Testimony of

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On

H.R. 925, H.R. 1747, H.R. 2748, H.R. 2854, H.R. 2918, H.R. 2956, H.R. 3399, H.R. 4340, H.R. 4341 and H.R. 4348

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Chairman Huffman, Ranking Member McClintock and Members of the Subcommittee, thank you for the opportunity to present testimony today on a host of wildlife and conservation legislation.

My name is Aimee Delach and I am a Senior Policy Analyst at Defenders of Wildlife (Defenders), a national nonprofit conservation organization dedicated to the protection of all native plants and animals in their natural communities. For over 70 years, Defenders has protected and restored imperiled species throughout North America by securing and strengthening state, national, and international conservation policies; working on the ground at the state and local level; and upholding legal safeguards for wildlife and habitat in the courts. We represent more than 1.8 million members and supporters nationwide.

Last week I marked 22 years working at Defenders, and for the past decade I have focused on climate change and wildlife adaptation. In that capacity, I will testify today primarily about the importance of passing H.R. 2748, the "Safeguarding America's Future and the Environment Act" (SAFE Act). I will cover each of the other bills under consideration as well.

Two Crises, One Consensus: Climate Change and Biodiversity Loss

There is overwhelming global scientific consensus that we are facing a global biodiversity crisis (described as "The Sixth Extinction") and that climate change is a significant driver of that crisis. Last spring, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an independent intergovernmental body representing 130 member countries, delivered a stark and alarming scientific consensus: human activity has devastated the natural world, and biodiversity "is declining faster than at any time in human history."[1] Based on an

[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Report of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its seventh session, Addendum: "Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services," Key Message A. (May 29, 2019). Available at https://www.ipbes.net/system/tdf/ipbes_7_10_add-1-_advance_0.pdf?file=1&type=node&id=35245

exhaustive compilation of nearly 15,000 information sources,[2] the IPBES estimates that up to one million species—nearly a quarter of the known life on earth—could face extinction within decades.[3] The drivers of this decline include habitat loss, overexploitation of species, pollution, and climate change, which is already affecting "almost half (47 per cent) of threatened terrestrial mammals, excluding bats, and one quarter (23 per cent) of threatened birds."[4] In fact, climate change is accelerating and exacerbating the effects of these other threats.

This summer, another international scientific body, the Intergovernmental Panel on Climate Change (IPCC) released another major report on "Climate Change and Land,"[5] finding that humans – through our appropriation of land for food, fiber, fuel and other products — are impacting 70 percent of the earth's ice-free lands.[6] And we are degrading roughly a quarter of that land surface through soil loss, desertification, and pollution,[7] while the warming climate threatens to accelerate this degradation with increased flooding, drought, erosion, crop losses, and permafrost melt. Further, we expect that tomorrow the IPCC will release a "Special Report on the Oceans and Cryosphere,"[8] which will provide an equally sobering description of the effect of warming and acidification on the world's oceans.

In the United States, the federal Fourth National Climate Assessment (NCA4), a multi-agency, congressionally mandated report released by the Trump administration in 2018, sent a similar message: "Ecosystems and the benefits they provide to society are being altered by climate change, and these impacts are projected to continue. Without substantial and sustained reductions in global greenhouse gas emissions, transformative impacts on some ecosystems

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[2] United Nations Environment Programme. "IPBES Global Assessment underscores need for transformational change to safeguard life on Earth" (press release) (May 6, 2019). Available at https://www.cbd.int/doc/press/2019/pr-2019-05-06-IPBES-en.pdf

[3] IPBES, Summary for Policymakers *op. cit*., Key Message A5.

[4] *Ibid*., Background B14.

[5] Intergovernmental Panel on Climate Change. Climate Change and Land: An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security and greenhouse gas fluxes in terrestrial ecosystems. Summary for Policymakers. (August 7, 2019). Available at https://www.ipcc.ch/site/assets/uploads/2019/08/Edited-SPM_Approved_Microsite_FINAL.pdf

[6] *Ibid.*, Finding A1.

