

Appendix Papers

Invited Paper on Sustainable Public Land Recreation

The Sustainability of Outdoor Recreation and Tourism: Findings from a Survey of Forest Service Managers

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Outdoor recreation and tourism represents a major service by which the public identifies with and better understands natural resources, even to the extent that it can foster environmental stewardship (for example, see Winter and Chavez 2008). Yet, myriad threats to recreation and tourism exist which need to be addressed. Addressing these threats can be facilitated through application of a sustainability framework. Sustainability, including sustainable recreation and tourism, must consider three dimensions: economic, social, and environmental. These dimensions are interdependent and a balance between them is essential to sustainability (UNEP and UNWTO 2005).

To better understand current perceptions, barriers, facilitators, and surrounding concerns related to sustainable recreation and tourism, a study was conducted through a national survey of Forest Service management personnel. The survey results provide insights into issues surrounding the idea of sustainable recreation and tourism, and suggest opportunities for furthering agency efforts in this area.

Methods

This web-based survey of resource managers with recreation management duties in the Forest Service was conducted in 2009. Survey items were derived from a sustainable operations survey completed by the first author (Winter 2008), from concepts explored by Cottrell and others (see Cottrell and Vaske, 2006; Cottrell, Vaske, Shen, and Ritter (2007), and from items of particular interest, such as perceived impacts and responses to global climate change.

We gathered names from directories, email lists, and direct contact through phone and email to verify appropriate personnel to include in our study. We aimed for a census of managers with primary recreation-management duties at the regional, forest, and district level. Temporary and seasonal personnel were excluded, as were most classified as recreation technicians. Each employee was sent up to three emails requesting their participation in an online survey. A total of 872 employees were contacted by email and 433 usable surveys were received, resulting in a 50.5 percent response rate. (Some of the employees were dropped from the response rate calculation because of an incorrect address, they were no longer in a recreation management position, or email inboxes that were not accepting

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messages through the duration of the study). Response rate, though varied by forest and district, was similar across the U.S. when examining Forest Service regions involved.

General Attitudes towards Sustainability

The majority of respondents strongly agreed that they have a professional responsibility to practice sustainable operations (business practices that reduce environmental footprint such as recycling and green purchasing) (72.4 percent), that sustainability is important in the area they manage (71.1 percent), and that it warrants additional investment (62.5 percent). They were also likely to agree that Forest Service operations are part of the sustainable tourism industry (68.0 percent). Sustainability was of personal concern to most respondents (90.4 percent).

Respondents were in less agreement that sustainability is a Forest Service priority (47.5 percent agreed). Most felt Forest Service resources were inadequate to cover demand for recreation and tourism (82.0 percent), and lack of resources was a common concern expressed in open ended remarks by respondents. For example, one respondent wrote “The Forest Service budget/workforce on our unit can't supply a quality recreation experience for the public.”

Components of Sustainability

Ratings of items important to sustainability reflect an understanding of the broader components of sustainability discussed above. For example, the majority rated environmental impacts (97.4 percent), increased environmental appreciation (95.0 percent), economic impacts (91.4 percent), increased appreciation of surrounding communities (80.1 percent), and improved health for the recreating public (77.1 percent) as important considerations in sustainability.

Partnerships and collaboration were explored related to sustainable recreation and tourism, including relationships with community residents, volunteers, outfitters, concessionaires, and businesses. A majority (70.7 percent) agreed that partnerships are relied upon to provide recreation and tourism in the area that they manage. However, less than one-third (30.5 percent) agreed facilities are developed in cooperation with local businesses. The majority (79.8 percent) have volunteers assisting with management. Most (84.5 percent) agreed that community residents should have an opportunity to be involved in recreation and tourism decision-making. About half (50.2 percent) felt that there is good communication among parties involved in the policy and decision making surrounding recreation and tourism.

Actions Taken to Ensure Sustainable Operations

The majority indicated the following actions as routinely practiced or in place to some degree in the area they manage: recycling at headquarters (84.4 percent)(append. fig. 1), vehicle reservation/sharing system (69.5 percent),

recycling in the field (63.5 percent), use green products (59.0 percent), reduce number of fleet vehicles (54.3 percent), and partnering with the local community to develop recreation and tourism opportunities (53.5 percent). Some of these represent narrow majorities and opportunities for increased sustainability efforts.

