

*The Social Impact Assessment Mandate* . . . . . 2  
*Taking the Opportunity to Self-Assess* . . . . . 3  
*Researchers as Facilitators and Mentors* . . . . . 4  
*Uncovering the Value of Place* . . . . . 4  
*Making Conversation* . . . . . 5  
*The Value of Civic Science* . . . . . 5

# Science

FINDINGS

*“Science affects the way we think together.”*  
 Lewis Thomas

## COMMUNITY, KNOW THYSELF: CARING ABOUT PLACE



▲ *Community self-assessment and other applications of civic science help integrate scientific and community-held knowledge.*

*“Culture, the shared meanings, practices, and symbols that constitute the human world, does not present itself neutrally or with one voice... There is no privileged position, no absolute perspective, no final recounting.”*

Rabinow and Sullivan, “The Interpretive Reader”

As sentient beings, we all have special and particular places that hold a great deal of meaning for us. Whether we still live there, have come to love where we live, or dream always of the hearths we left behind, we can name those places that elicit our deepest attachments. And, if asked, we gladly tell stories about them.

Rarely would we, in describing our favorite places, call on census data or county statistics or other numbers-based demographics. For our places are our contexts. We are our stories. Life itself is anecdotal.

“And yet, here we are at the end of the 20th century, with all that we know about people and how they relate to each other and to place, still following the same lock-step formalized process to conduct social assessments,” laments Linda Kruger. “The abstract generalized data collected lead to places becoming simply real estate, natural resources becoming recognized only for their commodity values, and people becoming simply a job or a salary.”

To avoid these outcomes and assist resource managers in working with communities, some social researchers are

### IN SUMMARY

*Traditional scientific assessments have limitations in providing full understanding of the potential impacts forest management has on communities. Much of the knowledge communities have of themselves is inaccessible to quantitative methods but can be provided through participatory processes, or what is termed “civic science.” Self-assessment by communities, social scientists at PNW Research Station theorized, would contribute more richly to the understanding of communities, factors that influence the capacity of a community to adapt to external change, and the relationship communities have with forests. In the White Pass area of southwest Washington, they put their theories to the test. A participatory process resulted that benefited the community, the individuals involved, and the agency that used the results of the assessment.*

investigating what has come to be known as civic science, a process by which citizens with an interest in an issue or members of a community under study become “scientists” who formulate the research questions, collect the data, and become an integral part of the research process. Kruger, a research social scientist with the PNW Research Station was one of two research facilitators to help enact a civic science process in the unincorporated communities that make up the White Pass in southwest Washington.

“When investigating specific places, particularly when we are interested in relations between the rural community and the forest, it seems that limiting data collection to variables that can be counted and measured does not help understanding of the community’s capacity to adapt to external change, or its real relationship to the nearby forest and its management,” she says.

KEY FINDINGS

- Formal scientific social assessments, often called social-impact assessments, may be necessary but not sufficient to understanding impacts of forest management on communities. Traditional methods are not well suited to drawing out much of the knowledge held by community members.
- Community self-assessment and other applications of civic science provide opportunities for collaboration between Forest Service employees and community members and foster the integration of scientific and community-held knowledge.
- Participation in community self-assessment increases awareness and appreciation of the individual, the community, and the relation between the community and the nearby forest. It also provides an opportunity for helping students and community members understand the forest as an integrated whole.
- Researchers can play important roles as facilitators and mentors. Participating along with community members helps defuse the “myth of expertise” that so often surrounds research, and also enhances community acceptance of both researchers and the new knowledge.

## THE SOCIAL IMPACT ASSESSMENT MANDATE

The practice of checking in on the potential social impacts of proposed developments evolved through the 1970s after the National Environmental Policy Act of 1969 established the need for environmental impact statements. Social impact assessments have been based almost exclusively on quantitative, second-

*Purpose of PNW Science Findings*

To provide scientific information to people who make and influence decisions about managing land.

*PNW Science Findings* is published monthly by:

**Pacific Northwest Research Station**  
 USDA Forest Service  
 P.O. Box 3890  
 Portland, Oregon 97208  
 (503) 808-2137

Sherri Richardson Dodge, Editor  
 srichardsondodge@fs.fed.us

Carlyn Mitas, Design & layout  
 mitas@hevanet.com

Orientations to social assessment	Standard social impact assessment	Civic science
<b>Nature of problems</b>	Technical/scientific	Social/place based
<b>Nature of knowledge</b>	Scientific, objective, detached from practice	Social, interpretive, socially constructed, historically embedded, value based, embedded in practice
<b>Source of knowledge</b>	Experts and specialists, knowledge	Participants, citizens and experts working together
<b>Planning orientation</b>	Technical/rational, “professionalized”	Participatory, social learning and civic science
<b>Role of participants</b>	Citizens as external to process, individuals with pre-formed individual interests; experts as distant, removed from object of study	Citizens as lay social scientists, researchers as research facilitators, mentors, catalysts for learning
<b>Values recognized</b>	Instrumental/utilitarian, marketplace	Multidimensional
<b>Data/variables</b>	Date gathered by using empirical-analytic methods; e.g., employment/unemployment, wages	Meanings, values

▲ *Alternative approaches to social assessment.*

Check out our web site at:

<http://www.fs.fed.us/pnw>



ary data drawn from the Federal census, labor, and social service agencies, and socioeconomic numbers such as board feet produced per acre per year, and employment statistics.