[7] *Ibid.*, Finding A1.5.

[8] Intergovernmental Panel on Climate Change. The Ocean and Cryosphere in a Changing Climate (report website). Available at https://www.ipcc.ch/report/srocc/

will occur; some coral reef and sea ice ecosystems are already experiencing such transformational changes."[9]

Wildlife Impacts: Climate Change is Here, Now

Climate change is not a worry for some distant future, or a threat only to species found halfway around the world. Climate change is here, it's happening now, and it is already impacting species across the country. Defenders has profiled more than 50 plant and animal species experiencing climate change effects in our "Field Guide to Climate Change."[10] These myriad and mounting threats include:

Increasing Temperatures. American pika, the diminutive chirping denizens of high elevation talus mountain slopes in the West, have declined due to warming. The species doesn't hibernate in winter, instead relying on a thick winter coat and huge stores of plants, leaves and flowers they gathered through summer. Their warm fur, along with their need to be very active during the summer to gather and store sufficient food, make it very easy for the animals to overheat, which can be fatal. Since they live on mountaintops, there is only so much higher that the species can go before it is literally get pushed off the top of the earth.

Warmer air temperatures are also threatening American birds in paradise. Hawaiian honeycreepers have suffered extreme declines and extinctions due to introduced diseases, particularly mosquito-borne avian malaria. Development and transmission of this deadly parasite are temperature-dependent, and the disease has already wiped out many bird species at lower elevations on the islands where temperatures are warmest. Historically, forests above about 5,000 feet in elevation were cool enough to serve as a mosquito-free refuge for Hawai'i's native birds, but climate change is shrinking this safe haven from avian malaria, with devastating results for honeycreepers. On the Big Island, warmer temperatures contributed to a spike in malaria prevalence at elevations up to 6,000 feet in 2001 to 2002. Similarly, on Kauai,

[9] U.S. Global Change Research Program. Fourth National Climate Assessment, Volume II: Impacts, Risks and Adaptation in the United States. Summary Finding 8. Available at https://nca2018.globalchange.gov/
[10] Available at www.defenders.org/climate-change-guide

warming temperatures and changes in stream flow have led to an increase in malaria transmission at medium- and high-elevation sites over the past 20 years.

Warming Winters. Climate change is warming winters, which has a particular downside: extended periods of very cold temperatures are an important natural mechanism for controlling ticks and forest pests. The loss of killing freezes is a factor in forest declines. Under recent milder conditions, mountain pine beetle populations have exploded and have killed almost 30 million acres of pine trees across the American West over the past decade. Whitebark pine, a critically important food source for squirrels, birds and even grizzly bears, is also under assault from insects and diseases once held in check by colder temperatures. In the northern U.S., moose populations have declined by 75 percent in Minnesota and 30 percent in New Hampshire, in part because tick populations increase when winters are warmer and the period of snow cover is shorter. Individual moose have been found with 100,000 ticks attached and sucking their blood. This same dynamic helps explain the increasing incidence of tick-born Lyme disease in people.

Warming temperatures are also melting snow and ice, both in the ocean and on land, shortening the snowy season, and causing more precipitation to fall as freezing rain rather than snow. These factors threaten wildlife both on land and at sea, like the polar bear and Pacific walrus, but also the cold-adapted snowshoe hare, white-tailed ptarmigan and bull trout.

S*tronger Storms and Worsening Droughts.* As water warms, it evaporates more readily, and warmer air can hold more evaporative water and moisture transpired from plants. This extra water in the atmosphere increases the severity of both precipitation and drought events. Extended droughts have killed millions of trees from Texas to California, and threaten wildlife as well. Drought is a particular problem in desert ecosystems where animals like the endangered Sonoran pronghorn and threatened Agassiz's desert tortoise already live at the edge of physiological tolerances.

