

Endangered Species Act

What is the Endangered Species Act?

The Endangered Species Act (ESA) serves to protect and conserve threatened and endangered species, and the areas they need to survive and recover.¹ Passed in 1973 with strong bipartisan support and signed into law by President Richard Nixon, the ESA serves as a “safety net” to protect species from extinction. The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) are the two federal agencies primarily responsible for implementing the ESA.²

Why does the ESA matter?

The ESA provides concrete solutions for the conservation of plant and animal species in peril. As of 2013, 99 percent of all species listed as “endangered” or “threatened” under the ESA have avoided extinction thanks to the law’s protective measures.³ Additionally, numerous key species teetering on the brink of extinction within the U.S. have recovered. For example, the national bird of the United States, the bald eagle, was once on the brink of extinction due to a variety of causes including DDT pesticide use, habitat loss and lack of food. In 1976, the bald eagle was listed as “endangered” under the ESA; it has since recovered as a result of protections granted by the law. In 2007, the bald eagle was removed from the endangered species list.⁴

Through the protection of endangered and threatened plants and animals, and the natural places on which they depend, the ESA also benefits Americans. We depend on healthy environments and the species that inhabit them for clean air, water and medicines.^{5,6} The ESA also provides significant economic benefits within the U.S. For example, protecting imperiled wildlife can help boost wildlife-related tourism economies like whale watching. In 2008, the whale watching industry in the U.S. generated a total expenditure of nearly \$1 billion annually.⁷ Sea turtle ecotourism in Juno, Florida alone has an annual economic impact of around \$60 million.⁸

Endangered and threatened species also serve critical roles in the development of vital medicines essential to our survival. In fact, about half of prescribed medicines are derived from substances found in plant and animal species.⁹ For example, the rosy periwinkle is a plant that was once endangered in the wild. Native to Madagascar, the rosy periwinkle produces substances that are effective in treating childhood leukemia as well as other diseases.¹⁰ There are over 11,000 “endangered” and “threatened” plant species in the world, and biologists estimate there are around 80,000 plant species that have yet to be discovered.^{11,12}

Marine species also show considerable promise for future health treatments.¹³ In the 1950s, the study of a large shallow-water sponge led to the discovery of two powerful chemicals and the development of numerous anti-viral and anti-cancer drugs. These medicines included the breakthrough HIV drug known as AZT and an anti-leukemia drug.¹⁴ The prospects for finding new drugs in the oceans may be much better than on land, due to the greater diversity of marine organisms.¹⁵

In short, protecting terrestrial and marine species in danger of extinction benefits the species itself, the ecosystems in which they live, and humanity as a whole due to the aesthetic, economic and medicinal value such species provide. The ESA is key to providing protections for at-risk species as well as all the benefits that flow from their continued existence.

How does the ESA work?

For a species to receive protection under the ESA, it first must be listed as either “threatened” or “endangered” by FWS or NMFS.¹⁶ “Endangered” refers to any species that is in danger of extinction throughout all or a significant portion of the geographical area where the species is found, called its “range.”^{17,18} “Threatened” refers to any species that is likely to become “endangered” within the foreseeable future throughout all or a significant portion of its range.^{19,20} The law requires listing decisions to be made based on the best available scientific information on the biological status of the species.²¹

Under the ESA, approximately 2,270 species are listed as “threatened” or “endangered,” including species found outside the United States. Of these, 151 are marine species, including 31 marine mammal, 26 marine turtle, 66 fish and 27 marine invertebrate species. Of these, 57 are foreign species.²² Foreign species that are listed are protected primarily through restrictions on trade.^{23,24}

When a species is listed, the ESA provides for the designation of “critical habitat”—specific geographic areas that need special management because they contain the biological and physical features needed by the listed species.²⁵ In addition, biologists with FWS or NMFS work with other experts and stakeholders to write recovery plans laying out scientific research and management actions with the goal of conservation and survival of the species.²⁶

