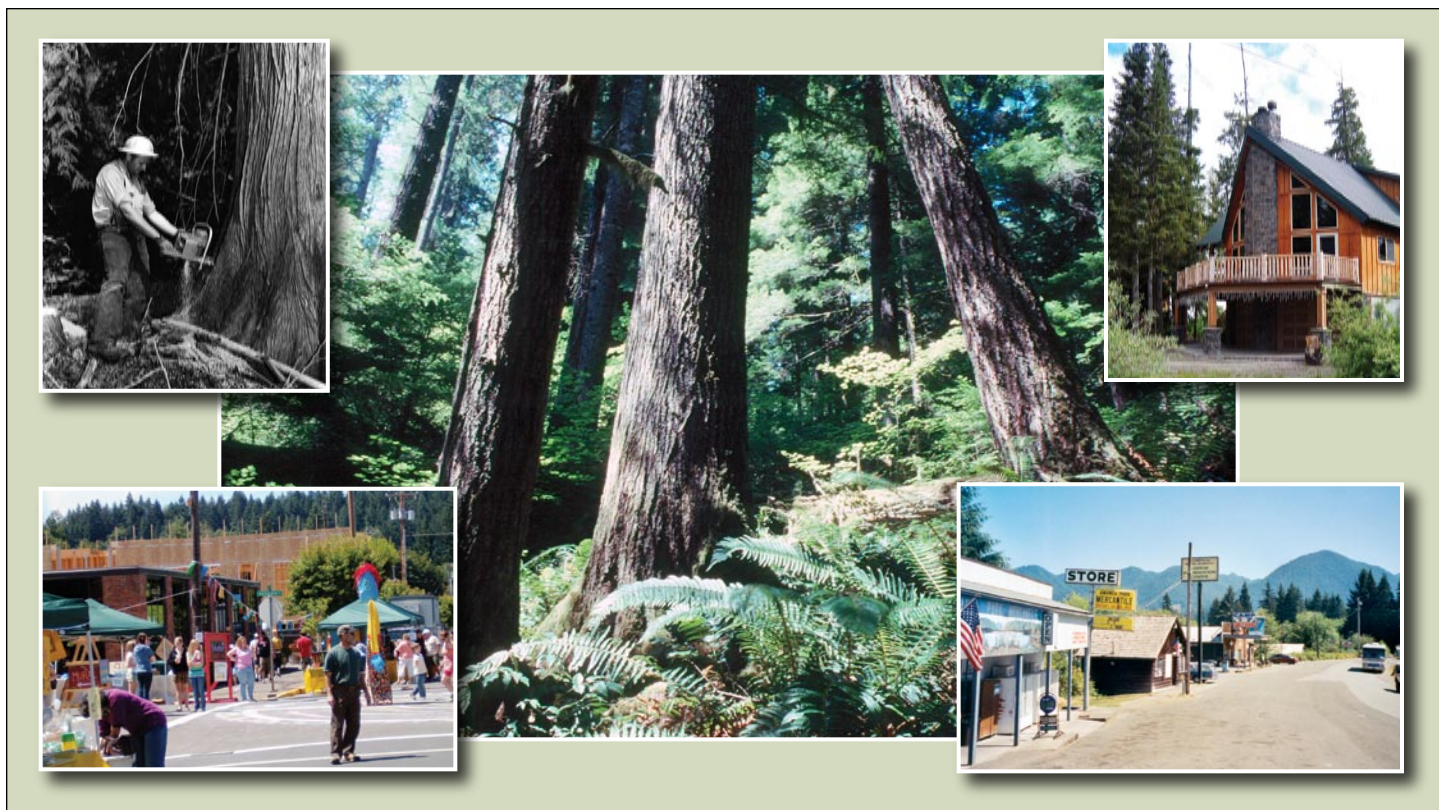




## UNDERSTANDING THE SOCIAL AND ECONOMIC TRANSITIONS OF FOREST COMMUNITIES



### IN SUMMARY

**F**or much of the last century, the connection between national forests and many rural forest communities, especially in the Pacific Northwest, was defined by timber-related employment. Assumptions about the economic dependence of forest communities on federal timber prompted the Forest Service to make community stability a matter of agency policy. But the relationship between forests and communities has changed, particularly over the last 25 years with declining timber harvests on federal land.