Severe storms are among the most destructive consequences of climate change. In addition to their devastating human and economic toll, storm surge and flooding from climate-charged hurricanes have impacted many coastal and island species—like the Attwater's prairie-chicken,

Puerto Rican parrot, the Everglade snail kite, and the Cape Sable seaside sparrow—through the destruction of nests, damage to habitat, and outright mortality of individuals. Sea-level rise, due to the thermal expansion of ocean water and additional runoff from melting land-based ice, compounds the damage to coastal communities and habitats.

Warmer, More Acidic Oceans. Most of the excess heat in the climate system has been absorbed by the oceans, and marine and coastal ecosystems—and the wildlife and human communities that depend upon them—are already experiencing the effects. Many marine species are acclimated to a narrow temperature range and are moving to more northerly or deeper waters in response to warming. These shifts can disrupt entire food webs, with devastating effects. For instance, puffins, a much-adored sea bird, nest in the same coastal cliffs and islands each year and rely on a steady supply of small cold-water fish to feed their young. Fewer chicks survive as warming oceans drive those fish away. Even when marine species are able to move in tandem with their food supply, problems emerge. Critically endangered north Atlantic right whales are more regularly appearing outside of their historic range, likely following their prey. Unfortunately, this shift is putting whales in danger as they move beyond protection zones designated to minimize ship strikes and entanglements with fishing gear. More whales are now dying from these causes.

In addition to absorbing heat, oceans are also taking up more atmospheric carbon dioxide, equal to nearly one-third of the emissions of our factories, power plants and vehicles. The gas dissolves directly into water, making it more acidic, which threatens catastrophe to marine ecosystems. Many marine organisms are protected by hard shells -- like clams, starfish, and even the tiny plankton that form the base of the food chain, and those calcium carbonate shells can’t form in water that is too acidic. Acidification is thus just as dire a threat as the warming climate.

Nowhere is the compound effect of climate change on our oceans better exemplified than in coral reefs. These biodiversity hot spots are threatened by full gamut of climate change threats: warming waters cause coral bleaching and increase susceptibility to disease. Stronger storms inundate reef zones with runoff and deadly pollution. And ocean acidification interferes with

coral's abilities to form reef structures. If the world remains on a business as usual path, the amazing underwater worlds formed by coral reefs, not to mention the billion-dollar economies these ecosystems support, could be headed for collapse.

Beyond the inherent tragedy of losing species forever, the consequences of species loss could well come back to haunt us. We are interfering with nature's very ability to support human beings on Earth with the provision of clean air and water, food, fiber, energy, and medicine. To reduce the effects of climate change on biodiversity, scientists and many policymakers agree that we must adopt a two-pronged approach: we need to *mitigate* by rapidly reducing our greenhouse gas emissions in order to limit the magnitude of global warming and we must support natural systems to *adapt* to the current and future effects of warming.

Supporting biodiversity to adapt to climate change is possible, though a daunting challenge. Three approaches include 1) enabling ecosystem resistance, identifying places that are less susceptible to change and protecting those places from other threats; 2) building resilience, helping species and habitats to withstand changes and to rebound faster; and 3) accepting ecosystem transformation, understanding that some species will need to move and some habitats will look very different in the future, and planning accordingly for connectivity, and to ensure a future matrix of diverse habitats can persist, even if in different places on the landscape than where they exist today.

The SAFE Act: A Roadmap for Wildlife Adaptation

The SAFE Act would support climate change adaptation for wildlife, habitats, and human communities. The bill would reinvigorate and codify the National Fish, Wildlife, and Plants Climate Adaptation Strategy,[11] a roadmap for protecting species and habitats from these impacts, which was originally conceived by Defenders and developed and implemented over several years but has languished in the current administration. The Act would also improve the federal government's ability to assist state, local, and tribal governments as they prepare for and respond to climate change effects. While helping stem the extinction crisis by protecting

[11] The National Strategy website is https://www.wildlifeadaptationstrategy.gov/, although the website is currently unavailable due to an encryption error.

species from the impacts of a changing climate, the SAFE Act will also benefit people by helping ensure that we continue to have clean drinking water, clean air, crop pollination, food, medicine, flood protection, recreation opportunities, and scenic beauty.

