The Endangered Species Act:
The Next 50 Years and Beyond

Defenders of Wildlife presents a look at the past successes, current challenges and future promise of the world's strongest law for stemming the biodiversity crisis

Defenders of Wildlife is a national, nonprofit membership organization dedicated to the protection of all native wild animals and plants in their natural communities.

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Cover photo credit: Stephen Ingram

Preamble from the President

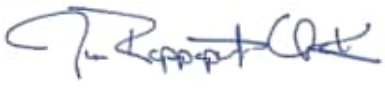
In 2023, we recognized the 50th anniversary of the Endangered Species Act, our strongest law for preventing extinction and restoring species to their natural landscapes. In 1973, the ESA's authors and visionaries developed a tool capable of incredible conservation achievements, some of which we've seen over the past 50 years. Each section of the Act was crafted to reflect the multifaceted approach that would be necessary to conserve and recover imperiled species and their ecosystems.

When I began my career as a wildlife biologist, the peregrine falcon was in dire straits and listing it under the ESA was an acknowledgment of our failure to protect this incredible bird from the harmful effects of our activities. Thanks to the ESA, however, we had the opportunity to fix our mistakes and put this species on the road to recovery and restore balance to its ecosystem. I had the privilege while director of the U.S. Fish and Wildlife Service of announcing the full recovery of the peregrine falcon in 1999 - just one of the many proud moments for the ESA, for our nation and for its species.

The Act was visionary, but its authors could have never foreseen the reality we face today. In the United States, 40% of our nation's plant and animal species are at the brink of extinction. The ESA has been instrumental in saving hundreds of species from the finality of extinction but after five decades of extraordinary conservation achievements we have reached a pivotal crossroads and need to double-down on our commitment to preserve our nation's biodiversity.

In this Defenders' tribute to the ESA, you will come to know more about the Act, its great successes and our current surmountable challenges. Defenders is working tirelessly to realize a vision of a strong ESA for the next 50 years and beyond, but we can't afford to lose any ground.

Defending the Endangered Species Act IS defending wildlife. It's defending polar bears, pinyon jays, desert tortoises, manatees, black-footed ferrets, whitebark pine trees, bull trout, red wolves and so many more that need help right now. The ESA ultimately defends us all and if fully funded and strengthened will help ensure the wildlife and wild places we all love will be here for generations to come.



Credit: James Emert

01 Introducing the Endangered Species Act

For 50 years, the Endangered Species Act (ESA or Act) has worked to keep species from falling off the brink of extinction and to recover them to the point where they no longer need the Act's protections. It has helped conserve and recover iconic species like the bald eagle, the peregrine falcon and the American alligator. It has also come to the aid of lesser-known species that contribute to the diversity of life on Earth like the island night lizard and the Lake Erie water snake. More than 95% of U.S. species listed under the Act are still with us today and many are on the road to recovery. Despite its great successes, however, major obstacles prevent the Act from fulfilling Congress' promise to recover imperiled species and the ecosystems on which they depend to survive and thrive.

In ***The Endangered Species Act: The Next 50 Years and Beyond*** we tell the story of the Act, and Defenders' 50-year history of advocating for it and defending it in the halls of Congress, in the courts and in the field. Defenders has steadfastly worked to conserve our nation's imperiled species and the habitats on which they rely for more than 75 years and has tirelessly worked to ensure the ESA realizes its full potential. We will explore the Act's successes and where its implementation has fallen short. Finally, we share our vision for implementing the Act in a way that more closely aligns with Congress' original intent in 1973. The Act must continue to serve as one of our strongest tools in addressing the current biodiversity crisis as nearly 40% of U.S. species are threatened with extinction. Before going further, however, it is important to understand why the Act was needed and how this bedrock conservation law came into being.

Credit: USFWS, Isaac Szabo

WHY DOES THE ESA EXIST?

When Europeans first began to colonize North America, the landscape they encountered was teeming with species previously unknown to them. One of these was the passenger pigeon. Well into the 1800s the passenger pigeon was incredibly abundant, numbering in the billions. People spoke of flocks that darkened the skies for hours as they flew overhead. Simon Pokegon, a Potawatami tribal leader, wrote of camping at Michigan's Manistee River in 1850 and hearing the sound of what he thought was an approaching storm. As the sound grew closer, he instead saw moving towards him "an unbroken front of millions of pigeons."

By the close of that century, however, the species was close to extinction, largely due to overexploitation and habitat destruction. In the early 20th century, the last passenger pigeons in the wild had been killed and in 1914, the lone remaining female passenger pigeon named Martha died at the Cincinnati Zoo. In the years that followed, additional species like the Carolina parakeet met the same fate.

Other U.S. species were disappearing from large portions of their historic range including the gray wolf which no longer roamed parts of the northeastern United States and the California subspecies of the grizzly bear which had vanished by the early 1900s. At the same time, the country's national mammal, the American bison, barely escaped extinction but only through intensive, last-ditch conservation efforts.

In the face of this widespread, increasingly visible biodiversity loss, the federal government made halting attempts to protect imperiled species at a national level through the Lacey Act of 1900 which prohibited some forms of wildlife trade, the Migratory Bird Treaty Act of 1918 which prohibited take of certain migratory birds and the Bald Eagle Protection Act of 1962 which provided protections specific to that species. In 1966, Congress took a broader approach to the extinction crisis by passing the Endangered Species Preservation Act. This act gave the Department of the Interior the authority to "list" native species of fish and wildlife as endangered, and to acquire habitat for them in


1900
LACEY ACT
1919
MIGRATORY BIRD TREATY ACT
1937
PITTMAN-ROBERTSON ACT
1966
ENDANGERED SPECIES
PRESERVATION ACT
1969
ENDANGERED SPECIES
CONSERVATION ACT
1972
MARINE MAMMAL
PROTECTION ACT
1973
ENDANGERED SPECIES ACT

the national refuge system which had been established in 1903. Congress amended that act in 1969, expanding protections to include the listing of mollusks and crustaceans.

By the early 1970s, however, Congress realized these attempts were not sufficient to conserve species on the brink of extinction as protections provided to species listed as threatened were limited. Congress passed a new, more robust Endangered Species Act in 1973 that fundamentally rewrote core provisions of those earlier laws. The ESA provided stronger protections for imperiled species and their habitats, including prohibiting take of all endangered animal species, and recognized that some populations of a species might need protection even if others were secure. The new Act also implemented the Convention on the International Trade of Species of Wild Fauna and Flora (CITES) for the U.S. to address threats from trade.

The structure of the Act today remains largely the same as it was in 1973 when enacted, though Congress did modify it in later amendments, including adding a permit system in 1982. While the U.S. Fish and Wildlife Service and National Marine Fisheries Services (collectively the "Services") are the primary agencies responsible for implementing the ESA, all federal agencies are accountable for recovering threatened and endangered species. The federal government is required to "list" species threatened by extinction. Listable "species" include subspecies, and for vertebrates, distinct populations. For example, the fisher is a forest-dwelling mammal related to the marten and found across wide portions of the U.S., but a geographically and genetically distinct population in California has been designated as endangered under the ESA. The ESA is, therefore, intended to not only recover the species in terms of abundance, but also to preserve its genetic and ecological variation across landscapes.

Once a species is listed, a number of protections come into play. For many, the most important protection is that from "take" which can mean to kill, hunt or harass, whether directly or, in some cases, indirectly. The ESA also requires federal agencies to take special care not to threaten the existence of listed species or adversely modify their designated critical habitat. Other provisions require federal agencies to use their authorities to protect and restore listed species, set out a framework for state cooperation and funding, and allow for permits to be issued under the Act. The Services develop recovery plans to set out how listed species will be recovered to the point where they no longer need the protections of the Act.