Without question, declines in timber production and other resource-base industries have adversely affected rural forest communities, leaving some with few economic alternatives. Yet many communities once commonly referred to as “timber dependent” have persisted despite the loss of an economic mainstay.

Why do some communities survive or even flourish through changing economic realities, while others do not? What makes these communities different? Scientists at the Pacific Northwest (PNW) Research Station have studied the connections between forests and communities and have found them to be more diverse and complex than originally thought.

This issue highlights PNW social science research on today’s forest communities and the evolving role of federal agencies in contributing to community well-being. A central concept is that the unique characteristics of communities cause them to respond and adapt to change in different ways. Research has also revealed that partnerships and collaborative projects with local groups may enhance the well-being of forest communities and accomplish resource management goals.





*Socioeconomic well-being in rural communities linked to national forests depends on factors both internal and external to the community. (Pictured above: Prairie City, Oregon.)*

## How does forest management policy affect the well-being of rural forest communities?

Harvesting timber on federal lands provided jobs for multiple generations of residents in many rural forest communities in the Pacific Northwest. These jobs were the foundation for many longstanding relationships between federal land management agencies and these communities. Federal legislation from the 1930s and 1940s has mandated that the Bureau of Land Management (BLM) and the Forest Service consider the well-being of forest communities thought to be economically dependent on federal timber production. The

social and economic well-being of these communities remains a vital element in federal forest management, but the ways in which it is considered have changed.

“Community stability was originally considered an economic issue,” explains Richard Haynes, retired program manager for the PNW Research Station. It was thought that public forest management should stabilize flows of timber and other goods from the forest, providing well-paid jobs and an economic basis for nearby communities. “The ensuing debate became about the number of jobs associated with different levels of activities on federal forests,” says Haynes. The notion that a

### *The relentless march of economic change has redefined the relations between communities and forests.*

sustained flow of timber was necessary to maintain the stability of communities, and that any decreases in timber flow would be harmful to community stability, drove policy decisions for decades. Numerous empirical research studies since the 1980s indicate that the debate is more complex.

What does it mean to be a “forest community” in the 21<sup>st</sup> century? Social scientists have looked closely at this question, investigating the factors that contribute to socioeconomic well-being in rural places linked to forests. “The relentless march of economic change has redefined the relations between communities and forests,” explains Haynes. “Where a community used to depend on one sawmill for jobs, the sawmill is gone but the community is still there. Its continued existence proves the story is more complex,” he says.

#### **Purpose of PNW Science Update**

The purpose of the *PNW Science Update* is to contribute scientific knowledge for pressing decisions about natural resource and environmental issues.

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Rhonda Mazza, managing editor

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Since the 1980s, social scientists have challenged traditional notions of timber dependency and community stability. “Being remote, small, and economically dependent on timber extraction no longer typifies forest communities in the United States and has not for several decades,” says Ellen Donoghue, research social scientist with the PNW Research Station. Communities are culturally, socially, and economically linked to nearby forest lands in complex ways, explains Donoghue. Understanding these links, and how changes in forest management policy might affect them, is a primary focus of current PNW social science research.

## What are the links between forest management and forest communities?

Scientists with the PNW Research Station and their collaborators have worked on several landmark efforts over the years that have helped reshape the thinking about forest management and communities. These include the Interior Columbia Basin Ecosystem Management Project (ICBEMP), which completed an ecosystem assessment for the east side of the Cascade Range of Oregon and Washington, and Forest Ecosystem Management Team (FEMAT), which completed an ecosystem assessment for the west side of the Cascade Range, covering the range of the northern spotted owl from northern California to the U.S.-Canada border. Both projects recognized humans as part of the ecosystem and included a socioeconomic component. The ICBEMP was never signed into law, but FEMAT documents eventually became the record of decision for the Northwest Forest Plan (Plan).