Despite critical need to respond to climate change, the Trump administration has declined to advance mitigation and adaptation policies, and has in fact revoked, rescinded and relegated dozens of policies promulgated by the previous administration. This is why the SAFE act is so important: it reinstates and legislates climate change adaptation planning for fish, wildlife and plants, returns scientific expertise to the forefront of conserving species and habitats facing these threats, and incentivizes states to engage in their own adaptation planning and management.

WOW Subcommittee's Agenda for Wildlife Conservation

The legislative agenda presented today by the Water, Oceans and Wildlife Subcommittee is critical for conserving America's fish and wildlife resources, and serves as an important bulwark against efforts by the current administration to wreck the federal regulatory framework that protects and recovers species and their habitats, including the Endangered Species Act (ESA). The ESA has a long, successful track record of protecting our most imperiled flora and fauna. The success is attributable to the central role of science in ESA decision-making, taking a common-sense precautionary approach to conservation, and ensuring we consider the full impact of our activities on listed species. New regulations promulgated by the Trump administration cut against those principles. For example, they would taint the scientific basis of listing with economic analyses that have no role in the fundamental purpose of protecting species. Science and precaution are relegated to the back seat when it comes to predicting threats to species, setting the bar unreasonably high for considering what research tells us about potential future harms that can inform timely and appropriate protections. The new regulations also cast aside the precautionary approach of extending fundamental protections to threatened animals, even when we don't have much time or knowledge to offer more tailored conservation prescriptions. And by allowing federal agencies to overlook the piecemeal destruction of critical habitat and to ignore the harmful effects of ongoing federal actions, the

new regulations let agencies blind themselves to the full effects of our actions on species. In short, the regulations undermine the central driving purposes of the ESA. By rescinding these damaging regulations, the "PAW and FIN Conservation Act of 2019" (H.R. 4348) will return us to a better path for species conservation.

Defenders also supports the "Extinction Prevention Act" (H.R. 2918), which establishes dedicated funds to support conservation of several highly imperiled taxa, including 1) butterflies in North America, many of which are listed as endangered or have experienced dramatic declines, including the iconic monarch butterfly; 2) native plants in the Pacific Islands, of which 450 are protected under the ESA; 3) freshwater mussels in the U.S., a taxa whose conservation needs presently far exceed the funding they have received; and 4) desert fish in the southwestern U.S., an array of unique species facing critical threats from climate change and water withdrawals. These four taxa comprise a large number of federally listed species, but have not received the recovery attention and resources dedicated to more charismatic groups like birds and mammals.

Defenders supports both bills considered today that would support international species conservation. The "SALAMANDER Act" (H.R. 4340) would assist in the protection of highly endangered amphibians in foreign countries. Amphibians around the world are facing declines and extinctions at rates far higher than background rates, driven by threats like habitat destruction, disease, climate change, and overexploitation. This bill is a key opportunity for the U.S. to support conservation in parts of the world that harbor diverse amphibian biota.

The "Critically Endangered Animals Conservation Act" (H.R. 4341) creates a fund to assist in the conservation of endangered species in foreign countries. There are over 5,000 animal species classified as endangered or critically endangered by the International Union for the Conservation of Nature, most of which would be eligible for funds under the Critically Endangered Animals Conservation Act. Establishing the Fund, leveraging other resources where available, and prioritizing projects through competitive grants is an essential part of demonstrating U.S. leadership in the global fight to conserve biodiversity.

