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HOME SWEET HOME:

5 HABITAT RESTORATION PROJECTS PROTECTING BIODIVERSITY AROUND THE WORLD

Imagine if your entire neighborhood was swept away by a giant oil spill, damaged by a train derailment, or lacked access to clean drinking water. All of these hypotheticals have actually happened to thousands of individuals as a result of climate change (and, if we're real: corporate greed). However, sometimes we forget that the same climate crises threatening our human ecosystems are the same ones threatening animals and the places they call home.

In fact, the World Wildlife Fund reports that wildlife populations have plunged by an average of 69% between 1970 and 2018. In addition to that staggering figure, the 2019 IPBES Global Assessment Report on Biodiversity and Ecosystem Services calculates that ecosystems have declined by an average of 47%, as 75% of land surface is significantly altered and 66% of the ocean experiences increasing impacts.

The Society of Ecological Restoration categorizes these ecological declines into three buckets: damage, degradation, and destruction. Damage refers to an acute and obvious harmful impact on an ecosystem (such as logging or poaching). Degradation is what happens as a result of chronic human impacts that disrupt a natural ecosystem (such as longterm overfishing or hunting). And destruction has the most severe impact: when degradation and damage removes biodiversity and ruins a

physical environment (such as urbanization, coastal erosion, and mining).

While these harms to biodiversity must be urgently addressed, they are not always irreversible. With this knowledge, we can move forward with ecological and habitat restoration — the process of aiding the recovery of a damaged or degraded ecosystem before it reaches destruction.

“Our world’s natural biodiversity is the web of life that supports us,” conservationist and co-founder of the Pacific Forest Trust, Laurie Wayburn, told Good Good Good. “Without it, our food supplies, as well as our ecosystems, are at risk of loss and collapse. Restoration and conservation are the most immediate and scalable solutions we have in the next five to 10 years to turn the tide on climate change.”

And that’s what brilliant conservationists and environmental activists (and animals themselves!) do every day.

Read on about just a few projects that celebrate the work being done around the world to restore habitats and make the world a safer place for our animal friends (and us, too!).

“People are but one species of the extraordinary diversity of life,” Wayburn said. “We ourselves are animals, so taking care of them, investing in their safe homes and refuges, is also taking care of us — and ensuring our own survival and joy in life.”

1

Florida’s Kissimmee River restoration project has brought wildlife back to the Everglades.

Much of the water in the Northern Everglades of Florida flows from the Kissimmee River. But in the 1940s, as a response to flooding and hurricanes, the federal government began draining the land, and within just a few short years, animal populations plummeted, decimating fish, waterfowl, bird, and mammal species. Now, decades (and over \$1 billion) later, 40 square miles of wetlands — about half of the original canal — have been reestablished and rehydrated. There are now 50 species of fish, 70 species of wetland-dependent birds, over 20 types of reptiles and amphibians, and four types of mammals living in the rehydrated marshes.

Additionally, the river has become part of the National Wild and Scenic Rivers System to provide special protections and funding for conservation work. While it is a great success for wildlife, the rehabilitated river also prevents flooding during storms (and performed perfectly under pressure during Hurricane Ian last fall).

“It’s a triumph of imagination and partnership between the federal government and the state,” Shannon Estenoz, assistant secretary for fish and wildlife and parks at the Department of Interior, told National Geographic. “It shows it’s possible to act at the landscape scale and demonstrates how quickly ecosystems can recover.”

2

Prescribed burns are helping crustacean populations thrive in their freshwater habitats.

Prescribed burns in southwestern Oregon’s Rogue River Valley have been a major catalyst for increased populations of vernal pool fairy shrimp.

These fires, often set to dry grasses in the savanna, target invasive plants, shrubs, and trees from shallow ponds — where these fairy shrimp (a threatened species) live. By eliminating these invasive plants, the shrimp have more room to dwell. In habitats treated with prescribed fires, fairy shrimp populations skyrocketed by over 50%.

