

<b>SOUTHERN RESEARCH STATION SCIENCE AREA CHARTER</b>		1. Title <b>Pioneering Forestry Research on Emerging Societal Changes</b>
2. Primary Research Work Unit (RWU Number, Title, Location)  SRS-4953: <i>Greatest Good for the 21<sup>st</sup> Century</i> : A Program of Pioneering Forestry Research on Emerging Societal Changes (Athens, GA)		
3. Science Area Leader H. Ken Cordell, Project Leader and Pioneering Scientist, Athens, GA		
4. Area of Research Applicability Regional, national, and international	5. Estimated Duration 5 years	
6. Mission Conduct broad-scale social science research and synthesis that would lead to better understanding the meanings of emerging societal changes for current and future natural land policy and management (an emphasis will be placed on relationships with recreation and public lands).		
Signature	Title	Date
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## 7. Description

Among the key factors influencing the future of the natural lands of the United States are the huge changes in the social, cultural and demographic makeup of the country's population. These changes are leading to greater and more complex land use demands, increased recreation and tourism, accelerated land development, and to a lesser known extent, shifts in what people think is most important about our natural lands.

Effectiveness in management of natural lands, especially public lands, will in part depend on being well informed about these persistent societal changes and knowing how they are relevant to management decisions. Effectiveness in management will also depend on having some foresight of future societal changes and the shifts in public values and attitudes such societal changes may signal. Fresh approaches will be called for if we are to sustain both the ecological condition and the flow of benefits from natural lands.

The magnitude and pace of the social changes underway are unprecedented. Little is understood about their long-term interactive effects with land management and management decision space. We do understand that social changes over time lead to trending in how people view natural lands, but the exact nature of this relationship is not clear. In just a few decades, Southern, and more broadly American cultures, have changed so dramatically that in many ways they little resemble the cultures that preceded them in the 20<sup>th</sup> and in earlier centuries. Dramatic social changes are predicted to continue, perhaps even accelerate. It is particularly critical that we improve our understanding of the likely *public land* policy and management implications of societal change. Without a vision of the meaning of our unfolding future, current decisions may badly miss the mark of creating *the greatest good for the future* from our public lands.

Effectively addressing the future of natural lands in the United States will require a better understanding of: (1) population, demographics, lifestyle, and other social changes, (2) the place of nature-based outdoor recreation and tourism in modern society, (3) the role of designated wilderness and other protected public lands in modern society, and (4) especially, trends and possible future changes in public values of natural lands.

## 8. Goals

Application of the research from this pioneering unit will span from wilderness to urban places. The research must link with the other Science Areas of the Southern Research Station, and with the science of other Forest Service Stations and universities. The following are the goals of this pioneering research on emerging social changes:

1. Expanded understanding of the driving social and cultural trends unfolding in the United States and how those trends are affecting natural lands. Likely to be especially important are trends associated with youth, changing lifestyles, retiree population, immigration, outdoor activities, and amenity migration.
2. Models of the linkages between social changes and broad natural resource value trends sufficient for forecasting at multiple scales likely changes in societal values toward

natural lands, especially public lands.

## **9. Focus Areas**

This pioneering research will emphasize five sequential areas of research and application:

1. Study the nature of population, demographic, lifestyle, immigration, migration, lifestyle and residence trends and identify the dominant, driving trends.
2. Study demand trends for nature-based outdoor recreation, tourism, natural amenity migration and use of public lands, including wilderness and other protected lands.
3. Conduct original as well as assemble existing multi-disciplinary research that describes broad cultural and natural resource value trends at multiple scales.
4. Model linkages between values and social changes and forecast changes in societal values toward natural lands, especially public lands.
5. Work collaboratively with a variety of science disciplines and a diversity of land policy formulators in the South and Nation to provide a range of policy interpretations of possible and likely societal trends and value shifts.

*How we will address these focus areas through partnerships:*

These focus areas of pioneering research are complex and require interdisciplinary approaches to understand and measure trends. While the pioneering unit has significant and unique talent for conducting this research, it will maintain important connections with partners who offer additional, complementary talents. Our scientists will work with Forest Service scientists in other Stations and with researchers from universities, private organizations, and industry.

In addition to scientists in other Stations and organizations, this pioneering research unit will reach out to national and regional program leaders in the Forest Service, as well as those in other federal and state agencies. We have maintained close working relationships with federal partners, such as the the National Oceanic and Atmospheric Administration, the National Park Service, the Fish and Wildlife Service and the Bureau of Land Management. We also maintain a partnership with the National Association of Recreation Resource Planners, the Outdoor Industry Association, and focused interests such as the birding industry and bird conservation organizations. An especially close partner is the Forest Service Renewable Resources Planning Act Assessment (RPA) staff in Washington, D.C. Focus areas one and two above are directly linked to the decennial RPA Assessments.

