

Comments on the National Nature Assessment

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Main Points

- The National Nature Assessment should be based on an inclusive definition of nature that recognizes the value of people and human-stewarded landscapes.
- Private landowners are a key audience of the assessment because they are the primary stewards of America's lands and waters, possess knowledge that can benefit the assessment's development, and could use the assessment to access markets that produce conservation and climate benefits.
- To be effective, the National Nature Assessment must have the trust of private landowners. It is essential that they have assurances that the assessment will not compromise their property rights or livelihoods.

Introduction

The Property and Environment Research Center (PERC) appreciates the opportunity to provide input on the development of the National Nature Assessment (NNA). We believe such an assessment can inform and improve initiatives like “America the Beautiful” and its aspiration to foster a more collaborative and incentive-driven approach to conservation. Improving our understanding of the natural world's condition at local, regional, and national scales can also help ensure conservation efforts are targeted to areas of the greatest importance. Appreciating the relative abundance or scarcity of nature's components can also improve the valuation of assets, such as areas of land, in conservation decision-making. For the assessment to be effective, however, it should take into account local knowledge as well as the interests of local communities and private landowners.

PERC is the national leader in market solutions for conservation, with over 40 years of research and a network of respected scholars and practitioners. Through research, law and policy, and innovative field conservation programs, PERC explores how aligning incentives for environmental stewardship produces sustainable outcomes for land, water, and wildlife. Founded in 1980, PERC is nonprofit, nonpartisan, and proudly based in Bozeman, Montana.

Defining Nature

The concept of *nature* is commonly defined in the negative. It is viewed as those things that are not human and where people are absent.¹ This popular concept of nature has also often assumed that the environment possesses a kind of inherent equilibrium if left unmolested by man. Concepts such as these were driving forces in the early conservation movement and are evident in the mission statements of agencies such as the U.S. National Park Service to “preserve unimpaired” certain areas of land. These concepts also persist to this day in disciplines such as

¹ See, e.g., “Handle with care.” *Nature* 455, 263–264 (2008). <https://doi.org/10.1038/455263b>

rewilding, the idea of restoring landscapes to an arbitrary point in time when they are thought to represent a similarly arbitrary ideal.²

To be useful, however, the NNA should not adopt a definition of nature rooted in these concepts. To do so would ignore the fact that human beings have been present in the United States for at least 16,000 years and have been modifying their environment ever since.³ This risks repeating past mistakes that now jeopardize the health of species and ecosystems. For example, Indigenous people used fire to manage and shape California's Yosemite Valley before they were evicted to make room for a national park.⁴ The loss of this management, within the park and on other federal lands in California, has contributed to disrupted fire regimes that now threaten the survival of giant sequoias as a species.⁵

If we applied such an exclusive definition to the NNA, we would likely discover there is very little nature to be found in our country. An exclusive definition would also ignore the contributions human-dominated landscapes such as rangelands, agricultural lands, and city parks make to the conservation of species and provision of ecosystem services.⁶ Finally, such a definition would ignore the reality that landscapes and species populations are dynamic and that there is a lack of scientific evidence supporting the idea of an inherent "balance of nature."⁷ Landscapes can undergo immense changes with or without human presence, such as by glaciation or seismic activity.⁸ Similarly, the fossil record shows that species populations have been rising, ebbing, rising again, and going extinct since long before human beings departed the trees for the savannah.⁹

² Perino, Andrea, Henrique M. Pereira, Laetitia M. Navarro, Néstor Fernández, James M. Bullock, Silvia Ceaușu, Ainara Cortés-Avizanda et al. "Rewilding complex ecosystems." *Science* 364, no. 6438 (2019): eaav5570.

³ Adovasio, James M., Joel D. Gunn, Jack Donahue, and Robert Stuckenrath. "Meadowcroft Rockshelter, 1977: an overview." *American Antiquity* 43, no. 4 (1978): 632-651. and Barnosky, Anthony D., Paul L. Koch, Robert S. Feranec, Scott L. Wing, and Alan B. Shabel. "Assessing the causes of late Pleistocene extinctions on the continents." *Science* 306, no. 5693 (2004): 70-75 and Anderson, Terry L. and Shawn Regan. "Rethinking the Way We Think." Pp. 15-25 in Anderson, T. L. (2015). *Free market environmentalism for the next generation*. Palgrave Macmillan.