Credit: Anthony Orowski

A Statement of America's Values

When Congress passed the ESA, it not only set forth a framework for protecting our natural heritage, but also made a bold statement about the values underpinning the Act:

[S]pecies of fish, wildlife, and plants in the U.S. have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation . . . other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction. . . these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.

The Act still contains this important language – and decades of polls demonstrate that the vast majority of Americans still support the ESA. This support cuts across all regions and political ideologies and underscores that the values set forth in the Act truly reflect Americans' view of the importance of conserving biodiversity and our country's – and the world's – precious natural heritage.

Species listed under the Endangered Species Preservation Act of 1966 remained listed under the ESA, and received the stronger protections offered by the new law. In 1967, the government listed the first set of endangered species, commonly known as the "Class of '67." The list of 78 animals included well-known species like the bald eagle, California condor and Florida panther that are still with us today and are testament to the effectiveness of the ESA. The majority of other species remain on the list and hundreds are still on the road to recovery. Those few that went extinct were likely functionally extinct before listing or had declined so severely prior to receiving protections that recovery was nearly impossible.

Credit: FL Fish and Wildlife

Credit: Gary L. Clark

The ESA: A Detailed Look

The ESA has several key provisions which govern how threatened and endangered species are designated and protected:

Listing:

The ESA requires the Services to list species as endangered if they are at risk of extinction in all or a significant portion of their range, and as threatened if they are likely to become endangered in the foreseeable future. Species can be actual species, subspecies or, for vertebrates, distinct populations. Once a species is placed on the list it receives significant protections. Species around the world can be listed, though in practice, the U.S. government does not have the same authority to protect and recover listed species in other countries. Finally, the listing process can be initiated by the Services, or can arise from a petition submitted by the public or state agencies. The Services are allowed to designate species as candidate species as well which means they warrant protections under the ESA but the listing is precluded by higher-priority species. The Services will periodically review the list of candidate species to determine whether to list them or remove them if they no longer need the protections of the ESA.

Critical Habitat:

When listing a species under the Act, the relevant Service must also usually designate "critical habitat" that contains specific areas determined to have the physical and biological features essential for the conservation of the species. Critical habitat can be presently occupied by the species, or unoccupied, at the time of designation. Federal agencies are prohibited from adversely modifying critical habitat through actions they carry out, fund or permit.

Recovery Plans:

The Services are usually required to develop recovery plans for listed species that detail what needs to be done to recover the species to the point where it no longer needs ESA protections. The plans also include the estimated costs of those actions and set forth criteria which a species should meet before it is considered recovered.

Consultations:

Federal agencies across the government are required to use their authorities to recover threatened and endangered species. One way this is done is to ensure their actions do not jeopardize the continued existence of listed species or adversely modify or destroy their critical habitat. If a federal agency proposes to authorize, fund or carry out an action that "may affect" a listed species or its critical habitat, it must consult with the Services. The relevant Service will then issue a biological opinion, which determines whether the actions

will jeopardize the existence of the species and may propose modifications to the action to avoid violating the Act.

Prohibited Actions:

Congress imposed strict prohibitions on the take of endangered species and gives the Services the authority to extend these protections, as well as others, to threatened species. Take includes not only killing, but also harassing and harming, which can include significant habitat modification. Plant species take prohibitions apply only in areas of federal lands or in violation of state law. Trafficking such plant species across state lines or across U.S. borders, however, is also prohibited.

Permitting:

Congress did allow some exemptions from take prohibitions by providing permits for circumstances such as research purposes, to enhance the conservation of species, and for incidental take while carrying out other activities. Applicants seeking exemption must apply to the appropriate Services, and if approved must follow the terms of such permits in order to be protected from civil or criminal liability if they take the species.

The ESA Today

The planet is experiencing an unprecedented rate of extinction with one million species at risk in the coming decades, according to the Intergovernmental Platform on Biodiversity and Ecosystem Services. The Act not only provides an important backstop to the extinction crisis but importantly mandates action to move endangered species toward a full recovery. As a result, many species have been recovered through the ESA and hundreds more are on the road to recovery.

Despite these successes, the intended goals of the ESA have yet to be fulfilled: hundreds of other species listed under the ESA continue to decline, and many hundreds of species not yet listed continue to decline to the point that ESA protections may be required. The following chapters take historical stock of what the ESA has achieved, how it can be strengthened and, importantly, the role it should play in comprehensive National Biodiversity Strategy. Defenders' role in championing the ESA in the policy arena, courts and Congress is also highlighted.

Credit: USFWS

Defenders of Wildlife and the ESA

Defenders' staff testified before Congress in support of a new ESA while it was being developed, and publicly advocated for its passage. By the time the Act was made law in 1973, Defenders had been on the front lines of wildlife conservation for nearly 30 years. Originally founded as Defenders of Furbearers in 1947, the organization was formed in response to the indiscriminate use of steel-jawed leghold traps and lethal poisons on furred animals like the gray wolf. The organization quickly expanded its mission to protecting all species and their natural habitats and renamed itself as Defenders of Wildlife in 1959.

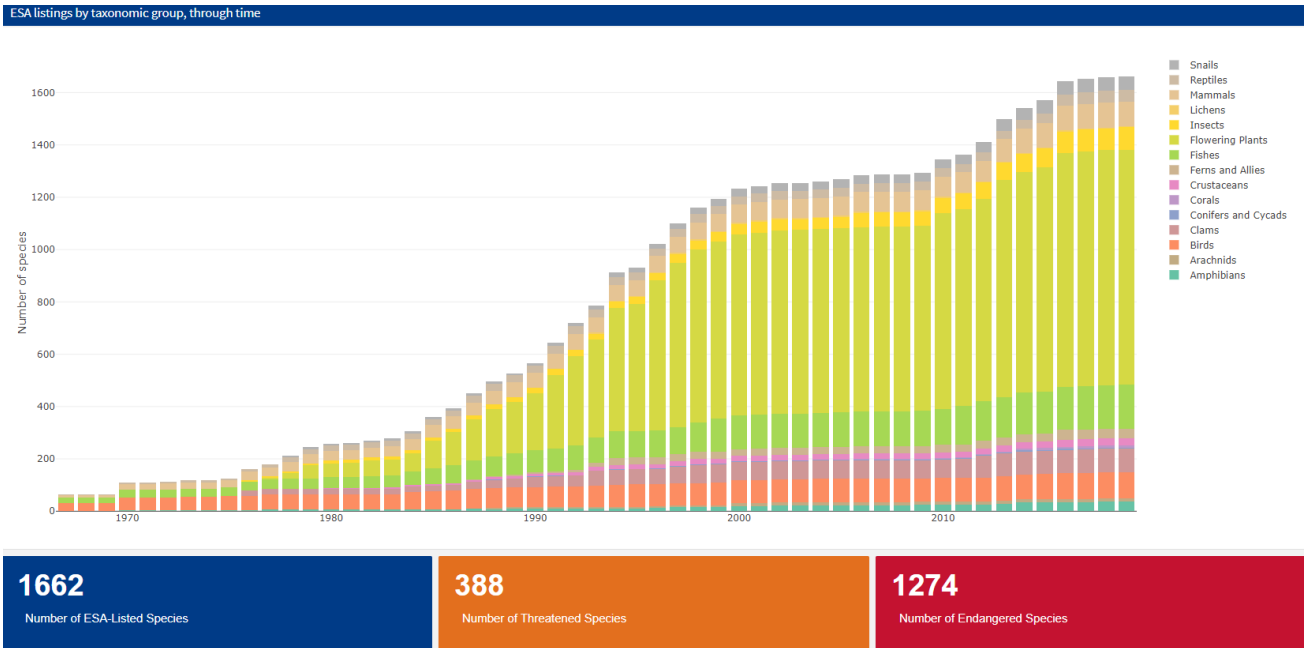
Today, Defenders continues to advocate for wildlife and boasts over 2.2 million members and supporters across the United States and the world. Defenders' voice and presence can be seen and felt in the halls of Congress, in the field and in the courts. The organization is a leader in innovative approaches to human-wildlife coexistence, having created the first private compensation fund for livestock losses to wolves in the U.S. Staff across the country work with ranchers and other partners to deploy nonlethal methods to discourage predators from preying on livestock as well as push for conservation on the national, international and local stage.


