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Trends in nature-based outdoor recreation participation in the U.S. — Part I

A RECREATION Research Report in the IRIS Series¹ and part of the 2010 National Assessment Series: Part I

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¹ The Internet Research Information Series (IRIS) is an internet accessible science report series covering outdoor recreation statistics (RECSTATS), wilderness research (WILDERNESS) and other human-dimension and demographics research (DEMOSTATS) related to natural resources. This research is a collaborative effort between the USDA Forest Service's Southern Research Station and its Forestry Sciences Laboratory in Athens, Georgia; the University of Georgia in Athens; and the University of Tennessee in Knoxville, Tennessee.

<http://warnell.forestry.uga.edu/nrrt/nsre/IrisReports.html>

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Introduction

In this Part I of the 2010 IRIS National Assessment Series, indexed trend lines are shown and briefly described for seven categories of nature-based outdoor activities. In subsequent Parts of this Series trends for individual activities within each category will be covered. This series of IRIS research reports are adapted from the forthcoming Forest Service RPA Assessment (<http://www.fs.fed.us/research/rpa/>). The data source is the National Survey on Recreation and the Environment (NSRE) (Cordell et al, 2004).

Activities were grouped into categories as listed below because of similarities in either setting or primary focus of the activities. For example, the activities in the group “visiting recreation and historic sites” were listed together because they involve people using designated recreation sites. As another example, the group named “viewing and photographing nature” includes activities focused on viewing and photographing birds, natural scenery, other wildlife (besides birds), wildflowers and trees, etc. The seven activity groups and the activities they cover include:

Visiting recreation and historic sites—family gatherings, picnicking, visiting the beach, visiting historic or prehistoric sites, and camping.

Viewing/photographing nature—View/photograph birds, natural scenery, other wildlife (besides birds), and wildflowers, trees, etc.

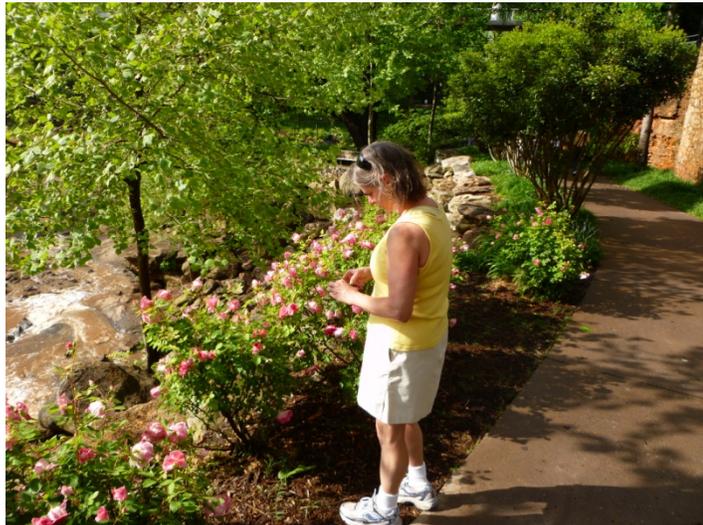
Backcountry activities—Backpacking, day hiking, horseback riding on trails, mountain climbing, and visiting a wilderness or primitive area.

Motorized activities— Motorboating, off-highway vehicle driving, snowmobiling, using personal watercraft, and waterskiing.

Hunting and fishing—Anadromous fishing (salt to fresh water migratory fish, e.g., salmon), coldwater fishing, warmwater fishing, saltwater fishing, big game hunting, small game hunting, and migratory bird hunting.

Non-motor boating—Canoeing, kayaking, rafting, rowing, and sailing.

Snow skiing and snowboarding—Cross country skiing, downhill skiing, and snowboarding.



Viewing and photographing outdoor scenery and nature is an area of outdoor recreation that is growing. (Photograph by Ken Cordell taken in a Greenville SC city park.)