⁴ Gassaway, L. (2009). Native American fire patterns in Yosemite Valley: Archaeology, dendrochronology, subsistence, and culture change in the Sierra Nevada. Society for California Archaeology Proceedings, 22, 1-19. and Poirier, Robert, and David Ostergren. "Evicting people from nature: Indigenous land rights and national parks in Australia, Russia, and the United States." *Nat. Resources J.* 42 (2002): 331.

⁵ Shive, Kristen L., Amarina Wuenschel, Linnea J. Hardlund, Sonia Morris, Marc D. Meyer, and Sharon M. Hood. "Ancient trees and modern wildfires: Declining resilience to wildfire in the highly fire-adapted giant sequoia." *Forest Ecology and Management* 511 (2022): 120110.

⁶ Moore, Aaron A., and Margaret A. Palmer. "Invertebrate biodiversity in agricultural and urban headwater streams: implications for conservation and management." *Ecological Applications* 15, no. 4 (2005): 1169-1177. and O'Malley, S. (2006). Birds of Central Park. *Northeastern Naturalist*, 13(1), 141. and Middleton, Arthur, Temple Stoellinger, Drew E. Bennett, Travis Brammer, Laura Gigliotti, Hilary Byerly Flint, and Sam Maher. "The Role of Private Lands in Conserving Yellowstone's Wildlife in the Twenty-First Century." *Wyo. L. Rev.* 22 (2022): 237.

⁷ Regan, Shawn E. "Austrian ecology: reconciling dynamic economics and ecology." *JL Econ. & Pol'y* 11 (2015): 203.

⁸ Smith Jr, Langhorne B., and J. Fred Read. "Rapid onset of late Paleozoic glaciation on Gondwana: Evidence from Upper Mississippian strata of the Midcontinent, United States." *Geology* 28, no. 3 (2000): 279-282 and Wicks, Charles W., Wayne Thatcher, Daniel Dzurisin, and Jerry Svarc. "Uplift, thermal unrest and magma intrusion at Yellowstone caldera." *Nature* 440, no. 7080 (2006): 72-75.

⁹ Cope, Edward Drinker. "Descriptions of extinct Vertebrata from the Permian and Triassic Formations of the United States." *Proceedings of the American philosophical Society* 17, no. 100 (1877): 182-193.

For the NNA to be useful it should adopt an inclusive definition of nature encompassing landscapes that are domesticated and tamed and where people are understood as strands in the web of life along with other species. At the same time, the definition must not be so encompassing that it loses all practical meaning.

Primary Audiences

If the NNA adopts an inclusive, values-based definition of nature, then private landowners must be treated as a key audience. Specifically, landowners must have confidence the NNA is not a threat to their property or livelihoods, especially if the NNA is to benefit from the access and information only landowners can provide. The NNA also has the potential to give landowners useful information that can help them access ecological mitigation, carbon sequestration, and emerging biodiversity credit markets.

Approximately 60 percent of the United States is privately owned. This gives private parties the lion's share of influence over nature.¹⁰ For example, 80 percent of American grasslands, one of the continent's most productive habitats, and one with value for carbon sequestration are privately owned.¹¹ In places like the Greater Yellowstone Ecosystem, where PERC is headquartered, these privately owned grasslands provide as much as 80 percent of the winter range for migratory big-game species, 93 percent of important bird habitat, and 39 percent of the dispersal routes connecting Yellowstone's grizzly bears with those of the Greater Continental Divide Ecosystem.¹² Additionally, 75 percent of the nation's wetlands and 56 percent of its forests are in private or tribal ownership.¹³ These lands filter more than 25 percent of the nation's freshwater supply, provide flood control, and support commercial fisheries.¹⁴ With nearly half of all species managed under the federal Endangered Species Act depending on private lands for 80 percent or more of their habitat, these lands are also essential to recovering endangered and threatened species.¹⁵

Producing an authoritative assessment will depend a great deal on cultivating the trust and cooperation of private landowners. This is likely to be challenging due to persistent distrust of

¹⁰ Agricultural Resources and Environmental Indicators, 2019. D. Hellerstein, D. Vilorio, and M. Ribauda (editors). EIB-208, U.S. Department of Agriculture, Economic Research Service, May 2019.