Defenders
of Wildlife
EXTINCTION IS
FOREVER!
#NoScienceNoChance
DEFENDERS OF WILDLIFE

02 ESA Successes

Since its passage, the ESA holds a near-perfect track record, with more than 95% of species listed still in existence. For species that went extinct after listing, the ESA's protections, unfortunately, came too late as most were either already functionally extinct or had populations so small there was no real chance of survival. As of present day, more than 1,600 U.S. species have been listed across numerous taxa, the majority of which are listed as endangered.

For the ESA, the ultimate win comes when a species is delisted due to recovery. This means that the protections of the Act were successful and the species no longer needs them to thrive in the wild, though science-based monitoring and management of the species should continue to ensure the species does not decline again. Most importantly, it means we have restored another thread to our country's natural tapestry. What does it take to achieve this level of success? Different species have different needs and face different threats. A few key common themes exist, however, including a strong reliance on science and collaboration. Recovering species can be a slow, resource-intensive process. To get it right requires a deep knowledge of the species' threats and needs as well as a federal all-of-government approach in collaboration with scientists, conservation groups, state and local agencies and the public.



Centering Science

What has driven the ESA's success? Much of the credit goes to its reliance on science-based decision-making. Many important decisions under the ESA, including whether to list or delist a species and how to designate critical habitat, must be decided solely on the basis of the best scientific or commercial information. The interest of the species is made central to the decision. Factors such as political popularity or economic considerations are not relevant.

While decisions on which species to protect and how to protect them focus on the best interests of the species, conservation actions under the ESA also have benefits for human communities. It is important to note, therefore, that science-centered conservation under the ESA can help drive reductions in air and water pollution, restore important ecosystem services like crop pollination and improve access to nature. As such, the ESA helps to conserve the biodiversity critical to human health and well-being.

A Foundation for Collaboration: Tribes and the ESA

Each section of the ESA was crafted to reflect the multifaceted and collaborative approach necessary to reach its goals. Among those critically important to protecting and shepherding imperiled species are the Indigenous peoples who hold deep knowledge and cultural connections with the species and landscapes. The federal government recognized the importance of Traditional Ecological Knowledge in a 2021 White House memorandum that called for agencies to incorporate the knowledge offered by Tribes into federal decision-making.

Although they comprise around 5% of the world's population today, Indigenous communities safeguard over one-third of the world's remaining intact forests and 80% of its biodiversity. Biodiversity declines are lower on Indigenous peoples' lands, a testament to their land management practices which serve as the oldest form of biodiversity conservation and ecological knowledge. When that knowledge is shared, the ESA can be implemented in a stronger, more equitable way. For example, the White Mountain Apache Tribe helped lead conservation efforts for both the Mexican gray wolf and the Apache trout, including conservation actions that led to U.S. Fish and Wildlife Service proposing to delist the latter due to its successful recovery.

The Gwich'in and other Native Alaska peoples have worked for decades to prevent oil and gas development in the Arctic National Wildlife Refuge, which harbors the greatest biodiversity of any protected area north of the Arctic Circle. Additionally, 80 Tribes across the country are members of the InterTribal Buffalo Council, an organization dedicated to restoring the iconic American bison. While the federal government still has much work to do to better involve Tribes in the management of threatened and endangered species, it is increasingly recognizing the important role they play in protecting biodiversity.

RECOVERED

Credit: Dawn Key

American Peregrine Falcon (*Falco peregrinis anatum*)

The peregrine falcon is the fastest animal on the planet, able to achieve speeds of more than 200 miles per hour while diving. Historically found across most of the continental U.S. and Canada, heavy use of pesticides like DDT (Dichloro-diphenyl-trichloroethane) and other chemicals significantly reduced its population. Raptors fed on contaminated prey and accumulating chemicals resulted in thinner egg shells vulnerable to cracking.

While the dangers of DDT had been known since the 1940s, it was not until 1962 when Rachel Carson's *Silent Spring* became a bestseller and launched a clarion call to action. Defenders of Wildlife and other conservation groups urged the government to ban DDT use shortly thereafter, but it was not until 1972 that the pesticide was banned in the U.S. Despite this victory, DDT continued to exist in the environment and by 1975 the peregrine had been wiped out in the eastern part of the country.

A concerted effort by federal and state governments, scientists and conservation groups included successful captive breeding programs that led to the reintroduction of thousands of peregrine falcons. The American peregrine falcon was removed from the Act in 1991, and currently numbers in the thousands across the country, living in both natural and human environments – with approximately two dozen breeding pairs living among New York City skyscrapers!

Credit: Tim Donovan

RECOVERED

American Alligator (*Alligator mississippiensis*)

The iconic American alligator is one of only two members of the alligator genus still around since the age of dinosaurs. It is well-suited to the wetlands of the southeastern U.S. Commercial hunting that began in the 1800s led to the species' near-extinction by the 1950s. Alligators were hunted primarily for their skins, which were used for accessories like handbags, and the American alligator was listed as endangered as part of the Class of '67.

With hunting pressure relieved by the ESA, and additional efforts made to protect the alligator's habitat, the species quickly rebounded. Through the 1970s and 80s, different populations of alligators were downlisted to threatened or removed from the list due to recovery. By 1987, the entire population was deemed recovered by the FWS. While it still receives ESA protections as a way of protecting related species like the American crocodile, the American alligator numbers in the millions and is frequently encountered in freshwater wetlands in Florida and Louisiana.

Credit: USFWS

RECOVERED

Delmarva Peninsula fox squirrel (*Sciurus niger cinereus*)

Delmarva Peninsula fox squirrels are one of the largest tree squirrels in North America. They can be distinguished from their relatives by their smaller, rounder ears and large fluffy tails. They rely on old growth forests within their namesake Delaware peninsula. During the mid-20th century these squirrels experienced a sharp decline in population due to forest clearing for agriculture and timber. They were thought to be extirpated from 90% of their historic range, leading the FWS to make this one of the first animals listed under the ESA.

In 2015, the Delmarva fox squirrel was determined recovered. Thanks to translocations and habitat protection, the Delmarva fox squirrel is thriving in much of its range. They can now be found in 10 counties within the peninsula. State parks, state forests, and National Wildlife Refuges were vital to the recovery of this species, and they continue to rely on them for habitat to this day. Although they are now abundant in Maryland, Delmarva fox squirrels are still rare in Delaware. The squirrel will continue to be protected through land conservation programs and by state endangered species laws.

Credit: USFWS

RECOVERED

Golden Paintbrush (*Castilleja levisecta*)

The golden paintbrush is native to the northwestern U.S. and parts of Canada. Unfortunately, habitat loss, fire suppression and recreational flower-picking led to its complete extirpation in the Willamette Valley and its listing in 1997.

In 2000, the FWS and the Washington State Department of Natural Resources published a recovery plan, identifying key conservation actions needed to help move the species away from the brink of extinction. Since then, groups including FWS, university researchers, state natural resource departments, private landowners and the Department of Defense have all helped to recover the now healthy population of golden paintbrush. Researchers worked to fill knowledge gaps about the plant's biology and restoration needs that helped guide better management. An active seedbank for golden paintbrush and other native grasses was established to facilitate reintroductions.

