



Science

FINDINGS

INSIDE

The Klamath and Linn Counties Study	2
Including an Emotional Dimension	3
Gauging Statewide Attitudes	3
Leading to Change	4
Building Bike Trails	4

"Science affects the way we think together."
Lewis Thomas

From Timber to Tourism: Perceptions in Rural Communities About Changing Forest-based Economies



Visitors pose for a photo at an overlook of the Deschutes National Forest, Oregon. Local support for tourism depends on residents' perceptions of the benefits it will bring to communities. USDA Forest Service photo.

*"We travel, some of us forever, to seek
other states, other lives, other souls."*

—Anaïs Nin

In their heyday, the timber and wood products industries provided good-paying jobs to families in small towns throughout the Pacific Northwest. Harvesting big trees helped to fuel economic growth in larger cities such as Portland and Seattle.

In 1950, some 90,000 Oregonians—16 percent of the workforce—made their living cutting and processing timber. Today, wood products employment in Oregon is about 30,000, or 1.4 percent of the workforce.

The once booming timber industry began declining in the 1980s, and along with it, the economic vitality of many small communities it used to support. To fill the void, many previously timber-dependent communities have turned to tourism—particularly businesses geared to offering or supporting recreational activities, such as hiking and mountain biking, in the surrounding forest and other natural areas.

But the attitudes of residents in many of these communities are mixed. Some embrace the idea of tourism, whereas others are concerned that it will negatively affect their communities through increased crime, pollution, and higher costs of living.

IN SUMMARY

Timber was a significant economic driver in many rural communities of the Pacific Northwest throughout much of the 20th century. However, the number of timber-related jobs began declining in the 1980s, leading to hardship in many timber-dependent communities. Since then, some state and local public officials have become interested in promoting forest-based tourism to boost local economies.

Jeff Kline, a research forester and economist with the USDA Forest Service Pacific Northwest Research Station, and Ian Munanura, a tourism expert and associate professor at Oregon State University, surveyed residents in Klamath and Linn Counties—two areas once heavily reliant on the wood products industry. They wanted to learn about residents' attitudes toward tourism, and whether residents would support forest-based outdoor recreation opportunities in their communities.

The researchers found that local support for tourism depended on more than the economic benefits that tourism might bring to individual communities. Alignment with personal values and desired quality of life also influenced local support for forest-based tourism. Residents who viewed forests primarily as a source of timber and wood-products industry jobs were less supportive of tourism.

Those who viewed forests in a more multifaceted way were more open to tourism.

These findings, as well as a followup statewide survey, are helping to guide tourism research and policies throughout the Pacific Northwest.

Jeff Kline, a research forester with the USDA Forest Service Pacific Northwest Research Station, and Ian Munanura, a tourism expert at Oregon State University's College of Forestry, uncovered these attitudes about tourism by surveying residents of Klamath and Linn Counties—two areas in Oregon that were once heavily dependent on timber.

They conducted the survey in 2018 during a time when the state of Oregon was investing in forest-based tourist attractions, such as hiking and mountain biking, to sustain economic growth in rural communities. Indications were that tourism had the potential to generate economic benefits, but previous research suggested that the success of such efforts to foster tourism depended on the support of residents. Kline and Munanura set out to measure that support—or the lack of it.

The Klamath and Linn Counties Study

The scientists chose Klamath and Linn Counties because both counties have long histories in the wood products industry, and both are seeing a growth in tourist activity. The counties are emblematic of what other Oregon counties have been experiencing.

“In social science, one of the things we can do is give a voice to people,” Kline said. “With the reduction in timber harvesting, some

public officials have suggested, ‘Well, we can just switch over to tourism.’ We set out to see how people in affected communities really felt about that.”