Shown in the line graphs are 3-year moving averages of total annual number of activity days on which participation occurred across the U.S. population of persons 16 or older. These moving averages are indexed to the estimated number of days in the year 2000, where the index value for 2000 is shown as zero. Put another way, the indexed values represent the percent change since the base year, 2000. Graphing for subsequent years shows whether there was an upward or downward trend, above or below the 2000 zero base line. The moving average metric is used here to smooth out year to year variation in participation in individual activities that resulted from weather patterns, catastrophes such as Hurricane Katrina, the 9-11 attacks, fluctuating gas prices and other factors. Variation from the base year zero is computed for any given year beyond 2000 as $((MA_{(2000+n)} / MA_{2000}) - 1)$, where n equals number of years since 2000 and MA equals the moving average of annual total number of activity days. Years 2003 and 2004 were combined due to insufficient sample size for either year alone. An indexed value of 1.0 would represent 100 percent growth. A value of -0.5 would represent 50 percent decline.

Summary of Trend

The patterns shown in figure 1 reflect the cumulative effects of trends in the individual activities reported in the above line graphs. While motorized activities showed growth up to about 2005, it along with hunting and fishing, and backcountry activities, ended up toward the end of this decade at about the same level of participation as in 2000. Non-motor boating grew modestly and visiting recreation and historic sites grew at a slightly higher clip. Various forms of skiing, including snowboarding, declined during this decade. The clear leader in growth of total annual days was the overall group of activities named “viewing and photographing nature”.

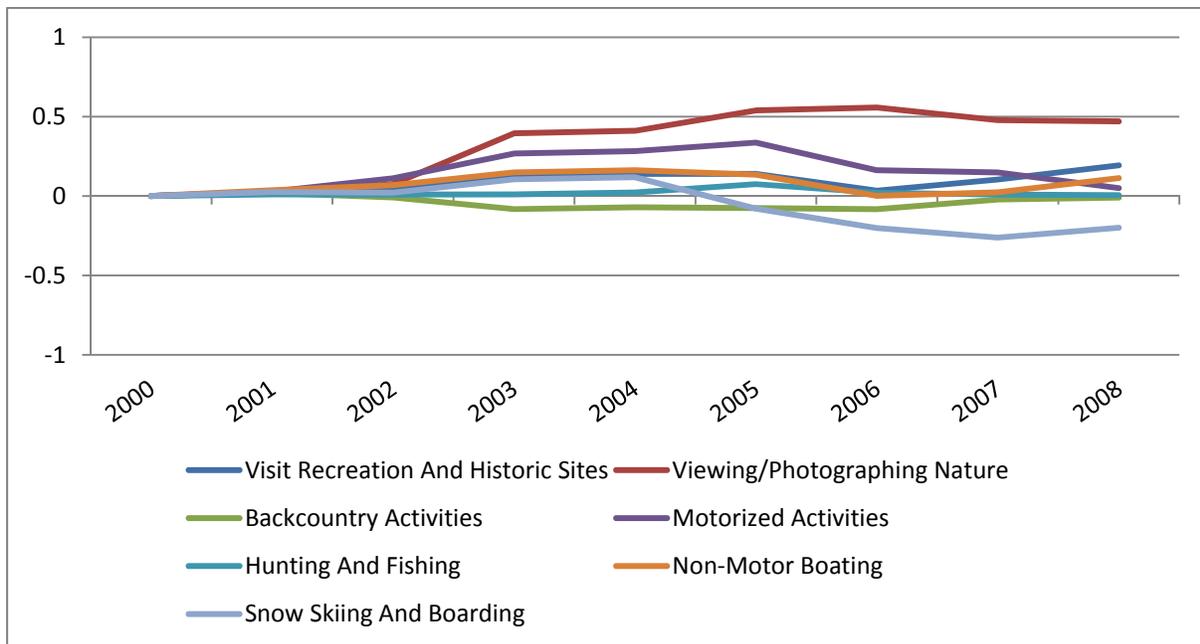


Figure 1—Trend for Seven Composites of Nature-based Activities

References

Cordell, H.K., Betz, C.J., Green, G.T., Mou, S., Leeworthy, V.R., Wiley, P.C., Barry, J.J., and Hellerstein, D. 2004. Outdoor recreation for 21st century America: a report to the nation: the national survey on recreation and the environment. State College, PA: Venture Publishing, 293 p.