The species had gone from just 10 known populations left in 1997 to at least 48 populations of golden paintbrush existing today. Continued maintenance of prairie landscapes benefits other protected species including Taylor's checkerspot butterfly, three species of Mazama pocket gopher in Washington and Nelson's checker-mallow.

Credit: USFWS

RECOVERED

Okaloosa darter (*Etheostoma okaloosae*)

The Okaloosa darter is a small freshwater fish found only in six clear streams in the Choctawhatchee Bay area of northwest Florida. This relatively sedentary species feeds primarily on insect larvae and requires clean, flowing water to survive. Almost all of its habitat is contained within Eglin Air Force Base, the largest air base in the world. The species was part of the class of '67, listed due to its extremely limited range and the destruction and modification of its habitat. Scientists at the time were also concerned about competition from a possibly introduced species, the brown darter (*Etheostoma edwini*). At the time of listing, scientists estimated fewer than 1,500 individuals left.

In the years following listing, stakeholders including FWS, the U.S. Air Force and the Florida Fish and Wildlife Commission worked together to identify and carry out management actions to conserve the species, including significant stream restoration that improved water quality and gave the Okaloosa darter the habitat it needed to thrive. In 2011, the species had recovered to the point that FWS downlisted it from endangered to threatened. Finally, in 2023 the FWS removed it from the list of threatened and endangered species altogether as the population grew from less than 1,500 individuals to over 600,000 – a ringing success for the ESA.

03 ESA Challenges

As written, the ESA provides for the protection and recovery of imperiled species and their habitats. As implemented, however, many species have suffered from chronic Congressional underfunding of the ESA, political interference in science-based decision-making, and the failure to take an all-of-government approach to recovering species as the law mandates. These are not insurmountable challenges, but they do require a political will that is, unfortunately, not always present in Congress and in the agencies implementing the ESA.

As demonstrated by the Act's success stories, when species are listed in time, they almost always survive. The ESA aims to go beyond survival, however, to recover species until they no longer need the protections of the Act.

Starved, Not Broken: Underfunding the ESA

Though fully funding the ESA would make up only a miniscule part of the federal budget -- approximately 0.5% of current annual discretionary spending -- the Act has chronically been starved for funding. A 2022 analysis by Defenders of Wildlife calculated that the USFWS receives roughly 40% of what it needs to fully implement the Act. This has wide-ranging implications for imperiled species as many that need ESA protections languish as "candidate" species for years until they are listed. The cost of listing too late is often extinction. For example, for 15 of the 21 species the Service delisted due to extinction in 2023, there had been no confirmed sighting of them for years – and in some cases decades – before listing. Many, if not all, were likely extinct or functionally extinct before they were listed, and never saw the protections of the ESA.

Credit: USFWS

Even after species are listed, lack of resources means that statutorily-required recovery plans often take years to complete. At the present time, 265 species listed under the Act lack recovery guidance of any kind, while 370 additional species lack final recovery guidance. Also concerning is the fact that over half of existing recovery plans are more than 20 years old. This means that the Services do not have up-to-date guidance on what many threatened and endangered species need to recover. Similarly, funds are not sufficient to allow the Services to carry out vital recovery actions, such as habitat restoration, invasive species removal and scientific research.

A recent Defenders of Wildlife analysis found that the FWS only receives approximately 25% of what it needs for species recovery. Analyses over the past several years show that recovery funding has largely been flat for more than two decades, even as the number of species listed has steadily increased.


84%
Support the Endangered Species Act.
DEFENDERS OF WILDLIFE
89%
DEMOCRATS
80%
REPUBLICANS


70%
Believe decisions should be made by scientists, not politicians.
DEFENDERS OF WILDLIFE
DEMOCRATS
80%
REPUBLICANS
61%

Political Interference with Science-Based Decision-Making

Despite widespread, bipartisan public support for the ESA, some politicians have tried to limit, repeal, or weaken the law and the scientific decision-making that prioritizes the interests of imperiled species over industry.

In fact, since 2014, Congress has repeatedly used appropriations bill riders to prohibit the FWS from listing the greater sage-grouse. The greater sage-grouse is the largest grouse in North America and once numbered over 15 million with a range spanning from the West into Canada. Their numbers have declined by approximately 97% and the species' populations continue to plummet as ESA protections are denied.

As a keystone species in its iconic sagebrush habitat, its listing could provide a wealth of benefits to other species that also make the sagebrush sea their home. Anti-wildlife forces in Congress, pushed by special interest groups like the oil and gas lobby, however, have handcuffed the FWS while the species is at the brink of extinction.

These attacks have become more frequent. During the ESA's 50th anniversary year – when Congress had an opportunity to celebrate the Act's success – members of Congress introduced more than 50 bills or riders to weaken the ESA. These included attempts to stop regulatory proposals that would strengthen the law, remove foreign species from ESA protection and override the best science by legislatively delisting individual imperiled species like the northern long-eared bat, the dunes sagebrush lizard and the lesser prairie-chicken.

The ESA Needs an All-of-Government Approach

The Services are the primary agencies responsible for implementing the ESA, for listing decisions, for interagency consultations, and for leading recovery efforts. With the ESA's passage, however, Congress was very clear that conserving imperiled species was to be a responsibility across the federal government:

> *"The purposes of the bill included the conservation of the species and of the ecosystems upon which they depend, and every agency of government is committed to see that those purposes are carried out. . . the agencies of Government can no longer plead that they can do nothing about it. They can, and they must. The law is clear."*
>
> Rep. John D. Dingell

This duty was written into section 2 of the ESA, which states:

> "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

Consistent with this goal is section 7 of the ESA, which contains two important directives to federal agencies. Section 7(a)(1) requires federal agencies across the government to use their authorities to conserve – in other words, recover – threatened and endangered species. This duty applies no matter what the agency's mission is. Furthermore, section 7(a)(2) requires federal agencies to consult with the Services to ensure those agencies' actions are not likely to jeopardize the existence of threatened or endangered species, or adversely modify their critical habitat.

While section 7(a)(2) has been used extensively in the decades since the ESA became law, the first section – the requirement that agencies proactively figure out how to use their authorities to recover threatened and endangered species – has unfortunately received far less attention. A 2021 Defenders of Wildlife analysis found that very few federal agencies had developed recovery programs under this provision of the ESA. This includes agencies whose activities can impact large numbers of threatened and endangered species, like the U.S. Forest Service (400 listed species) and the Bureau of Land Management (over 300 listed species). Even agencies that are not primarily land management agencies can implement such programs. For example, the U.S. Army Corps of Engineers developed section 7(a)(1) plan to conserve the least interior tern, a plan that the FWS credited with the recovery of the species.

Credit: Jason Mrachina

04 A Vision for the Future

Biodiversity is under threat in the U.S. and around the world, and laws like the ESA are critical in addressing the crisis. The nation's natural heritage evolved over billions of years, and as unprecedented environmental changes caused by human actions play out, wildlife, lands and waters must be protected for the future. Five decades ago, Congress enacted a visionary law to serve as the cornerstone of U.S. biodiversity protections. Now is the time for a vision of a strong ESA to guide the way forward. Defenders' vision is ambitious, but achievable if the biodiversity crisis is provided the attention it deserves.

Science & Technology

Science lies at the heart of the ESA. When deciding to list species, when developing recovery plans, and when consulting with federal agencies, the law requires that wildlife agency staff use the best available science. And utilizing best available science continues to be a critical component of implementing those decisions after they have been made.

