The Endangered Species Act

BANG FOR OUR BUCK

THE ECONOMIC BENEFITS OF SAVING IMPERILED SPECIES

The Endangered Species Act (ESA) doesn't just prevent individual species from going extinct. As our nation's most far-reaching wildlife conservation law, it protects the entire web of life that sustains us all. Though often hard to quantify, the benefits derived from conserving wildlife habitat and imperiled species reach every single one of us. We rely on innumerable plants and animals for medicine, jobs, recreation, clean water and abundant natural resources. So by safeguarding critical wildlife habitat and creating a healthy environment, the ESA also ensures America's long-term prosperity.

Ecosystem Services

Healthy ecosystems provide Americans with essential life-sustaining services virtually free of charge. In addition to providing a home for endangered species, our natural habitats help purify our water, control the climate, recycle nutrients and protect us from extreme flooding.

Economists have attempted to put a price tag on these so-called "ecosystem services" that we often take for granted. According to a 2011 study prepared for the National Fish and Wildlife Foundation, "The value of ecosystem services provided by natural habitat in the 48 contiguous United States amounts to about $1.6 trillion annually, which is equivalent to more than 10 percent of the U.S. GDP."[i] Our National Wildlife Refuge System alone produces at least $32.3 billion annually in benefits from ecosystem services.

The ESA is a crucial tool for conserving important habitat for imperiled wildlife that provide many of these additional benefits:

FLOOD PROTECTION Inland marshes, river deltas, barrier islands and flood plains all provide a vital buffer between human communities and high water. By soaking up water and creating a physical barrier, these natural land formations limit property damage generated by severe storms and flooding. For example, marshlands near the Charles River in Boston offer flood control worth $72,000 per acre.

DRINKING WATER New York City is supplied with clean drinking water that flows from the Catskill Mountains. Using forests for filtration instead of a new water treatment plant saves $6 billion to $8 billion per year and annual operating costs of $300 million.

FOREST PRODUCTS Our forests provide a bevy of natural products such as wood, fruits, nuts, mushrooms, honey and wild game worth an estimated $3 billion to $8 billion per year.

CROP POLLINATION A third of our food is pollinated by birds, bats and insects. The U.S. Environmental Protection Agency estimates that crop pollination alone is worth $6 billion a year.[ii] For example, two endangered species, the Mexican long-nosed bat and lesser long-nosed bat, are the main pollinators of the agave plant (*Agave tequilana*), which is used to produce tequila.

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AGRICULTURE A scientific study found that pest control services by bats—many species of which are threatened by disease and poorly sited wind turbines—save the agricultural industry at least $3.7 billion per year.[iii] Another study has shown that protecting water flow in the Rio Grande for an endangered minnow creates a $200,000 water benefit for Texas farmers and a $1 million benefit for the city of El Paso.[iv]

Recreation, Wildlife Tourism and Employment

Outdoor recreation continues to be one of our nation's most popular (and prosperous) pastimes. The total spent in 2012 for outdoor recreation in the United States was $646 billion, generating 1.6 trillion in total economic activity and 12 million U.S. jobs.[v]

In 2011, an estimated 90 million Americans participated in some form of wildlife-related recreation, including hunting, fishing and wildlife watching. These participants spent a total of nearly $145 billion.[vi] Wildlife watchers alone spent more than $55 billion in 2011, up 7 percent from 2006 when expenditures supported more than one million jobs. While imperiled species can't take most of the credit for this incredible boon, endangered species protection plays an outsized role in maintaining the wild places and wildlife that form the backbone of the outdoor recreation industry. And saving some species in particular has paid significant economic dividends:

GRAY WOLVES A 2006 study by University of Montana researchers found that the return of wolves to Yellowstone National Park brings an estimated $35 million in annual tourist revenue to the region.[vii] That figure effectively doubles once the money filters through the local economy.

ENDANGERED WHALES Whales entertain more than 6 million watchers in the United States and Canada, who spend more than $1 billion on tours, equipment and in local communities.[viii]

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PACIFIC SALMON The value of restoring Pacific salmon to sustainable levels just in the Columbia River basin is estimated to be $475 million. In 2010, restoration efforts created 1,750 jobs and $154 million in economic growth.[ix]

FLORIDA MANATEES Two state parks in Florida that focus on Florida manatees draw a combined 400,000 visitors each year who spend more than $20 million for the chance to see the graceful marine mammals.[x]

OCELOTS State parks in Texas that support the ocelot, an endangered cat, and hundreds of rare bird species are predicted to contribute $9.3 million to the local economy for every 10,000 park visitors.[xi]

Medical benefits

Our native plants and animals are nature's medical library. Each species has its own unique biochemical defenses, signals and enzymes that have the potential to treat some of the most devastating human ailments. Drugs developed from the Pacific yew tree and purple foxglove flower have already helped millions of Americans with cancer and heart disease. Our plants and wildlife continue to yield new medical discoveries that greatly benefit us all. The ESA helps ensure that none of these one-of-a-kind medicinal remedies disappear that could one day save human lives.

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Scientists looking for cures for diseases are carefully studying many rare species, including ones protected under the ESA such as:

CROCODILES Studies have shown that antibodies and proteins in crocodile blood have the potential to kill the virus that causes HIV/AIDS and bacteria resistant to penicillin.

HOUSTON TOADS Skin secretions that protect this rare toad from predators are being used to treat heart and nervous system disorders. They also have strong pain-relief properties.

DESERT PUPFISH Researchers believe this animal's ability to survive in hot springs may lead to a treatment for kidney disease.

ALLIGATORS Scientists are working to develop treatments for serious infections by treating them with proteins isolated from the blood of alligators, a species whose populations have completely recovered and been removed from the endangered species list.

i The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States, Southwick Associates, 9/29/11
ii http://www.epa.gov/ecology/faq.htm#10
iii http://www.sciencemag.org/content/332/6025/41.summary?sid=853248fd-6760-4341-93d0-2aeeab9ea450
iv http://onlinelibrary.wiley.com/doi/10.1111/j.1752-1688.2003.tb04396.x/abstract
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