To protect species that are listed as endangered or threatened, the ESA prohibits the “take” of such species, which refers to activities that harass, harm or kill.²⁷ In addition, the ESA prohibits the possession, sale, transport or trade – whether in interstate or foreign commerce – of species listed as endangered or threatened.²⁸ FWS or NMFS may issue permits allowing prohibited activities, including a “take,” if it is for scientific purposes or incidental to another lawful activity, such as expanding a port.²⁹

If any federal government agency proposes an activity that may affect a listed species or its critical habitat—whether through its own action, or by providing a permit or funding—the agency must first consult with FWS or NMFS.³⁰ This process is referred to as “Section 7 consultation,” and if FWS or NMFS finds that the species could be in jeopardy from the action, or critical habitat could be impaired, it proposes modifications to the activity to protect the species.^{31, 32, 33}

The goal for each species listed as endangered or threatened is to provide a program to conserve the species and the ecosystems upon which it depends so that it no longer needs ESA protections and can be delisted.³⁴ As of today, 47 species have been delisted in spite of deeply inadequate funding for implementation of the ESA.^{35,36}

Today, the ESA itself may be endangered. The law faces political threats from business and industry interests that have had to alter or limit their activities to comply with the law to conserve endangered or threatened species.³⁷

ESA Success Stories

Atlantic Green Sea Turtle

The green sea turtle is found throughout the tropical and subtropical waters of the Mediterranean, Atlantic, Indian and Pacific Oceans, and migrates incredible distances in order to forage and nest throughout its lifetime.³⁸ Unfortunately, the historic exploitation of green sea turtles and their eggs by artisanal and commercial fishermen over the past 140 years—in addition to habitat loss, disease and incidental catch in fishing gear—resulted in significant population declines.^{39,40} In 1978, the species was placed on the endangered species list.⁴¹

After years of conservation efforts implemented by FWS and NMFS, scientists have seen increases in nesting green turtles throughout the Atlantic.⁴² The ESA's co-management protocol brought diverse and successful protection measures to green turtles. As FWS was implementing programs to restore the turtle's nesting grounds by limiting land development, NMFS was working with the shrimp fishing industry to limit the unintentional capture of the species.⁴³ In 2016, NMFS announced that two of the 11 distinct breeding populations, including the population residing along the Atlantic coast of Florida, had been up-listed from “endangered” to “threatened.”⁴⁴ This reclassification reflects the successful efforts to protect the green sea turtle over the years and highlights that the ESA is an important tool for the protection of our endangered wildlife.⁴⁵

Southern Sea Otter

Historically, southern sea otter populations numbered in the hundreds of thousands with a broad geographical range throughout North America. These creatures were heavily pursued for the economic value of their fur throughout the mid-1700s, and by 1914, their numbers had been diminished to approximately 50 individuals. In 1977, southern sea otters were listed as “threatened” under the ESA.⁴⁶ Thanks to the protection efforts implemented under the law, southern sea otter population numbers have rebounded tremendously.⁴⁷ Through the law's provisions, FWS prohibited the intentional killing and harassing of southern sea otters while NMFS worked to minimize the unintentional capture of the species within fisheries, thus allowing their population numbers to bounce back from 50 individuals in 1914 to approximately 2,800 individuals between 2005 and 2010.^{48,49}

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¹⁰ FWS (1996) The Road Back: Endangered Species Recovery. In: *Endangered Species*. 18p. Available: <https://www.fws.gov/Endangered/esa-library/pdf/ESRoadRecovery1-18.pdf>.

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- ²¹ 16 U.S.C. § 1533(b)
- ²² NOAA (2017) Endangered and Threatened Marine Species under NMFS' Jurisdiction. In: *NOAA Fisheries Service*. Available: <http://www.nmfs.noaa.gov/pr/species/esa/listed.htm>. Accessed April 4, 2017.
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- ²⁵ 16 U.S.C. § 1532(5)
- ²⁶ 16 U.S.C. § 1533(f)
- ²⁷ 16 U.S.C. § 1532(19)
- ²⁸ 16 U.S.C. § 1538
- ²⁹ 16 U.S.C. § § 1539
- ³⁰ 16 U.S.C. § 1536
- ³¹ 16 U.S.C. § 1536
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