Working with partners, the Services employ a range of conservation science tools to ensure threatened and endangered species thrive in their natural ecosystems. These tools include those that help with conducting surveys to understand where imperiled species are present/absent, monitoring population health and taking action to conserve species. Many listed species are elusive and live in areas that are difficult to access. For example, the eastern black rail (*Laterallus jamaicensis*) is a recent addition to the list of threatened birds in the southeast. This species is described as "extremely secretive," dwelling in marshy areas with dense cover where it is rarely seen or heard. Given the rail's secretive nature, it is often difficult to identify where the bird still lives and thus where to focus conservation actions. New and emerging technologies and scientific approaches, like eDNA (see box), can help to accurately detect species presence and abundance.

As the biodiversity crisis intensifies, the country will be faced with increasingly complex questions on how to conserve threatened and endangered species. Conservation scientists and technologists, fortunately, are also developing new and improved ways to approach these questions. Biodiversity conservation will greatly benefit from cutting-edge innovations that can be applied to increase the efficacy of conservation efforts.

A vision for a stronger ESA includes increased transparency in what scientific research is being used and how; adoption of emerging technologies to improve ESA implementation; and clearer guidance for incorporating science in strategic recovery planning. Conservationists and ESA practitioners alike can harness new data, technologies and scientific approaches to improve outcomes for imperiled species and their habitats.

Environmental DNA

Environmental deoxyribonucleic acid (eDNA) protocols hold promise for the indirect detection of threatened and endangered species, including elusive and difficult-to-monitor species. By collecting samples of water, soil or air and performing a genetic assay of those samples, it is possible to identify species or groups of species that live nearby or were passing through. The application of eDNA for conservation science has advanced rapidly with scientists demonstrating the reliability and accuracy for a variety of taxa in different ecosystems. Some of the benefits of eDNA for conservation science include achieving high detection probabilities for low abundance species, non-invasive sampling that circumvents the need to handle threatened or endangered species and sampling locations that are unsafe or difficult to access. Compared to traditional methods, eDNA protocols are inexpensive, repeatable and scalable. Some federal agencies started to adopt eDNA protocols. In 2018, the FWS accepted an eDNA protocol to identify and designate critical habitat for the listed black warrior waterdog salamander (*Necturus alabamensis*). Given the potential of eDNA, it may able to fill in numerous data gaps, particularly with regards to hard-to-detect species.

Traditional Ecological Knowledge

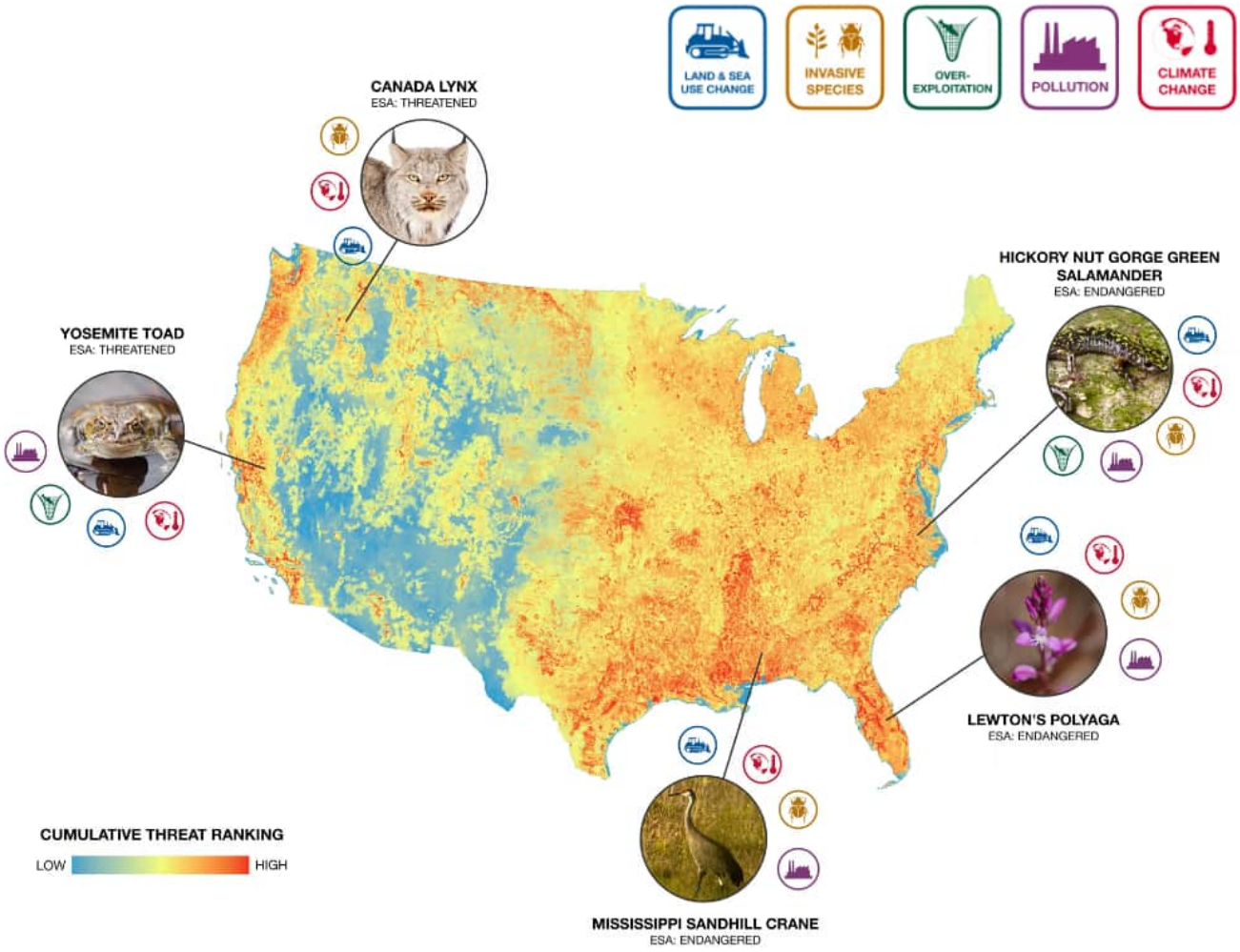
Scientists involved in ESA implementation historically created recommendations and management plans based on Western science. Over the years, other ways of knowing have often been excluded from methodologies or extracted from communities without acknowledgement. Recent trends in conservation and federal rulemaking seek to broaden the perspectives and sources of high-quality information included in decision-making. Traditional Ecological Knowledge (TEK) has been practiced by Indigenous peoples for millennia. Native communities in the U.S. often hold important and distinct understandings of species and habitats not yet known to Western science, particularly regarding climate. By intertwining these two bases of knowledge together, more durable protections for species are created. Some examples of successful instances of incorporating TEK include applying knowledge freely shared from Inuit communities to ensure stronger protections for polar bears as well as working with the Yurok Tribe to lead recovery and release of California Condors. If done properly, collaborations between TEK and Western science may produce some of the strongest protections for species. By bringing more perspectives to the table and building meaningful partnerships with Indigenous communities, greater understanding of imperiled species and their habitats can be achieved.

Artificial Intelligence & Remote Sensing

While imagery and information captured from satellites, airplanes or drones can enable monitoring of landscapes over time, examining the data can still be extremely time- and resource-intensive. Advanced artificial intelligence methods, however, allow users to teach computers to monitor landcover changes. Automated change detection systems can repeatedly check remote sensing datasets to identify possible environmental degradation and notify natural resource managers to undertake further investigation. In this case, the latest science and technology can improve monitoring of threatened and endangered species habitat to ensure that degradation is more quickly identified and remediated, and that legal protections of species and their habitats are adequately enforced.

Defenders' Center for Conservation Innovation launched Conservationist.io, an apps platform that allows users to leverage technologies like artificial intelligence for conservation.

