

IDENTIFYING FUNCTIONAL COMMUNITIES FOR USE IN FOREST PLANNING AND DECISIONMAKING

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Abstract: Public land managers are searching for frameworks for organizing and displaying social information that will make it useful in forest management and decisionmaking. On the Chequamegon-Nicolet National Forests in Wisconsin, managers and researchers have used the concept of functional communities to develop such a framework. Functional communities define geographic areas in and around the Chequamegon-Nicolet where people's perceptions and use of the Forests are similar or compatible.

Introduction

The USDA Forest Service and other public land managers are wrestling with how to improve their analysis of the social impacts of management decisions. Two events have spurred Forest Service managers' interest in people/forest interactions. The first event was the Forest Service's adoption of ecosystem management as its new management paradigm. On June 4, 1992 the Chief of the Forest Service announced that the Agency was committed to "using an ecological approach in the future management of the National Forests and Grasslands."¹ The Agency's adoption of an ecological approach to management was a response to changing public values related to the environment and to increased understanding about how ecological systems work.

One of the foundations of ecosystem management is that people are part of and interact with ecosystems:

"People are a part of forest ecosystems; they derive material and non-material goods and services from them, they live, work, and play in forests, and their attitudes, behavior, and knowledge of the forest ecosystem affect it in both direct and indirect ways. Thus, forest management systems that alter the structure and processes of the biological component will alter the human system that interacts with it. Conversely, the way in which people are organized and the processes through which they make decisions will lead to alterations in the forest ecosystem." (FEMAT 1993, p. VII-110)

Within the Agency, issues related to people/forest interactions fall under the rubric "human dimension of ecosystem management." In focusing on the human

dimension of ecosystem management, Agency staff seek to understand human demands on, values and perceptions of, and interactions with ecosystems, and to integrate these into policies, programs, and management decisions.²

In addition to a change in management philosophy, the Forest Service is embarking on its second round of land and resource management planning under the National Forest Management Act (NFMA) of 1974 (as amended by the Resources Planning Act of 1976). The first forest plans completed in the late 1980s were criticized for their lack of social analysis (USDA Forest Service 1990a). For example, in a series of critiques of the initial NFMA planning effort conducted by the Forest Service in cooperation with The Conservation Foundation and Purdue University, critique team members noted that on forests where the planning process was successful "the attention to people's needs (emotional, symbolic, and organizational, as well as economic and community needs) were given consideration along with the resource capabilities and commodity schedules" (USDA Forest Service 1990a, p.13).

In analyzing the effectiveness of the planning effort for decisionmaking, a critique team found that decisionmakers were left in a vacuum with regards to social information on which to base planning decisions: "We concluded that the planning process was designed for an analytical approach to resource decisionmaking; it lacked any means for incorporating sociopolitical issues into the decisionmaking process. A balance of both approaches is needed..." (USDA Forest Service 1990b, p.14).

One of the problems with including information on the human dimensions in forest planning and decisionmaking is finding a useful format for displaying or organizing relevant qualitative and quantitative information. Last July, several social scientists from the North Central Forest Experiment Station and their cooperators met in Park Falls, Wisconsin at the headquarters of the Chequamegon-Nicolet National Forests³. The Chequamegon-Nicolet is one of the first forests in the Eastern Region of the Forest Service to initiate forest plan revision, and we met to talk about social issues related to forest planning. Wisconsin National Forest staff felt that they needed a social assessment to help them place their planning effort in a social context. As part of this task, we agreed to look at the concept of functional communities, and to test the use of functional communities as a means of organizing information for social assessment and forest planning. To accomplish this, we would be drawing on work initiated by Deborah Carr, U.S. Forest Service, and Dale Blahna, Utah State University, that analyzes peoples' ties to the national forest from two perspectives—from a distance, using secondary data from sources like the Bureau of the Census; and up-close-and-personal, using key informant interviews to identify functional communities. It is the use of functional communities for collecting and organizing information for social assessment that is discussed here.

The Concept of Functional Communities

Generally when you categorize a group of people (or any set of objects) you can do so according to two different schemes—by categories or functions (Flynn 1985). With categorical groups you classify people according to

statistical or definitional characteristics. Examples of categorical groups include “teenagers” or “families with incomes below the poverty line.” With categorical groups, the groups are defined by the analyst, and people are either in or out. Functional groups are made up of people with similar behaviors or interactions. Functional groups cannot be determined prior to the analysis, but are determined by the analysis. In Wisconsin, we were interested in defining areas in and around the Chequamegon-Nicolet National Forests where people’s perceptions and use of the Forests are similar or compatible. We would define these functional communities using key informant interviews.