In the past, this ecosystem relied on naturally occurring fires, or those set by local Indigenous peoples, to maintain open habitats, like seasonal, shallow ponds. As the United States continually reckons with its history of colonialism, embracing the practices of land stewardship passed down from Indigenous peoples is vital to preserving and restoring ecosystems.

“This is a highly disturbance-dependent ecosystem. Going back thousands of years, there was a fire in these coastal plains, and if it’s not burned, this landscape dominated by a rich, herbaceous plant community will quickly revert to one dominated by woody vegetation,” wildlife biologist Scott Hereford told Mongabay News. “Our goal is to restore and maintain these open areas.”

RECOVER & RESTORE



3

By expanding its honey market, Ethiopian communities have improved conditions for wildlife in the Gura Ferda forest.

For much of history, Ethiopia's Gura Ferda forest has gone undisturbed. The massive forest, which covers approximately 90,000 acres, has been unprotected on a legislative level but has been maintained by local communities. In turn, the Gura Ferda is home to a wild array of terrestrial biodiversity.

The forest is rife with wild coffee plants, and applications to clear parts of the forest for coffee harvesting are aplenty. However, most locals use the forest for honey production, hanging hives in the trees without any deforestation, providing a key economic export, all without harming the natural ecosystem.

Ecologist Julian Bayliss recently led a data-collecting expedition with the **Ethiopian Wildlife Conservation Authority**, and it quickly became clear that the correct model to preserve the forest would be forming a community conservation area.

"This would ensure that the local communities still play a leading role in managing the forest and thus protecting their main livelihood through honey collection, but it would importantly provide legislation to prevent the forest being converted to coffee cultivation or extractive mining," Bayliss told Mongabay News. "It is a beautiful example of a forest and local people living in harmony. In nature, everything is connected."



4

A nonprofit working in Brazil's Atlantic Forest has helped reintroduce hundreds of species of birds and the lowland tapir by planting trees.

Forests — and trees in general — are integral to the survival of countless species. Take Brazil's Atlantic Forest, for example, which has seen intense degradation after centuries of deforestation (University of São Paulo ecologist Ricardo Rodrigues told Mongabay News these impacts are worse than those seen in the Amazon Rainforest).

But in the span of just two decades, the nonprofit **Guapiaçu Ecological Reserve** has planted over 750,000 trees, conserving nearly 30,000 acres of the forest. This work has protected the water supply of 2.5 million people in the affected region and has led to the return of 487 types of birds, as well as the lowland tapir — which is making its reintroduction to Rio de Janeiro for the first time in 100 years.

The area has been a hotspot for conservationists — including the coalition known as the **Trinational Atlantic Forest Pact**, which aims to restore 37 million acres of the forest. Guapiaçu Ecological Reserve is just one of many organizations dedicated to buying property and maintaining it in its most native, natural state — keeping it from deforestation.

"It's a win-win," Guapiaçu Ecological Reserve's Nicholas Locke told Mongabay News. "The forest maintains biodiversity, connects existing forest fragments, and contributes to water security for the watershed's downstream population."

5

California is investing millions in beaver protection so they can continue building dams and restoring ecosystems along the coast.

Although conservationists and biodiversity organizations work tirelessly to provide human solutions to some of our most pressing environmental threats, animals already know a thing or two about habitat restoration.

Take, for instance: beavers. Water that has been drained by people, dried by drought, or threatened by massive flooding is often restored by hard-working beavers, who build natural dams, rewater valleys, and in turn, help grow vegetation and provide habitats for a myriad of other (often threatened) species.

Because of their amazing contributions to habitat restoration, beavers must also be protected. Last summer, The California Department of Fish and Wildlife approved a \$3 million funding plan to restore beaver habitats — so that they can do their part to protect natural ecosystems, too.

Aside from providing new natural habitats for fish, flies, and vegetation, beavers' dams are also natural fire and flood barriers and are essential for restoring groundwater. They're not called "eager beavers" for nothing!

Wayburn said it best: "Beavers are core ecosystem engineers and highly trained — but unsalaried — workers who create restoration magic by bringing water back to our ecosystems."