A new research strategy to “ignite” the science of outdoor recreation

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Once upon a time...
Igniting the Science of Outdoor Recreation (ISOR)

Community of Practice

Legend
- USFS
- NPS
- BLM
- USGS
- USFWS
- University
- Non-federal Government
- NGO

Institutions: Colorado State University, Oregon State University, University of MONTANA, University of FLORIDA, Auburn University
Igniting the Science of Outdoor Recreation

Science Co-Production Team
- **Members**: Dale, Steve Selin, Lee, Anna, Jose
- **Products**: Gen. Tech. Report; Journal Special Issues

Research Strategy & Agenda Team
- **Members**: Lee, Monika, Anna, Matt, Adam, Bret, Steve, Karla, Lis
- **Products**: Research Strategy & Agenda (including 8 Research Focus Areas)

Coordination Team
- **Role**: This group meets monthly on Wednesdays to coordinate and guide the overall effort

Community of Practice Team
- **Members**: Gabe, Anna, Jim, Brenda, Lee, Toby
- **Products**: website, monthly updates to ISOR 88+ group

RFA Lead Authors:
- Lis Novak: RFA1
- Tinelle Bustam: RFA1
- Rachel Franchina: RFA1
- Steve McCool: RFA2
- Jason Robertson: RFA3
- Adam Milnor: RFA4
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ISOR Process

Outdoor Recreation Research Strategy

- 9 Research Focus Areas
- 50+ Contributors

What is it?
- A document that prioritizes research directions for outdoor recreation on US public lands.
- The product of extensive interagency dialogue and revision.
- A strategic framework to be adapted and implemented by agencies.
What is a Research Focus Area?

• Identifies and guides national recreation research priorities

• Developed through:
  • Sustainable recreation and tourism assessment
  • Golden workshop
  • Monthly coordination calls
  • 9 writing leads and teams
  • Review and revision process
Research Focus Areas

1. Integrated social-ecological planning frameworks
2. Organizational culture
3. New visitation drivers
4. Measuring and monitoring visitor use
5. Health and well-being
6. Diverse people-place-activity connections
7. Integrated cultural resource management
8. Public lands in the tourism economy
9. Recreation and environmental change
Integrating outdoor recreation planning into a social-ecological planning framework

This RFA aims to:
• Advance knowledge and practice for integrating multiple uses and resources into planning processes.

Traditional public land management is highly segregated by disciplinary programs, and recreation is often a secondary consideration.

Research topics to address management needs:
• Assess methods of integrating recreation into existing socio-ecological planning frameworks.
• Measure key interactions between recreation and other uses.
• Integrate key approaches in disciplinary recreation research to assist decision making.
Transforming organizational culture to enhance capacity for outdoor recreation management

A lack of adaptive approaches and low organizational resilience has made sustainable recreation practices difficult to implement.

This RFA aims to:

• Transform organizational culture to enhance capacity for and resilience in recreation management.

Research topics to address management needs:

• Evaluate efficacy of new financing, partnership, and personnel strategies to build capacity.

• Analyze organizational cultures and dynamics, and their relationship to recreation management practices.

• Pilot partnerships to facilitate joint production of research approaches and knowledge.
Understanding new drivers and characteristics of demand for outdoor experiences

Land managers need better information about changing recreational use patterns, so that they can adaptively manage recreation resources and access for a diverse public.

This RFA aims to:

• Understand drivers of demand for outdoor recreation experiences, and anticipate new patterns of recreation participation.

Research topics to address management needs:

• Analyze how regulatory and management approaches might respond to visitation changes.

• Examine how outdoor landscapes are imagined, commoditized, and consumed in the media.

• Model how social media and crowdsourcing apps influence visitation patterns.
Measuring, monitoring, and forecasting visitor use and distribution across public lands

Managers lack visitation data necessary for understanding long- and short-term recreation trends, as well as projected changes.

**This RFA aims to:**
- Develop methods for collecting accurate and reliable visitation data that can be integrated across agency jurisdictions and is available at relevant spatial and temporal scales.

**Research topics to address management needs:**
- Develop methods that measure visitation at relevant spatial and temporal scales.
- Characterize relationships among visitor volumes and experience, and ecological processes.
- Synthesize visitation monitoring protocols, best practices, and database design.
Understanding the health and well-being benefits of outdoor experiences to people

Research topics to address management needs:
• Assess the health benefits conferred by outdoor experiences, and their causal mechanisms.
• Evaluate programs run collaboratively by health providers and land managers.
• Synthesize best practices for health-oriented outdoor recreation programs and spaces.

