation and immediate conservation action, these rare species may be completely wiped off the face of the earth in a few years.

In the United States the USGS issued a report in May of 2013 that said that the first-ever estimate of how fast frogs, toads and salamanders in the United States are disappearing from their habitats reveals they are vanishing at an alarming and rapid rate.

The study by USGS scientists



Lake Titicaca frogs for sale.
Credit: Robert Elias

and collaborators concluded that U.S. amphibian declines may be more widespread and severe than previously realized, and that significant declines are notably occurring even in protected national parks and wildlife refuges.

“Amphibians have been a constant presence in our planet’s ponds, streams, lakes and rivers for 350 million years or so, surviving countless changes that caused many other groups of animals to go extinct,” said USGS Director Suzette Kimball. “This is why the findings of this study are so noteworthy; they demonstrate that the pressures amphibians now face exceed the ability of many of these survivors to cope.”

The IUCN Red List of Threatened Species™ has identified amphibians as being the most threatened vertebrate group assessed so far, with around 41% at risk of extinction. Extinctions and large scale declines of amphibian species have been variously attributed to habitat loss, pollution, fires, climate change, disease and over-exploitation. The IUCN says that action must be taken

urgently to protect the remaining populations of amphibians across the world.

On average, populations of all amphibians examined vanished from habitats at a rate of 3.7 percent each year. If the rate observed is representative and remains unchanged, these species would disappear from half of the habitats they currently occupy in about 20 years. The more threatened species, considered “Red-Listed” in an assessment by the global organization International Union for Conservation of Nature, disappeared from their studied habitats at a rate of 11.6 percent each year. If the rate observed is representative and remains unchanged, these Red-Listed species would disappear from half of the habitats they currently occupy in about six years.

In 2010, the US Fish and Wildlife Service created the Amphibians in Decline Fund, to address this global amphibian crisis. It is an initiative to provide financial assistance and technical know how for efforts that conserve highly endangered amphibian species internationally. The goal of this program is to build a networked community that is addressing amphibian conservation.



Axolotl salamander
Credit: Elsa Valiente

The Wildlife Without Borders - Amphibians in Decline Fund program has supported conservation projects starting in 2010. The program has funded 40 projects with \$1,034,142 in 25 countries and leveraged with an additional \$2,604,122.46 in matching funds.

To date, the Amphibians in Decline Fund has successfully supported conservation efforts to protect the Chinese great salamander, Cameroon's caecilian, and the Panamanian golden frog, among others. The Amphibians In Decline Fund has funded 40 projects, since 2010, in 25 countries. The Service's support often acts as a catalyst to leverage funding from other sources for these projects. From 2010-2013, the Wildlife Without Borders - Amphibians In Decline Fund has awarded \$1,034,142 that was leveraged with \$2,604,122.46 in matching funds for amphibian conservation.



Emerald Glass Frog

Credit: Smithsonian Conservation Biology Institute

**Amphibian in Decline Fund Grants
Percentages of Activities Supported by**

- o Disease and invasive species: 58%
- o Habitat loss caused by agriculture: 31%
- o Pollution: 19%
- o Habitat loss caused by residential and commercial development: 12%
- o Harvest: 8%

- o Mining: 4%

Percentages of conservation actions supported through USFWS grants:

- o Species management: 100%
- o Education and awareness campaigns: 81%
- o Land management: 23%
- o Formal protection policy: 4%
- o Economic incentives: 4%

Examples of projects

- o **Bolivia:** The USFWS is supporting the Museo de Historia Natural Alcide d'Orbigny in implementing the Bolivian Amphibian Initiative to survey some of the country's most endangered amphibian species for the presence of the deadly fungus, chytrid.
- o **India:** In partnership with the Wildlife Information Liaison Development Society and Zoo Outreach Organization, the USFWS is supporting efforts to survey the occurrence of chytrid in the Western Ghats, a hotspot for amphibians in India.
- o **Kenya:** USFWS is supporting the National Museum of Kenya to work with local farmers to plant trees and maintain suitable cropland for the *Sagella* caecilian, a subterranean amphibian that occurs in less than five square miles of habitat.
- o **Madagascar:** Illegal gold mining is destroying the breeding ponds of the golden mantilla frog in Madagascar. To combat this threat, the USFWS is supporting a local NGO, Madagaskira Voakajy, to establish a village-based conservation organization that will restore and guard golden mantilla frog breeding sites.



Toad Mountain Harlequin Frog

Credit: Smithsonian Conservation Biology Institute

- o **Ecuador:** In partnership with Zoological Society, the USFWS is supporting conservation efforts to protect the Spotted Harlequin frog by building an isolated frog propagation facility or a "Noah's Ark."
- o **South Africa:** In partnership with, CapeNature, the USFWS is helping to protect the Rough Moss Frog through the management of invasive pine tree species that increases the risk of catastrophic fire in the ecosystem.
- o **Hong Kong:** The USFWS is supporting EcoHealth Alliance to conduct surveillance at the airport to determine if *Bathrachochytrium dendrobatidis* (Bd), a chytrid fungus that causes the disease chytridiomycosis, is being introduced through the illegal amphibian trade from China.

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Amphibians In Decline Grant Funding from 2010 through 2014	
Total Number of Grant Proposals Received	189
Total Number of Grants Awarded	40
Total Funds Distributed through Grants	\$1,034,142
Total Matching/In-kind Funds Leveraged by Grants	\$2,604,122