The Plan was implemented in 1994 as the overarching management plan for forests in western Washington, western Oregon, and northwestern California. A series of law suits in the 1980s and early 1990s brought by environmental groups against federal agencies had halted new sales of timber on 24 million acres of federal forest lands to protect the northern spotted owl, a species whose population was declining due to large-scale harvesting of old-growth forests. Many feared these injunctions would doom rural communities whose economic lifeblood was believed to be linked to the harvest of federal timber. The Plan was the product of a mandate from President Clinton to resolve the legal gridlock and find a way to protect the long-term health of northwest forests and waterways, produce a sustainable and predictable supply of timber and nontimber forest products, and address the human and economic well-being of the region.

Ten years after the Plan’s inception, Susan Charnley, a social scientist with the PNW Research Station, led a followup socioeconomic monitoring project to determine the Plan’s effects on forest communities. She, Donoghue, and the rest of the research team were venturing into somewhat uncharted territory.

Socioeconomic monitoring involves systematic observation and measurement of social and economic indicators over time. It is one way researchers study the links between forests, forest communities, and forest management policy.

## Key Findings

- The social, political, cultural, geographic, and economic conditions that are unique to individual communities must be understood in order to:
  - Assess how land management decisions might affect forest communities
  - Determine how land management agencies may assist communities through socioeconomic transitions
  - Effectively engage communities in collaborative forest stewardship
- Developing partnerships and collaborative projects with local groups is a worthwhile investment for both enhancing forest community well-being and for accomplishing resource management goals. However, with continued reductions in Forest Service budgets and staffing, and growing reliance on volunteers and outside organizations to accomplish agency tasks, the long-term institutional capacity of the Forest Service to enhance the health of public lands and the well-being of forest communities is compromised.

But broad-scale socioeconomic monitoring related to forest management in the United States had rarely been conducted before, says Charnley.

**Studying forest communities.** The first step was identifying the forest communities affected by the Plan. “In the social sciences, when we say we are going to look at communities, it’s a big challenge to determine what is meant by ‘community,’” says Donoghue. “It’s not as easy as you would think.” For the Plan monitoring project, existing geographic designations of U.S. census data were insufficient for delineating communities because they did not capture many small, unincorporated places near forests. “So we went to a finer scale,” says Donoghue.

By reorganizing census data into smaller geographic units, the team captured the socioeconomic data of 4.5 million people in nonmetropolitan areas. By comparison, only 2 million people would have been considered in the analysis using more traditional methods. “We didn’t leave anybody out,” says Donoghue. The monitoring approach was innovative but time-consuming. “It was an important analytical investment to make, however, because the other data just weren’t speaking to forest communities,” explains Donoghue.

The next step was to investigate the relationship between the policies implemented under the Plan and the 750 identified forest communities in the region. To do so, the team went beyond traditional measures of community stability, such as the number of forest-related jobs. They developed an index consisting of six indicators derived from census data: employment diversity, education levels, unemployment, poverty levels, income inequality, and travel time to work. The index



## *The drivers of socioeconomic change are more complex than the number of timber jobs.*

measured changes in socioeconomic well-being and flagged communities of concern.

But to *really* understand the effects of the Plan on forest communities, explains Donoghue, the team also interviewed local residents, business owners, community leaders, interest groups, and federal employees to compile detailed community case studies. Combined, the census data and case studies provided a more complete picture of the effects of forest management decisions, the dynamics of forest communities, and the qualities that make a community more resilient to change.

**Effects of forest management on communities differ.** Did the dramatic downturn in federal timber harvests that resulted from the Plan negatively impact rural forest communities? In many cases, yes. The effects of the Plan differed depending on many factors, including the strength of the timber sector in each community's economy in the late 1980s, the amount of that timber harvested from federal forests, and the number of residents who relied on Forest Service jobs.

Frank Vanni



*Changes in forest policy, the timber industry, and markets led to fewer timber-related jobs.*

Approximately 30,000 timber-related jobs were lost between 1990 and 2000 in the area affected by the Plan. About one-third of these were lost because of reductions in federal timber harvests. The rest were lost because of changes occurring in the timber industry, such as increased mechanization of mills, and evolving national and international markets.