After the scientific assessment that led to the Northwest Forest Plan in 1993, social scientists could clearly see that much useful information about communities affected by natural resource policy was not being gathered.

“Approaches are needed that recognize aspects of lived experience, including meanings, symbols, metaphors, myths, and traditions, as well as provide additional opportunities for dialogue,” Kruger says. Such information can improve social assessments so decisionmakers have a deeper understanding of how their decisions will affect communities. Resource managers can use this type of information in building productive long-term relations with communities.

Traditional survey techniques can fail to draw out this rich layer of knowledge. In relying on numerical or quantitative data, the inaccessible and unquantifiable information about how lives are shaped and experiences drawn are ignored, she adds.

## TAKING THE OPPORTUNITY TO SELF-ASSESS

The Big Bottom Valley (as it is known by local residents) encompasses the three small unincorporated towns of Randle, Packwood, and Glenoma, Washington. It is united by the White Pass School District. Residents of the area had felt that current census data being used to determine social service needs was more representative of the social service needs of the I-5 corridor to the west than those of their own community. Living adjacent to economically thriving neighbors did not give the smaller, rather depressed communities the representation for financial assistance they felt they needed with the implementation of the Northwest Forest Plan.

A confluence of issues had brought White Pass to a threshold of readiness for assessment, Kruger says. The school superintendent, for various reasons, was interested in doing something that would involve

**LAND MANAGEMENT IMPLICATIONS**

- There is a need to take a critical look at the traditional roles of researcher and manager and the relation of each to the community. Technical assessments done solely by professionals deny citizens the opportunity for collective involvement, a factor that has been identified with quality of life.
- Collaborative arrangements with schools and local communities hold potential benefits for all parties, with residents empowered to identify issues and concerns, develop a vision for the future, and plan to achieve objectives.
- The Forest Service, by any management decision, affects a community's sense of place, and thus has a responsibility to provide opportunities for civic engagement. Such opportunities can help stabilize the sense of community and connection to place.

Furthermore, it is disempowering to a community to have outsiders come into their midst briefly, decide what the important, defining information is, collect it, and leave. When people feel disrespected in this way, Kruger suggests, they are not only more likely to disagree with an assessment, but also less likely to buy in to critical natural resource decisions that directly affect their places and their lives.

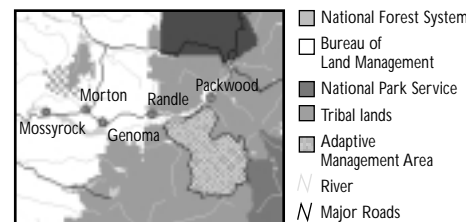
“Scientists who conducted the social assessment for the Northwest Forest Plan noted

that people will not support what they do not understand and cannot understand what they have not been involved in,” Kruger points out. The resulting report of the Forest Ecosystem Management Assessment Team (FEMAT) recommended that communities conduct their own “self-assessments.” No guidance was provided on how to proceed, or what such an assessment might entail, she says. To explore this unknown, researchers needed to engage with a community interested in participating in such an experiment.

students more in their community, as well as involve community members in the school. A grassroots group, including some service agencies, was already meeting to try to identify what could be done for this economically depressed community after changes in the timber industry had taken their toll.

And the coordinator of the nearby Cispus Adaptive Management Area (AMA) was committed to anything that could help improve relations between the USDA Forest Service and the surrounding communities. Adaptive management areas are special experimental management areas set up on Forest Service lands under the auspices of the Northwest Forest Plan.

Thus the stage was set for an area that had no legal governmental structure to depend on, but shared the White Pass School District.



*The Cispus Adaptive Management Area includes 143,900 acres of mountainous land in the Gifford Pinchot National Forest in the South Washington Cascades Province. The three towns of Packwood, Randle, and Glenoma participated in a self-assessment process.*

## WRITER'S PROFILE

Sally Duncan is a science communications planner and writer specializing in forest resource issues. She lives in Corvallis, Oregon.