Many rural communities in Oregon, including Klamath and Linn Counties, are surrounded by federal land, which for decades was a key source of timber. Federal timber harvest drastically declined in western Oregon in the 1990s following lawsuits seeking to protect habitat for northern spotted owls and the owls' subsequent listing as a threatened species under the U.S. Endangered Species Act. The resulting changes in federal forest management within the range of the spotted owl, coupled with market conditions and overall changes within the timber industry, such as increased mechanization, led to the loss of many timber-related jobs. During the 1990s, the annual timber harvests in both counties declined by half, according to a 2005 Oregon Department of Forestry report,¹ resulting in widespread unemployment and all the social problems that go along with it, such as increased crime and drug dependence.

A growing tourism industry has provided some relief. Between 2007 and 2019, tourism revenue and jobs in Klamath County increased

by averages of 4.4 percent and 3.3 percent per year, respectively, according to a study published by the Oregon Travel Commission. That same study found that in Linn County, annual tourism revenue grew by 6.4 percent per year, on average, while the number of tourism-related jobs increased by an average of 3.1 percent per year during that period.

PNW Science Findings

Providing 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
1220 SW 3rd Ave., Suite 1400
Portland, OR 97204

Send new subscription and change of address information to:

SM.FS.pnw_pnwpubs@usda.gov

Rhonda Mazza, editor; rhonda.mazza@usda.gov

Jason Blake, layout; jason.p.blake@usda.gov

To find Science Findings online, visit

<https://www.fs.usda.gov/research/pnw>
and click on **Publications**.

To become a digital subscriber visit:

<https://www.fs.usda.gov/research/pnw/products/publications/subscribe>

¹ Andrews, A.; Kutara, K. 2005. Oregon's timber harvests: 1849–2004. Selected counties. Oregon Department of Forestry. 163 p.



United States
Department
of Agriculture



Forest
Service

Boaters on the Rogue River in the Rogue River-Siskiyou National Forest, which partially falls within Klamath County, Oregon. USDA Forest Service photo.



Backpackers in the Willamette National Forest, which partially falls within Linn County, Oregon. USDA Forest Service photo.

Including an Emotional Dimension

Kline and Munanura built on previous studies that suggest that residents' support for tourism is essential for the long-term success of tourism industries in communities. Those previous studies describe local support in terms of transactional exchange in which support depends on real or perceived benefits—usually economic—derived from the tourism activity.

But Kline and Munanura say the transactional exchange approach doesn't fully explain the nuances of how rural Oregonians feel about their environment. Here, where so much of the state has a long history of interconnection between people and forests, personal values also matter a lot. Those values may range from seeing forests as the source of timber-related jobs or as natural ecosystems that should be protected.

Kline and Munanura set out to measure those values and attitudes by evaluating the mental process people use to judge tourism's potential benefits or costs.

The idea behind the mental judgement approach is that people, when faced with the impacts of an event, go through an appraisal process where they evaluate the effects of that event on their own quality of life. It takes the transactional exchange approach a step further, adding a more emotional dimension to an individual's perspective about whether bringing in tourism is a good thing. Whereas the transactional exchange approach might measure what people think they might gain

KEY FINDINGS

- Data from Klamath and Linn Counties in Oregon indicate that residents' perceptions influence local support for tourism. Residents who perceive that tourism will improve their quality of life tend to be more supportive.
- Residents who value the ecological aspects of forests more highly than their commodity value tend to be more supportive of tourism compared to residents who place greater value on timber-related forest commodities. Residents oriented toward the commodity value of forests remain concerned that tourism may further reduce local economic contributions of extractive forest industries.
- Residents' satisfaction with life is indirectly associated with greater tourism support, suggesting that residents' decisions to support tourism is a function of positive emotions and enhanced quality of life.
- The possible benefits of tourism outweigh negative, less critical factors in how residents think about tourism. Residents with perspectives that place more value on forest commodities are more likely to support tourism if they perceive tangible benefits similar to those from traditional forest industries.

from tourism, the mental judgement approach measures how individuals might feel about it on a deeper and more personal level.