Charnley's team found that, between 1990 and 2000, socioeconomic well-being scores increased for 37 percent of forest communities in the Plan area, and decreased for 40 percent. "But there was no concrete pattern," says Donoghue. Not all communities were affected by the changes in forest policy in the same way, or in ways that might have been anticipated prior to implementation. These findings indicate that the drivers of socioeconomic change are more complex than just the number of timber jobs.

**Forest communities are diverse.** Some forest communities can be characterized as commuter suburbs near urban areas; others are best defined by their mix of agriculture, ranching, and forest activities; and some are typified by their remoteness—areas surrounded by public and privately owned industrial forests.

"Sometimes we have the tendency to talk about communities in a monolithic way—like 'how does *the community* respond to change?'" says Lee Cerveny, research social scientist with the PNW Research Station. "My research showed that there really isn't *a community* in the sense of a single unit." Cerveny points out that communities are made up of individuals and groups that have different reactions to change based on "their relationship to the community and to the natural resources that surround them."

Linda Kruger, research social scientist in Alaska with the PNW Research Station, explains that the implications of land management decisions differ from one community to another, and within a given community given the sociocultural, geographic, political, and economic conditions that are unique to each. These conditions influence how communities respond to change. Given this, how should forest management policies address effects on forest communities? Kruger replies, "There is no cookie cutter approach. There are some general things we can say, but you can't always write policy that's going to apply to all communities."

"The take-home message is that there is tremendous diversity among these communities," says Donoghue, so knowledge of the workings of individual communities and groups of forest users is key to understanding how they may be affected by changes in forest management.

## **What factors help forest communities adapt to change?**

Social scientists generally agree that static notions of "timber dependence" and "community stability" are ideas of the past. Communities continually change in response to changing conditions, explains Donoghue. "So the idea of how they *deal* with both internal and external forces of change is more important."

**Resiliency—the new stability.** Terms like capacity and resilience are now used to describe a community's ability to adapt to change, take advantage of opportunities, and meet the needs of its residents. "Stability may have been intended to mean a similar thing, but it was measured strictly in terms of the timber sector and jobs," says Donoghue. "So it was very limited in terms of how you characterized communities." Donoghue adds that "resiliency is the new stability" in Forest Service planning and policy discussions, "and its use reflects an increased appreciation for the complex dimensions of rural community life."

How does a community collectively address problems and make decisions? How effective is its leadership? What makes a community attractive to new industry, retrain its workforce, or seek grants to create opportunities? "It's these things that

## *Elements of Community Resilience*

Social science research suggests that communities that maintain a high quality of life and sustain themselves in a changing economy share some common traits.

Higher community resiliency is often associated with:

- Populations greater than 5,000 people
- Higher economic diversity
- Strong civic infrastructure, which includes effective leadership, positive attitudes toward change, and strong social cohesion
- Presence of social and natural amenities
- Good access to major transportation routes, service centers, shopping, or recreation destinations
- Proximity to cities or major metropolitan areas

Exceptions always exist, however. Not every small isolated community responds poorly to change, nor does every large community with good access to transportation adapt well. “We have learned that there is a spectrum of response... It’s going to be different from community to community,” says Linda Kruger.

“Just because the income or education levels of a community are going up does not make it a more resilient community,” says Ellen Donoghue. For example, a community may have relatively high socioeconomic status, but may be socially divided on issues confronting the community, such as water rights or fire protection. If a community cannot overcome conflict associated with differing values and meet the broader needs of its residents, then it is not demonstrating attributes of resiliency. “A resilient community brings together diverse perspectives and deals with the equity issue,” says Donoghue.

make a community resilient and are really important to how communities adjust to changes in natural resource management policies,” says Donoghue.

Lee Cerveny has studied economic shifts in rural communities of southeast Alaska. She found that when faced with the decline of traditional jobs in timber and fishing, many communities rallied to embrace another industry. “Tourism was knocking at their door because cruise ships had been going to other southeast Alaska ports for several decades,” says Cerveny. “They made a conscious decision to invest in tourism infrastructure and reach out to the tourism industry.”