To conduct the self-assessment, the community developed an employment and training program, known as The Discovery Team, that provides on-the-job training for high school students, including “at-risk” students. The Cispus AMA, the Cowlitz Valley Ranger District (formerly the Randle and Packwood Ranger Districts), the grass roots community group, and PNW researchers all collaborated in this effort.

“The project involved integration across and within management, research, the school, and the community,” Kruger explains. “With collaboration emerging as an important issue for managers, the project provided a unique opportunity to both participate in and study an innovative collaborative process.” The research addressed the question, Can we improve the usefulness of the social assessment

process by engaging community members as co-researchers? The process developed in trying to answer this question created a model that can be used by other communities so they are better understood as decisions are made that will affect them.

## RESEARCHERS AS FACILITATORS AND MENTORS

**T**he project was initiated in 1995 when 25 high school student-researchers, with three teacher-supervisors took on the summertime task of learning more about the White Pass area, its history, its local residents, why they lived in the valley, what about this place was important to them, and the relations between the community and the forest.

The two research facilitators—Kruger and Amanda Graham of the University of Washington—had three primary responsibilities. The first was to identify and provide oversight for the research methods used in the project. The methods chosen allowed various ways and venues for gathering information, thereby encouraging a broad range of participation. Methods included a community forum, individual and group interviews, brainstorming activities, joint

meetings between the project committee and the student-researchers, and collecting and analyzing documents and photography, and mapping activities.

The second responsibility of the researchers was to assist the students—who were necessarily inexperienced in this kind of endeavor—in becoming researchers and carrying out the study as much as possible themselves. This linked directly to the third responsibility, which was to avoid directing the process, to allow it to evolve and to muddle through with the local participants. To help with this process, the two researchers moved to the community for the duration of the first year of the project.

“We had to convince the teachers and students that they were the experts,”

Kruger recalls. “It took a little while, but then it was very rewarding seeing the changes in them all, as they stepped up to take risks and do things they previously wouldn’t have tried.” For the students, this was often as simple as learning that they could go up to people they didn’t know and ask them questions.

As local participants gained confidence, an important goal of the researchers was inherently being met: communities with the capacity and skills to conduct this kind of activity themselves, Kruger says.

“Stepping outside the traditional role of a scientist and becoming a learner alongside the community members who are discovering their community for themselves results in far different knowledge from when researchers act independently,” she says.

## UNCOVERING THE VALUE OF PLACE

**S**tudent researchers were given a notebook and instructions on how to keep research notes as they interviewed people, read through documents, followed up with phone calls, or obtained new leads. At the end of each work day, students were given 30 minutes of reflective time to consider what they had learned and felt that day. The narratives they developed were incorporated into a project notebook.

What they were doing, Kruger explains, was beginning to recognize place as a cultural system. In other words, our sense of a place includes how we interact and have in the past interacted with the people, activities, and events within the community. The meanings we give our communities are held

within us, and thus will emerge only as a study such as this progresses, deepening our connection to our individual feelings and values, and to others with whom we share experience.

Student researchers came away from the project with a far stronger sense of the White Pass area as a valuable and valued community. A community forum, for example, provided a stage for students to visit with oldtimers eager to share their memories. Subjects ranged from Native American history and family reunions to floods and life before electricity.

“Participation in this assessment, for everybody, increased awareness and appreciation of the individual, the community, and the

relationship between the community and the nearby forest, along with those responsible for forest management,” Kruger notes.

Furthermore, the forest became much clearer as an integrated whole, consisting of trees, other forest products, wildlife, fish, water, recreation, aesthetics, and other values.

Indeed, she adds, other research suggests that community studies that do not support collaboration and participation can affect individual and community well-being and community capacity to adapt to change. They also can destabilize community and the sense of connectedness to a place, as that place is redefined by “outsiders” or professional planners.

## MAKING CONVERSATION

Conversation during the 4-week process took place at formal and informal gatherings, individual and group interviews, in person, and over the phone. The conversations served both to provide the knowledge student researchers were seeking and to help them see how they themselves “fit” into the community, Kruger says.

“This emphasis on conversation supports the idea that providing opportunities for dialogue is important because it allows people to

increase their awareness of their ability to take action.” Civic engagement, volunteerism, community pride, all can follow.

Conversation as a learning process also transforms levels of trust. Working together with a focused goal of listening and understanding provides the right setting for learning to value diversity, she says. Youth and adults alike learned that regardless of differences of opinion, people can and must find ways to work together for the good of the community.

## THE VALUE OF CIVIC SCIENCE

The Forest Service actively participates in “placemaking”—taking actions that define the values of the forest and allowing uses which in turn affect the meanings people assign to it, Kruger says. “With any of its management activities, the agency can change the meaning of a place, and it thus has a responsibility to engage citizens in processes that discover and reassess the meaning of place.”