Artificial intelligence can also shed light on trends in the remote sensing data and predict future changes. Conservation work tends to be reactive, with advocates, scientists, and resource managers reacting to threats like habitat loss when they occur or are imminent. While numerous mechanisms exist to protect important habitat, including on private lands, organizations dedicated to doing so often face significant resource limitations. When given a choice between protecting one parcel of land compared to another, some may choose to protect the land most susceptible to development. Defenders of Wildlife's Center for Conservation Innovation is leveraging advanced artificial intelligence and remote sensing datasets to provide a powerful tool to predict future landscape changes. Natural resource managers will be able to predict where future changes are most likely to impact areas of high biodiversity importance, then prioritize action in those areas.



Science to Stem the Crisis

In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) listed land-use change, climate change, pollution, species exploitation and invasive species as the five direct drivers of global biodiversity loss. Although science has helped to identify the major threats at the global scale, there are gaps in the understanding of their potential impact in the U.S. Defenders of Wildlife's Center for Conservation Innovation examined the threat these global drivers pose to species listed under the Act and some of the areas on which they rely. The 2023 report showed that nearly all threatened and endangered species listed under the Act are affected by one or more of these drivers, with many species affected by all five drivers of biodiversity loss. Climate change endangers the greatest number of listed species, with land-use change coming in a close second. Nearly half of areas of highest biodiversity importance in the contiguous U.S. face the greatest threats. Currently underway, the first National Nature Assessment is meant to create a more comprehensive understanding of the current and future state of the nation's biodiversity as well as the opportunities for tackling the crisis here at home.

Considering Climate Change

The biodiversity crisis is intertwined with another existential environmental crisis caused by human activity: climate change. It functions as an increasingly significant driver of the biodiversity crisis. At the same time, the effects of climate change are exacerbated by biodiversity loss which makes ecosystems – and human communities – less resilient to its impacts.

Climate science was very new when the ESA was made law and its impacts on species even less understood. Central to the listing and recovery processes under the ESA is the identification of the threats to the species. The five factors outlined in the ESA for listing a species are: "(A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence" (16 USC §1533(a)(1)). Climate change is not explicitly included in this list as one of the threats considered in listing decisions.

In 2007, the polar bear was the first species listed primarily due to climate-driven habitat loss. Similarly, climate change effects like snowpack loss are key drivers for more recent listings under the ESA like the North American wolverine. Other drivers of biodiversity loss can also be exacerbated by climate change. In Hawai'i, the interaction between warming temperatures and disease is contributing to the decline of Hawaiian honeycreepers: warmer temperatures enable avian malaria-carrying mosquitoes to expand upslope into areas that were once refuges for native forest birds. Increases in infectious diseases in the marine environment have also been linked to climate changes, negatively impacting corals, shellfish, finfish, marine mammals and seabirds.

Research carried out by Defenders found that almost all U.S.-listed threatened and endangered species are sensitive to climate change, but many recovery plans do not include climate-related recovery actions. A vision for a properly implemented ESA must address climate change in an ambitious way that recognizes the increasing threats to biodiversity caused by climate change and adapts recovery planning and other management activities.

Furthermore, the ESA serves not only as a way to conserve species in the face of threats like climate change, but also as a critical component of a larger strategy to restore and protect ecosystems on a scale that can help fight the climate crisis. Science-based afforestation projects can lock up carbon in healthy forest ecosystems. Restoring ecosystems like wetlands can reduce emissions and enhance carbon storage. The ESA has built into it a flexibility and power to meet the challenges ahead but lacks the Congressional will needed to make sure it is implemented to its fullest.

Time to Take Action

Over the past several years, Defenders' staff and colleagues have been a definitive source of information about the ways that climate change could impact listed species, and about the actions being undertaken by the management agencies. Assessments of threatened and endangered animals and endangered plants and lichens found that virtually all listed species are sensitive to at least one of eight factors that could be altered by climate change, and many species were sensitive to four or more. The Services have increased their consideration of climate change as a threat over time—climate change is discussed in documents for about 80% of animals and 90% of plants. Explicit planning of climate-related management actions for these species lags far behind, however: less than 40% of animals and less than 4% of plants have recovery documents that outline actions to reduce the threat of climate change. Recovery and management plans that are more forward-thinking can help practitioners begin to think about how action taken today can serve to mitigate the impacts of climate change on biodiversity tomorrow, but implementation is critical. Actions like conserving and restoring climate refugia and wildlife migration corridors, and tailoring protections to better address climate as a threat can help species adapt to the changing world.

Credit: Tom Schneider

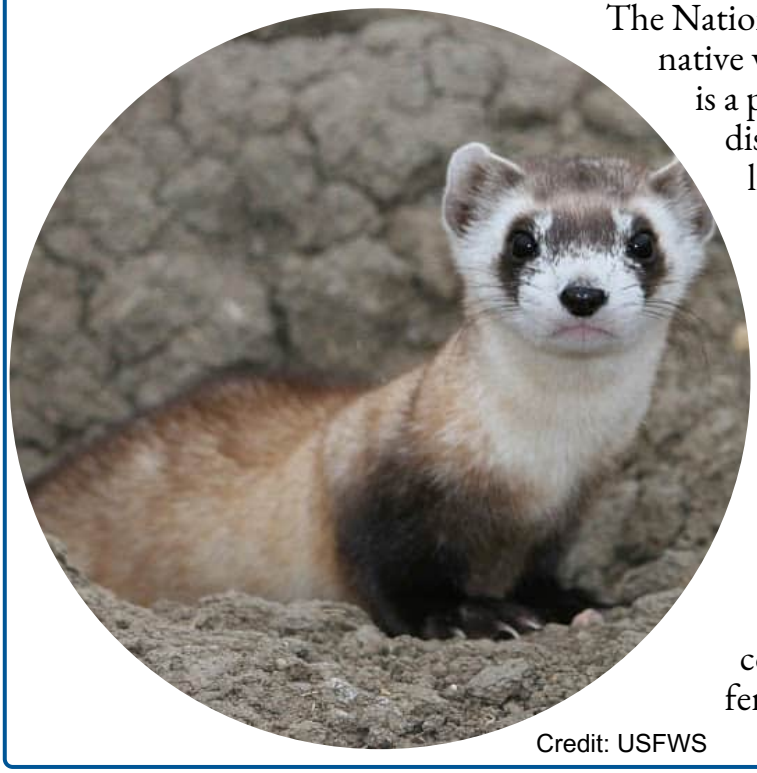
On Federal Lands

Comprising close to 28% of the U.S. land base, federal lands are essential to the future of protecting and recovering imperiled species. Along with harboring some of most beautiful and beloved landscapes in the country, national parks, national wildlife refuges, federally-protected forests, deserts and grasslands and other federal lands provide habitat for hundreds of threatened and endangered species. As required by the ESA, the agencies managing these lands must prevent harm to the listed plants, animals and fungi and take proactive actions to promote their recovery. There are four major federal public land systems. Two of them – the U.S. Forest Service's National Forest System and the Bureau of Land Management's National System of Public Lands – are managed under a "multiple use and sustained yield" doctrine. This requires those agencies to manage their lands for a multiple set of uses, with wildlife habitat as one "use." The National Wildlife Refuge System is primarily managed to conserve wildlife, and plays a particularly key role in the conservation of threatened and endangered species. The National Park System has a broader mission, and is managed both to preserve natural and cultural resources, and provide access to people. Collectively these federal lands enable species conservation across large landscapes. Existing federal laws give the Department of the Interior authority to bring lands into to the federal network for wildlife conservation, including by expanding the National Wildlife Refuge System. Unfortunately, historically federal land managers have too often failed to use these authorities to fulfill their obligations under the ESA to recover threatened and endangered species.