### ***A connection to broad regional economies and a strong sense of community contribute to community resilience.***

Haines, Alaska, is a good example. After a series of sawmill closures in the 1980s and 1990s, citizens of Haines voted for a tax increase to hire a tourism director and build a visitor center. They also voted to expand the city dock for cruise ships, allowing more tourists on shore to support the local economy. “As a community, they voted to spend public resources to invite tourism,” says Cerveny.

Sitka, Alaska, is another example. To determine its own future, explains Kruger, Sitka expanded education and health care, and created special events and festivals to attract people to their community. “They’ve had a multifaceted approach to moving forward... focusing on how to evolve and diversify.” Communities like Haines and Sitka demonstrate resilience, says Kruger.

But resiliency can be difficult to measure because it includes dimensions of community life that simply can’t be measured using standard economic or census data. Nevertheless, PNW

studies have revealed common characteristics shared by communities that have successfully weathered economic transitions.

For example, a connection to broad regional economies, a strong sense of community, strong attachment to place through personal and family histories, and strong civic leadership, in addition to employment-based factors, are key factors determining community resilience.

Kruger refers to these as “clues for resilience—qualities that help communities be better prepared, more swift on their feet, to adjust to future changes.”

Donoghue emphasizes that “even if we don’t know exactly how to measure the A, B, Cs of resiliency,” understanding factors that help make a community more resilient will help the Forest Service determine its role in building community capacity.

## **How are the relationships among communities, forests, and forest management changing?**

Gone are the days when the prevailing agency paradigm for community well-being centered on stable timber harvests. Contemporary agency programs, such as the Northwest Economic Adjustment Initiative, direct the Forest Service to assist communities in socioeconomic transition associated with changes in forest policies. Federal policies that focus on technical and financial support, resource management collaboration, and locally-based contracting all stress the importance of working with local communities to help build capacity to adapt to future changes. Examples include the National Fire Plan, the Healthy Forest Restoration Act, and stewardship contracting authorities.

## *Growth in Forest-Based Recreation and Tourism*

Wilderness trails, campgrounds, streams, wildlife, and other amenities of forest lands draw visitors seeking outdoor recreational experiences. Many rural communities are growing as a result of recreation and tourism, changing the social dynamics and everyday lives of local residents. Some changes are welcomed, others are not. The response to amenity-based growth differs from community to community.

Lee Cerveny found that recreation and tourism employment can be highly beneficial in supplementing household income in southeast Alaska communities. “A lot of people in the community can benefit from tourism,” says Cerveny, such as locally owned businesses, or women who were previously not working when most jobs were in fishing and logging. Tourism can also fit well with Alaska’s rural subsistence lifestyles, particularly for Native populations. “Subsistence hunting, fishing and gathering are a really important part of what it means to be from rural Alaska,” say Cerveny. It’s the sporadic nature of tourism that allows people to continue traditional cultural activities and fit employment around a subsistence lifestyle.

But the effects of tourism on the quality of life of local residents can be mixed. Tourism can conflict with subsistence activities and the desires of residents who appreciate Alaska for its quiet and peaceful environment. “Places that are special and valued by local people have been flooded by tourists,” says Cerveny.

Recreation and tourism are not always perfect remedies for the economic woes of forest communities in transition. Susan Charnley explains that one issue is the part-time and seasonal nature of recreation and tourism-related jobs. This can make them a less than perfect substitute to past timber-related employment. “Just being a Forest Service employee or a sawmill worker is a quality job in a rural

community where there aren’t necessarily a lot of year-round family-wage jobs,” says Charnley.

In the past, rural forest communities were generally accustomed to a slow pace of change. Especially in remote places like southeast Alaska, where only 3 of 35 communities have roads connecting them to the outside world, the rest accessible only by boat or plane. But with the arrival of the cruise ships, parts of southeast Alaska no longer feel so remote. The direct interaction with consumers makes tourism a significantly different industry than timber or fishing. These social interactions can be a catalyst for change, notes Cerveny.

With tourism, Cerveny says, “You have globalization coming to you. You have exposure to values, products, ideas and services that change the way the community is structured, and also change the ideas and desires of local residents.”