This RFA aims to:
• Improve understanding of the health and well-being benefits of nature-based outdoor experiences.

The benefits of outdoor experiences need to better understood so that managers can design programs, facilities, and spaces that maximize benefits for diverse visitors.
Understanding and fostering connections among people, nature, and public lands

This RFA aims to:
- Understand, encourage, and manage for diverse uses of public lands.

Research topics to address management needs:
- Examine institutional and cultural barriers that limit participation in recreation activities.
- Analyze how visitors create meanings from outdoor experiences, places, and activities.
- Assess tools that promote learning about different groups’ desired outdoor experiences.

Public land visitors have wide-ranging recreation behaviors, preferences, motivations, and different meanings they attach to places and activities.
Enhancing heritage, shared stewardship, and connections to place

Cultural resources are often managed separately from outdoor recreation and natural resources, resulting in missed connections for visitors experiences in cultural landscapes.

This RFA aims to:
- Assess opportunities to integrate cultural resources with outdoor recreation and natural resource management programs.

Research topics to address management needs:
- Assess models for integrating natural and cultural resource management.
- Develop management integration tools to forge heritage connections on public lands.
- Formulate best preservation and management practices for heritage sites, landscapes, and activities as they relate to outdoor recreation.
Planning for sustainable tourism and the role of public lands in the tourism economy

This RFA aims to:
• Understand and assess sustainable tourism as a local and regional development strategy in relation to public lands.

Research topics to address management needs:
• Analyze emerging tourism niches and how they relate to visitor demand on public lands.
• Identify key public lands in regional tourism systems through network analyses and systems mapping.
• Develop metrics for assessing and monitoring the sustainability of tourism on public lands.

Land management agencies don’t view themselves as tourism providers and don’t engage with regional or local tourism entities.
Recreation in the context of environmental change

Environmental changes such as climate change, altered fire regimes, and invasive species introductions all contribute toward changing conditions for recreational settings and opportunities.

This RFA aims to:
• Achieve a better understanding of the implications of large-scale environmental change for recreation use.

Research topics to address management needs:
• Develop recreation planning tools that help anticipate and adapt to environmental changes.
• Model how visitors adapt to environmental changes by substituting locations, timing, activities.
• Model the effect of recreation on the biophysical environment on multiple scales.
Research Focus Areas

1. Integrated social-ecological planning frameworks
2. Organizational culture
3. New visitation drivers
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Cross-Cutting Actions

Restructure research incentives
- Devote resources to knowledge synthesis and translation
- Shift from “science delivery” to “science co-production” mindset

Develop translatable and transferable methods
- Employ replicable and transferable data collection methods
- Leverage spatial tools and data dashboards to aid integration with other disciplines
- Deepen knowledge of cultural, ethnic and generational trends

Make new friends
- Invest in cross-sector partnerships: healthcare, tourism, transportation, economic development
- Promote inclusion of academic and industry science alongside agency efforts
- Form communities of practice that network managers and researchers
Join us!

• What’s missing?
• What’s next?
  • Research Strategy review
  • Strategy published late 2019
  • Community of practice
  • Journal special issues
  • 2020 symposium
Igniting the Science of Outdoor Recreation

Bridging management and research to understand outdoor experiences and human connections with natural and cultural heritage

An integrated team of managers, practitioners, and researchers has formed to find ways to bolster our collective research capacity and improve alignment around priority research needs for outdoor recreation and nature-based experiences. We work across many agencies, universities, and community-based organizations to identify the most important areas for future investment to enhance the quality and opportunity for people to connect with nature on our public lands.

Working Teams

**Research Strategy & Agenda Team** - Work with a group of managers and researchers to develop a research strategy and proposed agenda for outdoor recreation. We are specifically looking for people to work on different sections of the research agenda, including elaborating on research needs for each research focus area. Each team will summarize management challenges, develop a rationale, identify specific information needs, indicate new technologies, data needs, knowledge sharing strategies, potential partnerships, and opportunities for integration, and consider policy implications.

**Science Co-Production Team** - A compendium of 18 brief working papers is being published as a general technical report. We are also seeking contributions for a special journal issue on recreation research.

To get involved: anna.miller1@usda.gov