¹¹ [North American Grasslands and Birds Report](#), by CB Wilsey, J Grand, J Wu, N Michel, J Grogan-Brown, B Trusty. National Audubon Society (2019).

¹² [Elk in Paradise: Conserving Migratory Wildlife and Working Lands in Montana's Paradise Valley](#), by Whitney Tilt. PERC (July 2020) and Rural Development and Biodiversity: A Case Study from Greater Yellowstone," by A.J. Hansen and J.J. Rotella. Pgs 123-140 in: Levitt, J., ed. *Conservation in the Internet Age*. Island Press. New York (2002) and [Potential Paths for Male-Mediated Gene Flow to and From an Isolated Grizzly Bear Population](#), by Christopher Peck, Frank van Manen, Cecily Costello, Mark Haroldson, Lisa Landenburger, Lori Roberts, Daniel Bjornlie, and Richard Mace. *Ecosphere* 8(10), (October 2017).

¹³ See [Wetlands](#). USDA Natural Resources Conservation Service and "[Private Forestland Stewardship](#)," by Sarah Hines. USDA U.S. Forest Service, Climate Change Resource Center (October 2011).

¹⁴ [Private Forests, Housing Growth, and America's Water Supply: A Report from the Forests on the Edge and Forests to Faucets Program](#), by Miranda Mockrin, Rebecca Lilja, Emily Weidner, Susan Stein, and Mary Carr. USDA U.S. Forest Service, Rocky Mountain Research Station. Gen-Tech Report 327 (September 2014).

¹⁵ US Fish and Wildlife Service. Endangered Species and Private Landowners. Factsheet.

the federal government, especially by rural landowners.¹⁶ The NNA must make a clear and compelling case that it is not a vehicle through which private property rights will be compromised. It is important to clearly convey that the NNA will not be used to develop restrictive regulations on the use of lands, waters, and wildlife. Moreover, the economic and other benefits the NNA might provide private landowners should be made clear and widely communicated. This includes how the NNA will be used to guide the development of economic incentives for conservation.

Identifying and Engaging Relevant Knowledge Sources

As the primary stewards of American lands, private landowners are also key sources of local knowledge about the state of nature in a given area. The need for farmers, ranchers, and forest landowners to derive a livelihood from their land gives them the incentive to know and understand the details of the land's health. The NNA will benefit from tapping into the knowledge held by private landowners, especially those that own large acreages.

To access the knowledge private landowners possess, the NNA will need to actively communicate with and listen to landowners early and often. Ideal avenues for engagement include rural conservation districts, university cooperative extensions, industry associations such as the Montana Stockgrowers Association, and local conservation organizations with a track record of collaborating with landowners.¹⁷

Early engagement should focus on building trust by being transparent about what the NNA is, what it seeks to achieve, and how it will be used. Engagement efforts should also focus on building trust with landowners by establishing assurances that the NNA will not infringe on their property rights. This phase should also assure landowners that participation in the NNA is voluntary, will not impose unreasonable costs on participants, and clearly identify any benefits stemming from participation.

Ongoing engagement should reiterate respect for private property rights and the potential benefits of participating in the NNA. It should also inform landowners how they can participate. If possible, incentives for participation should be formulated and used.

Conclusion

By improving our understanding of the world around us, the National Nature Assessment can be a valuable conservation tool. For the assessment to live up to its potential, however, it must be based on a practical definition of nature that is inclusive of human beings and that integrates an accurate scientific understanding of the dynamic nature of our planet. It must also inspire the trust and cooperation of private landowners who steward the majority of the nation's land, water, and wildlife habitat. For this to happen, the assessment must be transparent about its purpose and objectives, engage with landowners early and often, and demonstrate respect for private property

¹⁶ Bonnie, Robert, Emily Pechar Diamond, and Elizabeth Rowe. "Understanding rural attitudes toward the environment and conservation in America." Nicholas Institute for Environmental Policy Solutions, Duke University (2020).

¹⁷ Ex supra 14.

rights. Doing so will likely improve the data set available to the NNA initiative and encourage the kinds of collaborative conservation efforts that form the basis of initiatives such as “America the Beautiful.” Thank you for the opportunity to contribute our thoughts to this development process.