Tourism can also increase pressure on recreational resources, public space, and community infrastructure. When Haines became a port of call for cruise ships, the number of annual visitors increased from 40,000 to 180,000 in 5 years. Now “there’s a sense that the community needs more local control over the pace at which tourism grows,” says Cerveny.

Despite the drawbacks, rural communities are generally open to tourism because of the few alternatives available. Cerveny describes the general attitude towards tourism in the communities she studied as, “It doesn’t fit in with who we are, but we have to do something to live and survive here ... for our kids to get jobs here and maintain our community. If tourism is the best ‘something’ for us right now, we are willing to do it.” Cerveny explains that at best tourism can supplement a local economy, “but in most cases, it won’t be the main economic engine or driver.”



Lee Cerveny

*Cruise ships docking in Ketchikan: during the summer travel season, cruise ships may bring thousands of visitors to small, once-remote towns in southeast Alaska.*



“There is no single policy that underscores the agency’s relations to communities,” says Donoghue. “Instead, there is an assortment of policies and programs that represent what I would simply call opportunity—opportunity to enhance the well-being of forest communities through forest management actions and planning.”

### **Promoting economic development.**

As communities explore new areas of economic development linked to forest resources, federal agencies are redefining their relationships with communities. Recreation, tourism, ecosystem restoration, nontimber forest products (floral greens, edible and medicinal plants, etc.), specialty wood products, and energy production from small woody material have become economic focal points. Federal agencies have an important role in generating local economic development opportunities in all of these areas.

For example, “The Forest Service is just beginning to appreciate its role as a driver of tourism,” says Cerveny. In the past, there wasn’t much thought given to how Forest Service policy and management practices influence “who might come, why they come, what they might do once they get there,” explains Cerveny. Now, there is greater awareness of how the agency can shape tourism and affect the economic well-being of communities that depend on it. There is also a growing awareness of the new challenges that communities face with a shift to a recreation and tourism-based economy.

Although large-scale timber production on federal lands has dwindled, economic opportunities still remain in the timber sector. For instance, Cerveny suggests that smaller scale timber sales could be a way for local operators to provide lumber for their community and for specialty products such as furniture or musical instruments. “There are little pockets of people looking at niche markets around the region, but they have a hard time fitting into a federal timber sale system that is more oriented around bigger sales,” she says. Identifying ways to re-tune policies and remove roadblocks to encourage smaller scale sales are some ways federal land managers can contribute to local economic diversification, says Cerveny.

## *Communities may have a valuable role to play in forest stewardship.*

**Ecosystem restoration.** One objective of the Northwest Forest Plan was to create social and economic benefits for communities through collaboration in forest management and restoration. “Communities potentially have a valuable role to play in forest stewardship, and can be a valuable asset in helping the agency meet its management objectives,” says Charnley. One area that shows promise is fuel management.



Eini Lowell

*The Forest Service is using stewardship contracts to create forest-based jobs and accomplish forest restoration activities such as hazardous fuel reduction.*

The buildup of hazardous fuel on federal lands is a significant management concern. Charnley and Donoghue are researching how the Forest Service can reduce hazardous fuels in ways that benefit local communities. An obvious community benefit is the reduced risk of wildfire, but Charnley and Donoghue are investigating other benefits, such as creating local jobs, building community capacity to engage in forest stewardship, and building collaborative relationships between communities and the Forest Service. Collaborative fuels management could be particularly beneficial in rural areas that were more heavily dependent on timber and are seeking to create new forest-based jobs, explains Charnley. Woody biomass energy—using materials from fuel management projects to produce energy—is an emerging growth area.

Stewardship contracts are one approach the Forest Service and BLM are using to create community benefits while accomplishing forest restoration. These contracts address local community needs and call for collaboration in their development and implementation. A number of stewardship contracts in the Pacific Northwest have focused on hazardous fuel reduction. On the Fremont-Winema National Forest, a 10-year contract is being developed that would help guarantee a supply of woody biomass, making it economically feasible to build a biomass powerplant in a local community and retool a local mill to process small-diameter logs. Both would create more local jobs while helping the forest accomplish its restoration goals. “There’s a lot of thinning out there to be done to restore forests and to maintain them in their desired conditions, so it should be sustainable for the community well into the future,” says Charnley.