Close ties with all partners keeps our research focused on practical questions and important emerging issues in public and private land management. Our research scientists have particularly close relationships with national forest staff. Past work from the unit has been especially important in land and resource management planning.

Our research is conducted in partnership with other federal scientists and with academic researchers. University scientists often serve as principal investigators in joint research

studies. Much of our research is of direct use and interest to conservation organizations.

### **9.1 Focus Area: The nature of social trends**

Rapid and expansive changes are occurring in the social, cultural and demographic makeup of the country's population. These changes are leading to greater and more complex land use demands and accelerated development. Understanding these changes as they occur is critical.

#### a. Top Priority Research and Development Needs:

- Describe the growth and spatial spread of population
- Understand the dimensions of demographic and household changes
- Trace the magnitude and geography of immigration and migration
- Understand lifestyle and residence trends
- Identify which social trends are the primary drivers of people's relationship to forests and other natural lands

#### b. Key Barriers to Conducting Research and Implementing Results:

- The challenge of engaging multidisciplinary teams across the spectrum of social change dimensions
- Incomplete and inconsistent data sets across governmental and organizational jurisdictions, especially inconsistent spatial scales

### **9.2 Focus Area: Outdoor recreation and wilderness trends**

Outdoor recreation, tourism, public use of federal and state lands, and associated trends are of extreme importance to natural resource managers, public and private. There are significant trends that are little understood. For the 2010 RPA Assessment and as critical background for the public values components of this pioneering research, the top priority research areas are as follows:

#### a. Top Priority Research and Development Needs:

- Study demand trends for nature-based outdoor recreation, especially the use of public lands
- Understand current trends in nature-based tourism and natural amenity migration
- Describe the role of wilderness and other protected lands in recreation and tourism
- Identify emerging high-profile issues, such as those associated with motorized recreation and new technologies
- Conduct a spatial analysis of demand and supply relationships
- Model and forecast recreation, tourism, and natural amenity migration futures

#### b. Key Barriers to Conducting Research and Implementing Results:

- Inconsistent, incomplete and sometimes unreliable public land use statistics
- Travel data that are not directly designed for use in analyzing nature-based

tourism

- Inconsistent measures employed by different recreation and tourism providers
- Differing policies and organizational structures to which results of this research is relevant

### **9.3 Focus Area: Broad cultural and natural resource value trends**

#### a. Top Priority Research and Development Needs:

- Assemble and synthesize available completed research describing what society and sub-groups within society value about natural lands and water
- Design studies that trace trends in natural resource values, especially forest values and public land values
- Identify scale effects in hierarchies of public natural resource values

#### b. Key Barriers to Conducting Research and Implementing Results:

- Synthesizing research from a range of social science disciplines
- Attracting broad sponsorship for conducting original studies to trace values trends
- Longitudinal inconsistencies in measures and scales of values

### **9.4 Focus Area: Forecast changes in societal values**

#### a. Top Priority Research and Development Needs:

- Identify and model linkages between a range of measures of natural resource and public land values and the primary drivers of social change at multiple scales
- Validate forecasts and a range of scenarios of the primary drivers of social change identified as significant in natural resource values models
- Test the sensitivity of parameters of different models to changes in underlying assumptions
- Forecast a range of possible shifts in natural resource and public land values

#### b. Key Barriers to Conducting Research and Implementing Results:

- Availability of a range of forecasts of social change variables at multiple scales
- Complexity of interpreting the modeled linkages between social variables and value measures (e.g., scales)

### **9.5 Focus Area: Provide a range of policy interpretations of predicted value shifts**

#### a. Top Priority Research and Development Needs:

- Engage a variety of science disciplines in interpreting the results of forecast value shifts and the social change variables driving those forecasts
- Design communications approaches suitable for addressing a range of land

policies and policy formulators

- Study feedback processes and policy effects of providing interpretations focusing on the relevance of values shifts in forest and public land management

b. Key Barriers to Conducting Research and implementing Results:

- Obtaining repetitive engagement venues for sharing results of value shift forecasts to policy and management leaders
- Designing effective communications strategies for providing forecasts in ways readily seen as relevant and timely

## 10. Environmental Analysis Considerations

Proposed research activities are limited and not expected to have a significant effect on the quality of the human or natural environment. Most activities conducted under this charter are covered by categorical exclusion. The environmental effects of specific actions will be considered during the development of study plans, at which time the existence of extraordinary circumstances related to the proposed action, and categorical exclusion will be documented as a part of the study plan as described in FSH 1909.15, Chapter 30. Where environmental concerns exist regarding particular studies, these may be evaluated within individual study plans, or by Environmental Assessments or Environmental Impact Statements prepared with and reviewed by the cooperating District, Forest or other staffs. No research having the potential to affect a plant or animal species that is federally listed as endangered or threatened or proposed for such listing will be conducted.