Areas of potential growth were also indicated, in that a number of actions were *not* chosen by a majority as routinely practiced or in place to some degree. Those close to, but less than majority practice included having hybrid vehicles in the fleet (49.6 percent), education and interpretation informing visitors about environmentally important issues (43.3 percent), and partnering with business to identify and develop recreation and tourism opportunities (43.1 percent). The opportunity to increase the proportion of managers using transportation management is evident, where 14.1 percent indicated they address transportation management with a bus or shuttle system in high use areas.

Opinions on Global Climate Change

A force that may impact the future of recreation and tourism on agency managed lands is global climate change. A majority (59.4 percent) suggested climate change is of personal concern related to Forest Service managed lands. However, some respondents felt that climate change was not occurring based on open ended comments, for example, one respondent wrote: “Climate change (human caused) is a myth and a political hoax.” Others felt that if climate change was occurring, it would not make a difference in recreation. Among those who felt there may be impacts, anticipated impacts involved an increase in wildfire risk and changes in vegetation, and geographic displacement or movement of recreation opportunities. A majority agreed that the Forest Service should take specific actions to address the impacts of climate change including reducing climate-changing gasses (78.4 percent), anticipating the effects (68.9 percent), and educating visitors (61.1 percent). Other suggested actions including investment in educational programs, designing buildings around sustainability guidelines, encouraging non-motorized recreation, leading by example for the public, and investing in more science to examine the impacts and how to manage them.



Figure 1—Most respondents practiced a number of sustainable behaviors in the office and field, including recycling.

Additional Areas of Primary Concern to Respondents

Further efforts towards sustainable recreation and tourism can be made although it is helpful to understand areas of greatest concern to managers so that these concerns, when appropriate, can be understood through their relationship to sustainability measures. Issues facing respondents' management areas that were of greatest concern included a lack of resources (especially funding and personnel), unmanaged use, increased use, and agency relationship with the public. Sustainability measures that speak to these concerns may be more readily adopted than those seen as independent of these pressing issues. For example, use of more

efficient hybrid vehicles might result in significant fuel cost savings allowing those funds to be allocated to other needs. This would encourage a more rapid adoption of fleet changes.

A set of items that queried reasons for environmental concerns included impacts on others (labeled altruistic concerns); impacts on the ecosystem (labeled biospheric concerns); and to less of a degree, impacts on self (for example, changes in lifestyle, labeled egoistic concerns)(append. fig. 2). Schultz and Zelezny (2003) have demonstrated the importance of addressing broader appeals towards environmental issues than a purely biospheric focus. Multiple concerns and perspectives can drive behavior and serve as motivators. Framing appeals to sustainability might benefit greatly from this approach, and seems aligned with the broader sustainability paradigm as discussed at the beginning of this paper. For example, a core component of the sustainability paradigm involves consideration of community, including collaboration with communities in planning and delivery of recreation and tourism opportunities. A compelling basis for this collaboration might be improved opportunities for youth (an altruistic basis), as well as the enhancement of agency-public interactions (egoistic such that job-related conflict may be reduced).



Figure 2—Sustaining the ability to contemplate in the canyonlands. Photo by Nate & Kelly Bricker



Figure 3—Educating the future. Photo by Nate & Kelly Bricker

Discussion

This paper examined management perspectives on sustainable recreation and tourism. Sustainability appeared to be a shared concern among respondents, and was viewed as a responsibility. Global climate change received a mixed response, with a slight majority expecting impacts on recreation and tourism. Expected impacts and how to address them were quite varied and suggest an opportunity for further research and dialogue. However, a minority viewed sustainability as an agency priority. Discussions of resources and capacity seemed to surround this view, where personnel and funding were offered as barriers to efforts in the areas respondents managed. Central in many responses was the importance of having the agency take a lead role in sustainability and the value of educational efforts (append. fig. 3). It also seems that educational efforts aimed at illuminating the tangible costs and myriad benefits of sustainable recreation and tourism efforts could help guide further sustainability efforts in the agency. It may be that a number of efforts, when shown to result in measurable gains and benefits, could be viewed as warranting investment.

Agency personnel also indicated that costs and benefits might be considered from a broader benefit perspective to include direct ecosystem or cultural enhancements. Partnering with community groups, volunteers, organizations, and local businesses, seems to be another route for enhancing efforts surrounding sustainability, and is an essential determinant of sustainability. Further understanding of any barriers to partnering with local businesses might be of help in the continuing development of approaches to sustainability in the agency. It may be that public agencies have specific constraints that make them unique in their best approaches to sustainability. Of interest may also be an agency-wide approach that embraces indicators of sustainability and provides a grounded feedback loop to inform the many active stages of development across Forest Service recreation and tourism.