Defenders also supports both bills that would build on existing national and international efforts to conserve wetland and aquatic habitats. The "North American Wetlands Conservation Extension Act" (H.R. 925) extends federal authorization and increases funding for a successful national program that conserves more than 900 species of birds and other wildlife that depend on wetlands, a habitat type that is critical to maintaining ecosystem resiliency against climate change. First enacted in 1989, "NAWCA" supports federal agencies, states, tribes, private landowners, conservation organizations, businesses, and local governments in protecting, restoring, and managing wetlands in accordance with the North American Waterfowl Management Plan, a precedential international strategy that provides for the long-term protection of wetlands and associated upland habitats across North America.

Similarly, the "National Fish Habitat Conservation Through Partnerships Act" (H.R. 1747) would codify the current National Fish Habitat Partnership, a popular program that supports collaborative efforts to restore and enhance aquatic habitats. Streams, lakes and other aquatic ecosystems provide habitat for numerous imperiled fishes, mussels, amphibians and other species. Projects undertaken through these partnerships have to date helped improve habitat for numerous fish species, including cold-water species like brook trout that are particularly susceptible to the effects of a warming climate. By improving habitat, restoring connectivity, and reducing damaging inputs of sediment and pollutants, these partnership programs help to conserve and restore important aquatic ecosystems.

Defenders also supports H.R. 3399, which would amend the Nutria Eradication and Control Act of 2003 to include California in the program. Nutria, an invasive species from South America, were discovered in California's Central Valley in 2017 and have begun destroying important wetland habitats. The rapidly expanding nutria population is concentrated in the Grasslands Ecological Area—a complex of state, federal, and private wetlands that create the largest contiguous block of freshwater wetlands west of the Rocky Mountains. The nutria are undermining levees and other water delivery infrastructure, threatening the water supply for these critical wetlands that support millions of Pacific Flyway birds and several threatened and endangered species. The damage they inflict on water infrastructure also threatens water delivery to major California cities and agricultural regions. While California has spearheaded a

multi-agency effort to eradicate nutria, federal assistance is necessary to make sure this threat to California's wildlife and water supply is eliminated.

Defenders supports the "Protect Our Refuges Act of 2019" (H.R. 2854), which reverses the Trump administration's damaging revocation of an administrative prohibition on the use of neonicotinoid pesticides in the National Wildlife Refuge System, permanently preventing application of these toxic chemicals on refuges. The widespread and uncritical application of "neonics" is a serious problem for all wildlife and should be prohibited on these public lands, which are dedicated to conservation. Neonics have especially been implicated in declining pollinator populations around the world, though the impacts don't stop with insects. Research has found that the dangers of neonics can extend to vertebrate wildlife such as birds, fish, and amphibians, and effect the collapse of the food base for insectivores. A growing body of scientific research suggests that neonics are one of the most persistent, prevalent and potentially toxic pesticides since DDT.

Defenders has long championed the mission and strategic growth of the National Wildlife Refuge System, the nation's only network of federal lands and waters dedicated to the conservation of fish, wildlife and plants. We support the concept of establishing a new national wildlife refuge in Riverside County, California, and we thank Congressman Calvert for his efforts to increase wildlife conservation in his district. However, for Defenders to endorse H.R. 2956, we would need to see some important amendments to the bill. As introduced, the text unnecessarily encumbers authority for administering the new unit by requiring federal-county consultation in decision-making for these federal public lands. While local government along with the rest of the public should have an opportunity to provide input on refuge management alternatives, final decision-making authority has always, and must continue to, rest with the federal government. The bill also threatens to circumvent current law by authorizing the Secretary of the Interior to determine boundary adjustments for the refuge. Defenders looks forward to working with proponents to make changes and improvements to the legislation when it is marked up by this Subcommittee.

Thank you for inviting Defenders to present our testimony on this suite of important legislation that will help to address pressing threats to biodiversity, such as climate change, and advance conservation efforts for our most imperiled species. We commend the Subcommittee on its vital work.