Using Key Informants to Identify Functional Communities

Key informants are “experts” who can provide information about activities or events, or can help explain events (Patton, 1980). To identify potential key informants we contacted the five district rangers on the Chequamegon-

Nicolet National Forests and asked them to provide lists of long-time area residents (Forest Service and non-Forest Service employees) who could help us understand the relationship of the area to forests, lakes and public lands. From those lists we selected 46 residents to interview, 23 Forest Service employees and 23 non-Forest Service employees. We met with people at places and times convenient for them. We met people at mills, sporting goods stores, resorts, and in district offices; we met over lunch, before work, and after supper.

The Forest Service employees we interviewed had lived in Wisconsin an average of 34 years, and in the community 39 years. Non-Forest Service key informants had lived in Wisconsin an average of 39 years and in the community 33 years. Table 1 shows the employment of non-Forest Service key informants. We were looking for balance in the employment and affiliation of our key informants, but ultimately we took whom ever had the time.

Table 1.—Distribution of key informants among occupation categories, average length of time living in Wisconsin and living in the functional community, non-Forest Service informants, Wisconsin National Forests Social Assessment

Occupation/ employment	Number of informants ¹	Years lived in Wisconsin	Years lived in the functional community
Educator/writer/extension	5	46	28
Timber industry	5	35	49 ²
Civic leader	5	50	37
Retiree	4	63	35
Small business owner/operator	4	43	32
Tourism/recreation	3	42	35
Other	3	22	10

During the interviews, we sat at a table with a large map of Wisconsin covered with a piece of mylar. We asked key informants to start drawing circles around areas where the people thought about and used the Wisconsin National Forests in similar ways. Then, we used an interview sheet to ask them a series of questions about the people and resources in their circles. These questions sometimes caused our key informants to redraw their communities, but by using this process we came up with 15 functional communities for the Chequamegon-Nicolet National Forests.

Using Functional Communities in Forest Planning and Decisionmaking

How are we using these functional communities to help forest managers understand the social context in which they are operating? First, narrative information is used as part of the Forests’ public involvement process. For each community we created a community profile. Community profiles include a general description of the community, a discussion of community ties to the land, further discussion of ties to the Wisconsin National Forests, and a list of issues important to the residents of the functional community. Community profiles are an important component of the public involvement process developed by the Forests. Community profiles help diversify the input received regarding forest management and planning by providing information on the issues and concerns from people who might not otherwise become involved in formal

public involvement activities. Information presented in community profiles adds texture and depth to the discussion of programs and issues that occur during “Friends of the Forest” meetings and other outreach efforts. Information contained in community profiles helps round out the list of issues managers develop as part of the forest planning process. Finally, insights gained from interviews and displayed in the profiles help land managers anticipate the responses by different publics to potential changes in forest management.

Functional communities are useful frameworks for displaying categorical data. For example, the map in Figure 1 shows the percent change in population in northern Wisconsin by county. This is interesting, but it’s a little hard to see how it applies to the Forests specifically. Figure 2 shows the same information for the 15 functional communities. These maps are useful in showing how different various communities around the forests really are.

Finally, functional communities could serve as a basis for analyzing the impacts of alternative management actions on different communities for social impact analysis. For example, after identifying impact categories of importance to a community (perhaps number of jobs, quality of life, tradition and culture, economic diversity), a focus group could be formed in each community to ascertain people’s perceptions of the potential impacts of management alternatives on the community.