Charnley and Donoghue’s research documents the mutual benefits of collaborative fuels management. Nearby sawmills and biomass energy facilities create markets for woody biomass and timber. Without these markets, tight federal budgets limit the amount of hazardous fuel reduction federal land management agencies can accomplish, highlighting the interdependence of healthy forests and healthy communities.





*The Forest Service now relies more on the efforts of volunteers than it did in the past. Above, volunteers build a trail on Oregon's Sandy River Delta.*

**New partnerships.** The Northwest Forest Plan and its shift away from intensive timber production had some unintended consequences. Perhaps the most significant consequence for the Forest Service has been a sharp decline in budgets and staffing linked to timber production. Agency capacity to manage national forests has been greatly affected by those declines, says Donoghue. “The agency used to have people throughout the districts who communicated and interacted with forest users and communities. Now the staff wear multiple hats and are stretched pretty thin.” And while agency capacity has decreased, the public’s demands on forests have increased and become more diverse.

In response, the Forest Service has turned its attention to partnerships. Kruger explains that the national-level support for partnerships came from the recognition that the Forest Service no longer has the internal capacity to get its work done. So how does the agency leverage the money and personnel that it does have? “We find people who care about programs that the Forest Service has traditionally done, and are willing to work with us to stretch our dollar so we can do more,” says Kruger. Partners include volunteer groups, other government agencies, nongovernmental organizations, and other community groups who pool their money and resources to accomplish activities like trail improvement, environmental education, fuels reduction, and watershed restoration. Kruger points out that many new programs, such as Kids in the Woods, are carried out almost entirely through partnerships.

Cervený has begun to look more closely at the Forest Service’s reliance on recreation partnerships and volunteer organizations. “In our preliminary data collection from 10 national forests throughout the U.S., we were shocked that there were over 35 general types of partnerships being used, with specific partners ranging from volunteer trail groups to prisoners to local 4-H groups to university outing clubs.” Cervený is determining which conditions are conducive to this reliance on partners and which are not. “Some forests don’t use partners at all, and for others it’s the primary way they are getting work done.”

Yet, maintaining partnerships is a challenge because “it takes an investment,” says Kruger. “Human relations, social relationships take finesse and take time. I’ve worked with some district rangers whose highest priority is engaging the public, doing things through partnerships, and seeing themselves as an extension of the community. And then there are others that don’t,” says Kruger. “Some people don’t see the payoff ... that this bigger thing is happening with building capacity within the community and within the agency,” she says.

**New residents.** The natural amenities, such as beautiful scenery and recreational opportunities, that attract tourists in the first place can also lure them back as residents, for at least part of the year. These “amenity migrants” are playing a big role in the way forest communities are changing, says Linda Kruger. In some cases, they can be a source of economic growth because new residents and businesses often bring new money into the community and stimulate job creation.



## *Community and Agency Collaboration in Recreation and Tourism*

Social scientists with the PNW Research Station have documented innovative ways that federal agencies are working with communities to enhance economic opportunities in recreation and tourism. “In the community work done for the Northwest Forest Plan monitoring,” says Susan Charnley, “we saw several local Forest Service and BLM offices collaborating with different segments of the community, whether it was the chamber of commerce, outfitter guides, or others, to agree on ways that the agencies could support attracting more visitors.” Examples they found included developing visitor brochures and interpretive centers, creating scenic byways, building trails and other recreation facilities, or marketing forests to recreation users such as mountain bikers and boaters.

In Alaska’s Prince William Sound, the Forest Service has been working with communities on a proposal for an eco-mapping project based on a model created by National Geographic. Community members will identify places that hold special significance and share local stories and cultural history about the special place. The final product will be an information guide and souvenir for tourists to purchase. Linda Kruger sees the process as a great community-building opportunity. “When it’s finished,

it’s their map. It’s their story being told.” Small communities might not be able to accomplish such a project alone, says Kruger. “The Forest Service can come in as a partner and provide the leadership and technical support that gets it off the ground and helps maintain the momentum until it’s completed.”

