USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Northern Research Station

Rooted in Research

ISSUE 25 | FEBRUARY 2024

How Will Recreation on Public Lands Be Different in 2050?

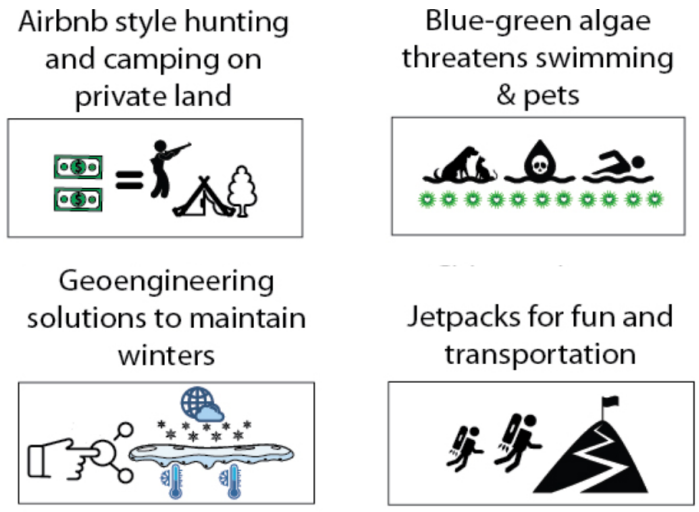
Anticipating and preparing for the future are among the challenges land managers face when making decisions about how to balance the public's desire for outdoor recreation with ecological concerns. A recent General Technical Report by Lynne Westphal, emerit research social scientist with the U.S. Department of Agriculture Forest Service Northern Research Station, aims to assist managers by analyzing potential changes in recreation on public lands 30 years into the future.

To collect data for the report, Westphal drew on more than 700 "scan hits"—signals of potential change—from the Forest Futures Horizon Scanning Project that relate directly or indirectly to outdoor recreation. The scan hits were gathered from a variety of sources ranging from scientific articles to science fiction. Some signals were weak (uncertain and far in the future), some were strong (happening now or very likely to happen), and others were in the middle (likely to happen).

Next, Westphal applied a widely used analytical framework in strategic foresight to guide and sort the scan hits. "Strategic foresight, also known as futuring, is designed to help think about different things that could happen in the future," Westphal explains. "The goal is to help planners, policy makers, and managers make changes now to steer toward a desired future."

KEY MANAGEMENT CONSIDERATIONS

- Recreation on public lands may be significantly different in the future.
- Health-related outdoor recreation is likely to increase in the future.
- Climate change is a key driver of changes related to outdoor recreation.
- Attitudes toward tourism and new modes of travel could influence interest in and access to natural areas.
- Social factors and technological advances will have significant impacts on outdoor recreation.



Factors that land managers may need to consider as they plan for future outdoor recreation. The top graphics show activities that are already happening. The bottom graphics show activities that are likely to happen but are uncertain.

Although it is impossible to know exactly what the future holds, the report describes a range of possibilities that may increase, decrease, or otherwise change outdoor recreation on public lands in the United States.

Health-related Recreation

The data point to increased levels of health-related recreation, from forest bathing for physical and mental health to medical prescriptions for time spent in nature and longer life expectancy. Older adults, in particular, may be more able to remain engaged in favorite recreation activities and to try new ones.

Climate Change and Recreation

The report identifies climate change as a driver of changes in recreation. For example, the projected decline in snowfall may threaten winter sports in areas that rely on skiing and other snow-dependent tourism. Recreation activities that depend on

abundant wildlife, such as fishing and hunting, may be affected by reduced water quality and species decline.

Climate change may also contribute to the movement of people and wildlife. Rising sea levels are projected to displace millions of residents on the coasts of the United States. Climate migrants may repopulate rural areas, changing who engages in recreation on nearby public lands. Experiences that require interaction with wildlife, such as birding, may be affected by changes to habitat and new migration patterns.

Tourism and Recreation

Westphal found mixed results regarding tourism. Although the data point to overall increased tourism to natural areas, scan hits about vacation habits among young people and personal choices to reduce the carbon footprint of leisure travel suggest that there may be less long-distance travel to natural areas. But electric and hydrogen fuel cell powered jets, ships, and RVs may make long-distance travel more climate friendly.

Tourism to special places, such as the now famous Antelope Canyon or sites in Iceland, can draw thousands of visitors after photos go viral on social media. These special places risk becoming "loved to death" (i.e., degraded by being trampled by too many people) and at the same time generate economic boosts for the people who manage them. Some of these places also draw last-chance tourism fueled by a desire to see iconic places before they are gone.

Social and Technological Factors

The report also covers scan hits related to social factors, technology, and recreation. For example, traditional outdoor recreation activities such as hiking and camping may decrease due to a rise in biophobia (fear of nature), particularly in young people. But new recreation activities like nature-based cosplay (acting out fictional stories in costume) and virtual or augmented reality that would allow people to experience various outdoor scenarios—walking through a forest 100 years in the past, watching a forest regenerate after harvesting, or visiting a forest far away—could change what outdoor recreation looks like, who participates in it, and what facilities are needed on public lands.

Technological advances, such as the use of passenger drones, may make access to the outdoors more accessible for all people. 3D rendering image of a passenger drone. Licensed image by chesky/AdobeStock

"The scan hits point to uncertainty and volatility in recreation activities on public lands like National Forests. That means that planners and managers need to be on their toes!" – Lynne Westphal

Technological advances have the potential to reshape outdoor recreation. Changes in the design of wheelchairs and other mobility-assistance devices may make it possible for people to participate in outdoor recreation regardless of age or health condition. Passenger drones may be able to carry people to natural areas that they otherwise could not reach because of age, health, or mobility. These drones may make wilderness areas easier for all people to access and make search and rescue safer for rescue teams. When visitors arrive in natural areas, they may find robots conducting trail maintenance, emptying trash cans, or tracking numbers of visitors.

In a future where the only certainty is change, managers will make many decisions about outdoor recreation on public lands. The report highlights the need for careful planning to ensure the preservation and accessibility of outdoor recreation for future generations. As Westphal puts it, "the scan hits point to uncertainty and volatility in recreation activities on public lands. That means that planners and land managers need to be on their toes!"

PROJECT LEAD

Lynne Westphal is emerit research social scientist with the People and Their Environments: Social Science Supporting Natural Resource Management and Policy research work unit.

FURTHER READING

Westphal, Lynne M. 2022. The future of recreation on public lands: a horizon scan. Gen. Tech. Rep. NRS-208. Madison, WI: U.S. Department of Agriculture, Forest Service, Northern Research Station. 106 p. https://doi.org/10.2737/NRS-GTR-208.

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