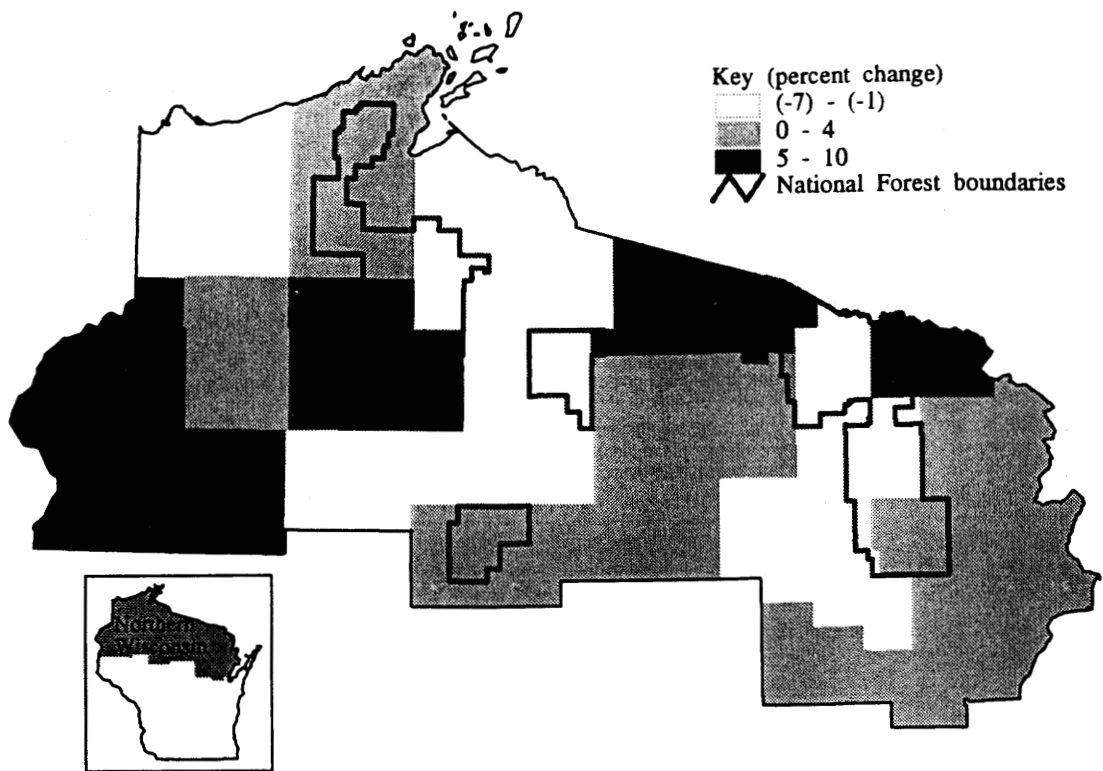


Figure 1. Percent change in population, northern Wisconsin by county, 1980-1990 (US Census Bureau)

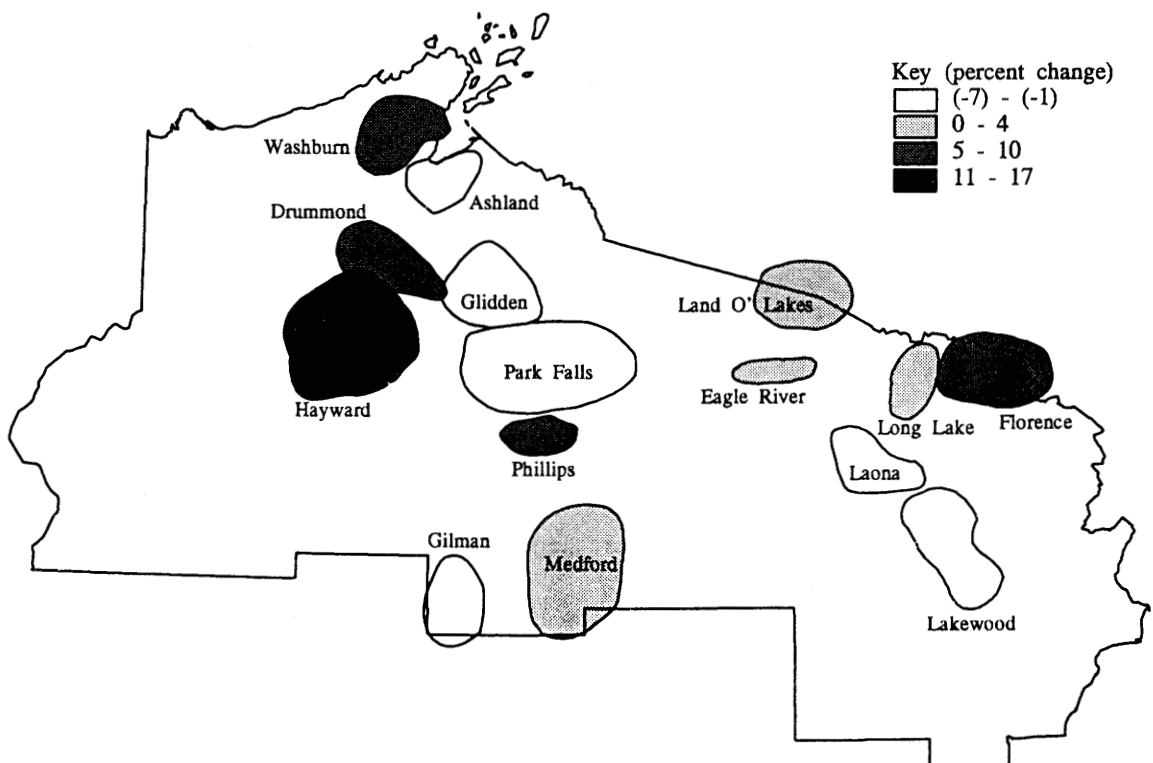


Figure 2. Percent change in population, northern Wisconsin by functional communities of the Chequamegon-Nicolet National Forests, 1980-1990

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¹ "Ecosystem Management of the National Forests and Grasslands." Memo to regional foresters and station directors from Chief F. Dale Robertson, June 4, 1992.

² USDA Forest Service, National Human Dimensions of Ecosystem Management Task Team. Human Dimensions in Ecosystem Management: A Concept Paper. September 1996.

³ The Chequamegon National Forest and Nicolet National Forest have one administrative staff and are being managed as one forest even though they technically remain two forests.