In the small town of Hoonah, Alaska, Forest Service staff worked with local tribal members, city officials, other community members, and the cruise industry to develop a cruise ship destination focused on native culture and recreation in surrounding public lands. With a dramatic increase in annual visitors in this town of 800 people, the Forest Service worked with this group on strategies to encourage economic development while preserving the quality of life for residents and minimizing impacts on natural resources in the surrounding area.

By working with local groups like these, the Forest Service is acknowledging its role in generating local economic development opportunities that go beyond timber sales. This is important for tourism, says Cerveny because “In a place like Alaska where public lands are predominate, agencies like the Forest Service can play a significant role in shaping the flow of tourism to a region.”



Lee Cerveny

*The former cannery near Hoonah, Alaska, has been turned into a tourist attraction with an emphasis on local history and Tlingit culture.*





*The scenic beauty and recreational opportunities in the surrounding area draw new residents to forest-based communities. This new home borders the Gifford Pinchot National Forest in southern Washington.*

Amenity migrants whose incomes do not rely on the local economy, such as telecommuters or retirees, might find themselves at odds with residents trying to make a living in the wood products sector. Conflicts may rise further if property values and taxes increase with amenity growth and development. Kruger points out that some longer term residents may find it more difficult to afford to live and work in their community. Both long-term and recently arrived residents of amenity-growth communities are concerned with maintaining a quality of life associated with living close to forests. But they may have different ideas about how to do this. Conflicts in values regarding how forests should be used and cared for can play out in rural communities like these.

## What are key issues for the future?

The quest is ongoing to better understand the interplay between forest communities and forest policy. In general, “We need to continue exploring opportunities for communities and forest managers to work together to support healthy, resilient, sustainable communities and forests,” says Kruger. Such opportunities might include scaling forest management projects to local economic capacity and integrating them with local community development objectives, developing agency performance measures for community collaboration,

or providing technical and financial assistance to enhance the capacity of forest communities to undertake work linked to national forest lands.

Social scientists at the PNW Research Station plan to continue their focus on the benefits and implications of partnerships. The agency’s increased reliance on partnerships has been largely out of necessity, stemming from declining budgets. “The long-term effects on the health of public resources and community well-being from disinvestment in public land management agencies are unknown,” says Donoghue.

Federal agencies and tribal groups throughout the country recently have begun collaborating on various land management issues. Some PNW social scientists are specifically interested in the role indigenous knowledge plays in these collaborations. Researchers are also interested in how economic development linked to forest resources, such as recreation and tourism in Alaska, might affect Native populations differently than non-Native populations.

As population growth and development accelerate in communities bordering national forest lands, how will local community growth affect national forests? Achieving goals for sustaining communities and forests will require a closer look at how development pressures affect forests resources and



management, particularly in areas such as recreation and fire management.

The effects of climate change will continue to be studied from various angles. Alaska's forests, wildlife, fish, and people are already encountering change associated with warmer temperatures. How will this affect vulnerable human populations that rely heavily on subsistence hunting and gathering to maintain their culture? What will be the role of federal agencies in mitigating the impacts of climate change on resources and communities? Private land owners within a community may also play a role in mitigating effects by shifting their forest and range management practices to enhance carbon sequestration. What policies and market opportunities are needed to provide incentives for them to do so?

Like the forests around them, forest-based communities are dynamic entities. Change can be painfully obvious or progress almost unnoticed like growth rings on a tree. Just as other scientific disciplines seek to understand the factors that make a forest resilient to disturbance, social science research can help us understand the resilience of human communities connected to these forests.

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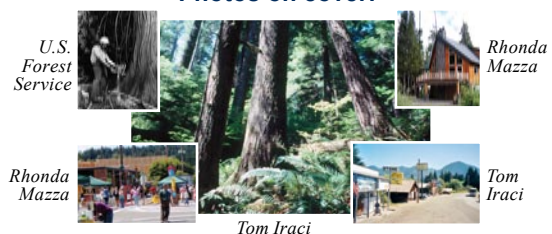
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