Kruger believes the White Pass process demonstrated citizens can participate in civic science that produces knowledge of place for social assessment that is important to land managers.

“Community self-assessment provides an opportunity for collaboration between Forest Service employees and community members and fosters the integration of scientific and community-held knowledge,” she says. “Knowledge gained through self-assessment can be integrated with scientific knowledge to provide a deeper understanding of issues and relations for both the agency and the community.”

The more formal, traditional type of scientific assessment may be necessary in some cases, but it is not sufficient for fully understanding the impacts of forest management on communities. As Kruger points out, many times it is by the process of “working through” the implications of proposed changes that people begin

to comprehend those implications themselves. This process allows people to make more informed decisions.

The process of civic science, however, is messy. It is time-consuming. It is ambiguous. It lets matters just play out as they will, without a fixed structure. It takes inordinate amounts of care and feeding. And, just as traditional social impact assessment doesn’t translate well from large-scale to single communities, so the reverse is true. What is real for White Pass may be relatively meaningless even for a nearby community.

Then there is the crucial followup question: How can such information be incorporated effectively and powerfully into the planning process?

“The answer is just not available yet,” says Kruger. “Scale issues will continue to be a challenge, and yet what we do know is that this participatory process is a tremendous builder of trust. In the White Pass community, where the Forest Service was formerly perceived negatively, it is now seen as a neighbor, an integral part of the community.”

It is possible that adaptive management—learning how to learn and learning while you manage—could be the conduit for translating the local knowledge gained through civic science methods into larger forest planning, she says.

The results of the White Pass process affected community relations across all kinds of boundaries—generations, business, education, individual, social, and government, Kruger notes. “What was perhaps most exciting of all was to see how the so-called ‘at-risk’ students stepped up to the challenge, and came out of it with the confidence to take on new projects afterwards that they normally would not have considered as being within their capabilities.”

“There is a need to take a critical look at the traditional roles of researcher and manager and the relationship of each to the community. In a participatory process, they become facilitators, mentors, and guides to learning right beside the participants. Other studies have shown that planning activities and research carried out solely by professionals can result in reduced strength and vitality of communities.”

The White Pass story is one of community engagement, pride, mutual understandings, and a clearer vision for the future. Students and teachers learned together and increased their personal levels of confidence. Community members felt valued as a resource. Forest Service employees built up trust, and as a result, created a more welcoming workplace. A mechanism was set in place for further self-assessment, and indeed, the work has continued for five summers, without the researchers. Such a story, reveals that the benefits of participation accrue to the community, the individuals involved, and the agency using the data.

Civic science may be messy and time-consuming, Kruger says, but investing time at the front end may save an agency the all-too-familiar and even more expensive routine after-the-fact confrontation, conflict, and the endless delays of litigation.

*“The community rejected other research, and they did not reject you because you fit in. You did not come with pre-conceived notions, you came and rolled up your sleeves and were elbow to elbow with us.”*

Margarette McHugh,  
Cispus AMA coordinator, committee member

## FOR FURTHER READING

Kruger, L.E.; Shannon, M.A. 2000. *Getting to know ourselves and our places through participation in civic social assessment*. Society and Natural Resources. 13(5): 461-478.

Kruger, L.E. 1996. *Understand place as a cultural system: implications of theory and method*. Seattle: University of Washington. Ph.D. dissertation,

Schnnekloth, L.H.; Shebley, R.G. 1995. *Placemaking: the art and practice of building communities*. New York: John Wiley and Sons.



U.S. Department of Agriculture  
Pacific Northwest Research Station  
333 S.W. First Avenue  
P.O. Box 3890  
Portland, OR 97208-3890

Official Business  
Penalty for Private Use, \$300

BULK RATE  
POSTAGE +  
FEES PAID  
USDA - FS  
PERMIT No. G-40

## SCIENTIST PROFILE



LINDA KRUGER is a research social scientist and team leader with the People and Natural Resources Program at the PNW Research Station. She has studied processes of community participation in decisionmaking, participatory research and the interrelations between communities and forests for 10 years. Before joining the Station she was a natural resource manager with the state of Alaska for 14 years.

Kruger has been especially interested in the meanings and attachments people have for special places and how meanings influence people's perceptions of places. Her current work includes documenting land use change and population dynamics along the I-90

corridor in Washington, exploring how people perceive the changing social and biophysical landscape, and studying the relationship between water and recreation and other social values. She is also very interested in the ways the workplace environment influences the production of quality science and healthy scientists.

*Kruger can be reached at:*  
Pacific Northwest Research Station/USDA Forest Service  
Forestry Sciences Laboratory  
4043 Roosevelt Way N.E.  
Seattle, Washington 98105-6497  
E-mail: [lkruger@fs.fed.us](mailto:lkruger@fs.fed.us)  
Phone: (206) 732-7832