Federal lands provide habitat for hundreds of threatened and endangered species, including well-known wildlife like polar bears, salmon and owls as well as lesser-known species like cacti, tiny fishes, snails and insects. Some animals and plants rely almost exclusively on federal lands and are found nowhere else. For instance, the Virgin River chub (*Gila seminuda (=robusta)*) is found only in the Virgin and Muddy rivers where Arizona, Nevada and Utah come together. The endangered Mount Charleston blue butterfly (*Plebejus shasta charlestonensis*) occurs only on the Humboldt-Toiyabe National Forest in Nevada. The Warm Springs pupfish (*Cyprinodon nevadensis pectoralis*) and Whitebluffs bladderpod (*Physaria douglasii tuplashensis*) have 100% of their range on Refuge System lands and the Ash Meadows Amargosa pupfish (*Cyprinodon nevadensis mionectes*) has 92%.

More than half of the listed endangered and threatened species occur on the federal lands managed by the four agencies noted. Unfortunately, many of those species are moving further away from recovery. Half of the listed animal species that have the majority of their range on National Forest System and Bureau of Land Management lands are declining. In order to capitalize on the potential for federal lands to make a strong contribution to curbing the extinction crisis, a paradigm shift that results in committed leadership and resources dedicated to species recovery and habitat protection is required.

National Wildlife Refuge System



Credit: USFWS

The National Wildlife Refuge System, where native wildlife and ecosystem conservation is a primary purpose, protects a disproportionately large number of listed species given its relatively small land base. With its 94 million terrestrial acres and 795 million marine acres, the Refuge System protects over 500 endangered and threatened species -- nearly one-third of the total listed under the ESA. Refuges also are integral in the ongoing recovery of some of the most imperiled and iconic listed species, including California condor, red wolf and black-footed ferret.

This means that listed species that live (or will live) on federal lands have the ecological conditions needed for their recovery and long-term viability.

Federal land managers need to consider the recovery of listed species a primary responsibility and actively address threats in the context of climate change, maintaining up-to-date inventories and restoring and connecting habitats that will support long-term viability. Properly implementing the ESA on federal lands means conservation strategies are in place, line officers are committed to their protection and agencies are working together to achieve recovery at a landscape level. It also means an expanded Refuge System and other protected areas, ensuring imperiled species' habitat can be managed for conservation. Federal lands include tremendous natural landscapes, and they are intended to be managed for the benefit of the American people. By focusing more on biodiversity, these lands can provide profound improvements to biodiversity in the United States for today and generations to come. As climate change, human encroachment, invasive species and myriad other challenges face America's wildlife, the FWS should use its authority to strategically grow the Refuge System to protect habitat for species while we still can.

On Private Lands

Fulfilling the goals of the ESA depends greatly on voluntary conservation efforts by private landowners and businesses. Sixty percent of the land in the U.S. is privately owned, more than 60% of which is farms and ranches. Additionally, land trusts steward more than 60 million acres of land in the U.S., an area larger than all the national parks combined. Seventy percent of ESA-listed species spend part of their lifecycle on private lands. Recovery and conservation of ESA-listed species hinges on the engagement of private entities, such as private landowners, businesses and land trusts. Numerous promising options exist to expand private lands conservation for threatened and endangered species.

As the largest source of federal funds for wildlife conservation on private lands, the Farm Bill is one of our most important pieces of legislation for conservation of ESA-listed species. Voluntary, incentive-based programs provide support to producers to conserve wildlife and habitat on their land. Adequate funding is needed to enable private entities to implement necessary conservation efforts on their lands. In addition, improving accessibility of Farm Bill programs is crucial to widespread collaboration efforts for wildlife conservation and to help address historical inequities.

Another major source of private lands conservation is section 10 of the ESA. Section 10 balances the need to protect threatened and endangered species with development by providing for a comprehensive incidental take permitting system that allows applicants to be protected if they take a protected species, as long as they work with the Services to develop a "Habitat Conservation Plan" (HCP) that sets out measures by which the applicant will minimize and mitigate their impacts on the species to the maximum extent practicable. These measures might include avoiding areas of particular importance to the species, modifying the timing of planned activities to avoid breeding season and even protecting off-site land to offset the damage caused on-site. Without such a permit, the applicant is legally liable for any take in violation of section 9 of the ESA. Unfortunately, the HCP program is not being carried out to its potential. As with other programs, the HCP program is underfunded and the Services lack adequate resources to develop, approve and monitor these plans, and there are significant data gaps in how many of these plans are performing. An expansive, scientifically-rigorous, transparent and rigorously enforced HCP program could not only improve species outcomes on the individual HCP level and ensure compliance with the law, but science and management data could inform ESA recovery at a national level.

In 2023, the FWS proposed a new kind of conservation agreement, the Conservation Benefit Agreement (CBA) which replaces older voluntary instruments. As proposed, CBAs will allow private landowners and other private actors to take steps to improve the status of species on private lands while avoiding legal liability

Success on Private Lands

The ESA empowers private landowners to voluntarily manage their lands and undertake conservation efforts for listed species to minimize penalties, and to promote healthy viable lands. These efforts have resulted in many successes. For example, the grizzly bear and New England cottontail have seen successes under the ESA on private land. While the grizzly remains listed as threatened under the ESA and still need the law's protections, their numbers in the Greater Yellowstone Ecosystem have tripled since they were first protected under the ESA. As one step toward eventual recovery of grizzly bear populations, federal and state agencies have collaborated with private landowners, tribes, and conservation organizations on habitat restoration and conflict reduction efforts on both public and private lands. Similarly, the New England cottontail was saved from being listed under the ESA due to proactive voluntary conservation efforts by private landowners. In 2015, farmers and foresters collaboratively helped federal and state agencies prevent the need to list the candidate species under the ESA by increasing and connecting early successional habitat.

when those species are taken by such activities. If properly implemented and run, this program could extend recovery further into private lands.

A vision of communities energized to fulfill the many opportunities to conserve listed species on private lands could be realized through legislation providing for adequate funding, equitable access opportunities, accountability measures and inclusion of material language that recognizes the biodiversity loss crisis alongside the climate change crisis. Voluntary conservation agreements should be seen not as just a way for applicants to get protection from legal liability, but as an opportunity for federal and non-federal parties to collaborate on truly innovative, effective conservation initiatives that can be coordinated at the landscape level to meet important recovery objectives for threatened and endangered species. Each of these programs should be expanded, strengthened and closely monitored to ensure they are working as intended.

When Congress wrote the ESA, it wrote a clear policy goal into the Act: to conserve imperiled species and their habitats. In turn Congress defined "conserve" with a very specific aim, including in its definition "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." Congress explicitly set that goal for all agencies in the federal government, not just the Services.

While Congress was clear about what the ESA required, many of the details it left up to the agencies to implement. This is a common feature of many complex American laws – Congress sets out what must be done but delegates the details to one or more federal agencies. For example, while Congress instructed the Services to list a species as endangered if they are at risk of extinction in "all, or a significant portion of its range," it did not define "significant portion," leaving it up to the Services to determine what that means when making listing decisions. Unfortunately, terms such as these have not always been interpreted in a way that meets the true purpose of the ESA, instead preventing species that need protections from receiving them.

A legal vision for the ESA would not involve changing the law itself, but how federal agencies implement it. The Services should roll back recent changes to the ESA regulations and re-evaluate longstanding interpretations of how species are listed, how consultations are carried out, and how recovery actions are implemented with the goal of achieving enduring, long-term recovery consistent with the ESA's stated goals.