## 7. Science Capacity

Staffing—

The Pioneering Unit includes one ST scientist whose primary research discipline is social science. The Unit receives additional support from collaborating scientists nationwide, professional specialists and administrative staff. The lead scientist and unit are internationally recognized for their pioneering work using advanced public surveying methods, forecasting future demands for amenities, and modeling changes between human uses and natural lands. Noteworthy is the on-going National Survey on Recreation and the Environment.

Infrastructure—

The research unit is housed at the Forestry Sciences Laboratory in Athens, Georgia, but through collaboration it will network throughout the South and Nation. The Forestry Sciences Laboratory is located on the campus of the University of Georgia. The University of Georgia is a land-grant and sea-grant university with state-wide and regional commitments and responsibilities in forestry and other natural resource sciences. It is the state's flagship institution of higher education and the state's oldest, most comprehensive and most diversified institution of higher education. The Forestry Sciences Laboratory is a part of the Southern Research Station whose Director is Dr.

Peter Roussopoulos. The Southern Research Station, with headquarters located in western North Carolina, is the leading organization for research on natural resources management and sustainability in the Southern United States. It has a staff of 130 scientists serving 13 Southern States and the Nation. The Station mission is to create the science and technology needed to sustain and enhance Southern forest ecosystems and the benefits they provide. This pioneering research will serve this Station mission through its interdisciplinary design, as well as through its special emphasis on social science.

## **Appendix A: Relationship of Pioneering Unit Focus Areas to Forest Service Strategic Plan and National Strategic Program Areas**

1. The nature of social trends
2. Outdoor recreation and wilderness trends
3. Broad cultural and natural resource value trends
4. Forecast changes in societal values
5. Provide a range of policy interpretations of predicted value shifts

*Relationship to Forest Service Strategic Objective (numbers in parentheses refer to which of the above Pioneering Unit Focus Areas contributes to each FS Strategic Objective):*

- 1.1 Reduce the risk to communities and natural resources from wildfire. (1, 5)
- 1.2 Suppress wildfires efficiently and effectively. (N/A)
- 1.3 Build community capacity to suppress and reduce losses from wildfires. (N/A)
- 1.4 Reduce the adverse impacts from invasive and native species, pests, and diseases. (4)
- 1.5 Restore and maintain healthy watersheds and diverse habitats. (5)
- 2.1 The national forests provide a reliable supply of forest products over time that: 1) is consistent with achieving desired conditions on NFS lands and 2) helps maintain or create processing capacity and infrastructure in local communities. (4, 5)
- 2.2 Ensure that the national forests and grasslands provide a reliable supply of rangeland products over time that: 1) is consistent with achieving desired conditions on NFS lands and 2) helps maintain ranching in communities. (4, 5)
- 2.3 Help meet energy resource needs. (N/A)
- 2.4 Promote market-based conservation and stewardship of ecosystem services. (1, 2, 3, 4, 5)
- 3.1 Protect forests and grasslands from conversion to other uses. (5)
- 3.2 Assist private landowners and communities in maintaining and managing their land as sustainable forests and grasslands. (5)
- 4.1 Improve the quality and availability of outdoor recreation experiences. (2, 3, 4, 5)
- 5.1 Improve accountability through effective strategic and land management planning and efficient use of data and technology in resource management. (N/A)
- 5.2 Improve the administrative National Forest lands and facilities in support of the agency's mission. (N/A)
- 6.1 Promote conservation education to increase environmental literacy through partnerships with groups that benefit and educate urban populations. (1, 2, 3, 4, 5)
- 6.2 Improve management of urban and community forests to provide a wide range of public benefits. (1, 2, 3, 4, 5)
- 7.1 Increase the use of applications and tools developed by Forest Service Research and Development and the Technology Development Centers. (1, 2, 3, 4, 5)

*Relationship to Forest Service Research and Development Strategic Program Areas (numbers in parentheses refer to the Pioneering Unit Focus Area):*

- Resource Management and Use (1, 2, 3, 4, 5)
- Recreation (1, 2)