

Written Statement of Defenders of Wildlife

Jacob Malcom, PhD
Director, Center for Conservation Innovation
Defenders of Wildlife

before the House Committee on Science, Space, and Technology

June 4, 2019

Hearing on the IPBES Global Assessment of Biodiversity and
Ecosystem Services

Chairwoman Bernice Johnson, Ranking Member Lucas and members of the Committee:

For more than 70 years, Defenders of Wildlife has protected and restored imperiled species throughout North America by implementing on-the-ground programs at the state and local level; securing and strengthening state, national and international laws and policies that protect species and their habitats; and upholding legal safeguards for native wildlife in the courts. We represent more than 1.8 million members and supporters across the nation and around the world.

On behalf of Defenders, an organization where the development and application of the best available science guides our work, I appreciate the opportunity to submit a statement for the record to the House Committee on Science, Space, and Technology about the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services' (IPBES) Global Assessment. This seminal report comes at a critical time for wildlife and humanity. Prepared by experts at the top of their fields, the scientific information presented in the report is a stunning, sobering update on the status and trends of global biodiversity. We should all be challenged by its findings:

- One in eight species on Earth—up to one million species—are facing extinction.
- This devastating loss of biodiversity is driven by human alteration of more than 75% of terrestrial environments and 66% of marine environments across the planet.
- Populations of native species have declined by over 20% on average, some much higher. The occurrence of coral reefs globally has declined by 50%.
- Half a trillion dollars of crops are at risk from pollinator loss.
- Half of the international Sustainable Development Goal metrics are declining.

We are losing species faster than ever before in human history, at tens to hundreds of times the pace of the normal background extinction rate. We are facing our planet's sixth mass extinction event. An asteroid striking earth precipitated the last mass extinction, taking out the dinosaurs; this time, we are the cause.

The top threats driving biodiversity loss are all a result of humans living unsustainably—and foremost among them is habitat loss and degradation, both on land and at sea. We have transformed three-quarters of the surface of our planet, causing change that natural systems cannot sustain. The science on biodiversity conservation has long recognized the importance of this threat and identified ways to address it.

The second-greatest threat is our direct exploitation of species. We have hunted, fished, trapped, and in other ways over-harvested species at levels that they cannot sustain. While this threat tends to be less prevalent in the United States, certain groups of species, like plants (for example, orchids), fish, reptiles, and amphibians are susceptible to overexploitation in our country.

And the third-greatest threat—one that nobody can ignore—is climate change. As science has already shown, climate change is radically affecting temperatures, weather, phenology, and biodiversity, causing myriad and negative impacts on species and habitats around the world and in our own backyards. Climate change alone is transforming our planet, but in combination with the other threats, the damage we have done and are doing is almost unimaginable.

Critically, the consequences are as dire for humanity as they are for wildlife under our care. Ecosystem services from crop pollination to fisheries to water filtration and beyond are all at grave risk because of the damage and losses of natural systems.

Despite the darkness of the results, there is reason for hope: we also have solutions. Science is central to identifying and supporting the effectiveness of these solutions.

In the United States, we and wildlife are fortunate to have visionary laws, like the Endangered Species Act (ESA)—the world's most powerful tool for preventing extinction. Like our other bedrock environmental laws, the ESA puts science at the forefront of decision making to help address the challenges identified in the IPBES report. Species listing decisions, federal planning and permitting, and any comprehensive, strategic conservation plans hinge on the use of best available science.

In fact, science supports both the effectiveness and efficiency of the ESA. For example, research Defenders published in the *Proceedings of the National Academies of Science* showed that consultations under the Act—one of the strongest components of the law—allowed almost

every federal action proposed over eight years to proceed while also protecting species. Other research has shown that funding levels are positively correlated with species status—empirical science that leads our advocacy for fully funding the ESA.

And the ESA is just one of our tools for addressing the threats to biodiversity and ecosystem services presented in the IPBES report. Research also points to another, complementary solution: protecting habitat, both terrestrial and marine. For example, the Global Deal for Nature is a science-based proposal that calls for protecting 30% of the Earth’s surface by 2030, on global and regional scales, to conserve biodiversity. While perhaps intimidating in its scope, this ambitious policy recommendation provides a roadmap for conserving habitat and biodiversity for our planet and humanity. And as the United States and the world grapple with and address threats to biodiversity and ecosystem services, we have science available to guide our decisions.

We see time and again the importance of science for conserving biodiversity and, as a result, protecting human health and well-being. Science is essential for understanding the state of biodiversity and ecosystem services, as shown in the IPBES report. Science is essential for informing decisions about how to avoid, minimize, and mitigate human-driven harm to species and systems. And science is essential for evaluating the effectiveness of our protections, allowing us to continually improve the effectiveness and efficiency of our actions.

Your constituents, even those who choose to not accept the science, depend on nature and the ecosystem services it provides. We need the leadership of the Committee on Science, Space, and Technology to advocate for science in governing our nation and require the use of science in decision-making. You can help make that difference, not just for wildlife, but for humanity.