As discussed in more detail in Chapter III, section 7(a)(1) of the Act requires not just the Services but agencies across the federal government to use their authorities to create "programs for the conservation of endangered species and threatened species" in consultation with the Services. Such an all-of-government focus on proactive conservation of imperiled species and their habitats is essential for tackling the biodiversity crisis at home and abroad. Though mandated by the ESA, relatively few agencies have developed such 7(a)(1) plans, even those that – like the federal land management agencies – have significant impact on threatened and endangered species. A wide array of federal agencies, however, carry out activities that could help conserve listed species, ranging from pollution control to infrastructure development, and from licensing and permitting to funding and grants. Creating and expanding this kind of proactive conservation planning is critical to meet the all-of-government approach Congress mandated when it passed the ESA. The Services can help meet these goals by creating regulations and policies that offer guidance to other agencies on how they can meet these legal obligations. In addition to the agencies, federal courts can play an important role in strengthening implementation of this mandate by clearly establishing the importance of section 7(a)(1).

Credit: USFWS

Consistent with section 7(a)(1), a legal vision for the ESA should also see closer coordination with the implementation of other environmental laws. While above we discuss land management statutes and how federal lands can better conserve threatened and endangered species, other laws like the Clean Air Act and Clean Water Act can have significant impacts on threatened and endangered species. The Cook Inlet beluga whale population in Alaska, for example, has suffered for years from water pollution from dumping of waste that has been allowed under the Clean Water Act. Similarly, the Florida manatee has seen steep declines over the past few years due to water quality issues that could – and should – be addressed by the Clean Water Act.

Credit: Corbis/Photolibrary.com

Winning for Wildlife

When the federal government is not taking adequate steps to meet the recovery goal of section 7(a)(1), groups like Defenders sometimes need to step in to give voice to those species who cannot speak for themselves. The red wolf is the most critically endangered canid in the world, with less than 300 individuals in existence, and the vast majority residing in zoos and nature centers. Once found throughout the southeastern U.S., the red wolf was almost completely wiped out by the early 1970s due to intentional eradication and habitat destruction. The same year the ESA passed, FWS began capturing the last remaining wild individuals to breed them in captivity in order to rebuild the population. In 1987, FWS began reintroducing captive wolves into North Carolina. This red wolf recovery effort was the first carnivore reintroduction program and celebrated as huge progress. By the early 2000s, the population reached a peak of well over 100 animals. Unfortunately, personnel changes at FWS and liberalized hunting regulations for coyotes by the state wildlife agency led to numerous red wolves being killed mistakenly. As more of the breeding males and females were killed, their packs collapsed and the ability to sustain their populations was severely diminished. This, in turn, led to increased incidences of hybridization with coyotes which impacted the genetic integrity of the population. In response, FWS stopped reintroducing wolves and pulled back the management efforts desperately needed to prevent the collapse of the wild wolf population. Most concerningly, the agency then posed the question: is recovery even possible? Defenders and its conservation partners filed a lawsuit to force the agency to fulfill its obligations to the species and not abandon it to extinction in the wild. In August 2023 Defenders, its partners, and the Service entered into an historic settlement agreement which legally re-committed FWS to red wolf recovery through 2030, including through resumption of annual release plans for captive red wolves, better transparency and communication with landowners to encourage coexistence and improved management to better handle hybridization. While still critically endangered, the future is at least looking brighter for this iconic southeastern species.

Strengthening the ESA Through Improving Regulations

In 2019, the Services issued a wide-ranging set of regulations that fundamentally changed how the ESA was administered. Defenders joined with conservation partners to file a lawsuit to overturn them, arguing that they were, among other things, simply inconsistent with the requirements of the ESA. These regulatory changes weakened the ESA's implementation in a number of ways. They removed the rule which extended certain endangered species protections to threatened species managed by FWS as a default – a rule which had been in place for more than four decades. They also made it easier to exclude

Credit: USFWS

designating critical habitat for listed species. They weakened the consultation requirements for federal agencies and made it easier for federal agencies to adversely modify the critical habitat. With these and other changes, the Services weakened imperiled species conservation. While a new administration proposed to reverse some of these changes in 2023, it has left the majority in place.

Beyond the Endangered Species Act

The landmark 2019 IPBES report was a wake-up call for the world's biodiversity and endangered species. Bold, systemic, and innovative approaches are needed immediately to comprehensively stem the leading drivers of the biodiversity crisis. As in the case of implementing ESA's 7(a)(1) authority, much can be done to better focus existing federal laws, policies and programs on these drivers. The ESA's work to ensure healthy nature for all can be supported by a strong national commitment to tackling the biodiversity crisis.

All governments throughout the country, including those at the federal, state and Tribal levels can and must do much more to comprehensively and systemically address these drivers. The federal government must lead the way by providing an inspired national commitment, as well as a strong scientific foundation that stimulates and promotes innovate policy approaches that will empower governments to focus on addressing the underlying causes of biodiversity loss. Congress and the Executive Branch can do more to fund and apply existing federal laws, policies and programs on these drivers and better coordinate the efforts of federal agencies across the national government. A close policy review of the problem would also identify areas of federal law and policy that are affirmatively contributing to biodiversity decline through their goals or poor implementation. Recommendations to respond to this national policy review would give policymakers options for escalating the national response to the crisis.

Without these actions, the nation will continue to play catch up as we fall further and further behind in efforts to arrest the biodiversity and extinction crises. Today, 194 countries have some form of National Biodiversity Strategy. The U.S., however, is not among them. A National Biodiversity Strategy would provide governments at all levels with the scientific foundation, policy options and focused commitment needed to encourage and enable them to arrest the biodiversity crisis in the U.S.

A Conclusion, Not an Ending

In 1973, the American people demanded Congress take action to conserve our nation's wild species and places, and Congress delivered with the ESA. The Act was built for incredible conservation achievements, carefully crafted to reflect the multifaceted and collaborative approach necessary to stave off today's biodiversity crisis. For example, section 4 requires the listing of plant and animal species at risk of extinction and the development of recovery plans. Section 6 provides for critical collaboration between the federal government and the states. And section 7 requires federal agencies across the government to work with the Services to protect and restore listed species. And with the addition of provisions to section 10 in 1982, the ESA empowers the Services to work with landowners, governments and others to minimize and mitigate impacts on non-federal lands. Though there have been a few refinements over the years, the law's central goal – to recover threatened and endangered species to the point they no longer need its protections – has not.

The ESA has kept its promise. Armed with best available science and widespread support of Americans, the ESA has saved species like the snail darter from oblivion and today, it remains the greatest tool in the world for staving off extinction. But today we also face an unprecedented rate of biodiversity loss. We need a strong ESA now more than ever. Unfortunately, anti-wildlife politicians and special interests are waging legislative warfare on the ESA in an attempt to weaken the law and short-circuit its reliance on science. They have left the ESA starved, but not broken. As a result, imperiled species remain unlisted, crucial recovery actions remain unfinished and data gaps leave wildlife managers uncertain about whether conservation measures are adequately working. Americans cannot tackle the biodiversity crisis with a weakened ESA.

There is still much progress to be made if the ESA is to realize the goals Congress intended in 1973. Defenders' vision for a stronger, more effectively implemented ESA is just a starting point for a program that can better meet the needs of the nation's imperiled species. Beyond full funding and political support for strong regulations and science integrity, the ESA can benefit from greater technological innovations, better planning for climate change, expanded species conservation across federal and private lands and improved coordination across government agencies. Great conservation achievements come from collaborative conservation, and we can all take a stronger role in conserving our imperiled species and their habitats. A stronger ESA is about more than preventing an extinction, it is critical to the well-being of all Americans whether they walk, fly, slither, swim or sway.

Credit: PxHere

DEFENDERS OF WILDLIFE