To gain this insight, Kline and Munanura mailed questionnaires to residents of the two counties and followed up with a phone survey. The questionnaire and survey asked residents their feelings about the positive and negative effects of tourism, their perceptions about the importance of tourism as an economic driver in their community, and their attitudes about forests. Respondents were asked if forest preservation and ecofriendly tourism should be emphasized (an ecocentric perspective) or if forests should primarily be managed for timber production (a commodity perspective).

Results from the county surveys were mixed: The attitudes about the benefits of tourism were moderate. The residents with a more ecocentric perspective tended to be more supportive of tourism, whereas the more commodity-minded residents were not.

Based on survey responses, the researchers were able to sort out differing perceptions that revealed people's openness or lack of openness toward tourism in their community. For most residents, the issue often boiled down to "How will tourism benefit me or my town economically?" and "How will tourism affect my quality of life?"

Providing information about the positive benefits of tourism could be key in helping residents become more open about it, the researchers said. That could come in the form of showing the level of growth in tourism jobs experienced in other communities, and how tourism revenue can enhance public services.

Dispelling the impression, primarily among more commodity-minded residents, that tourism is an "either-or" proposition would also be valuable. Some people might welcome

a total switch to a tourism economy, while others might fear it. Both feelings may be somewhat misplaced, the scientists said.

"One possibility could be that tourism and the timber economies are complementary," Kline said.

"Both activities require the presence of the forest. For people who've lost jobs in the timber industry, tourism is a way for them to have a different kind of job in the forest. The challenge in relying on tourism is that some communities are hopeful that tourism might totally replace once thriving timber economies. But that doesn't always happen."

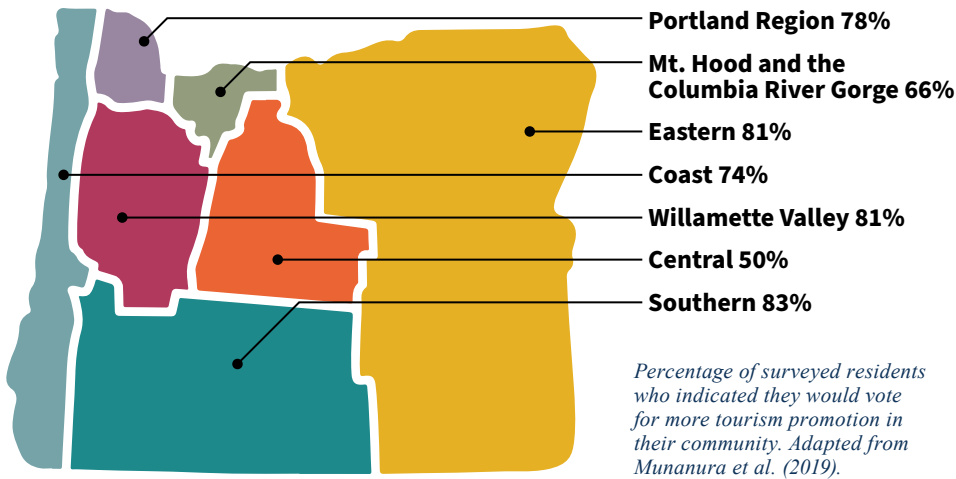
Gauging Statewide Attitudes

While work was underway on the Klamath and Linn Counties study, Travel Oregon, the state's main tourism agency, commissioned Munanura and his colleagues to conduct a statewide survey to gauge Oregonians' attitudes about tourism, significantly broadening the scope of the research. The intent was to help Travel Oregon understand residents' perceptions of tourism and its contribution to their quality of life.

The 2018 survey showed that in most regions of the state, Oregonians were generally supportive of tourism. In fact, 75 percent of all respondents indicated that they would vote for more tourism promotion in their community.

However, residents in Central Oregon and the Mt. Hood/Columbia Gorge region were less open to the idea. Respondents there said that they noticed more negative effects of tourism in their communities compared to respondents in other regions. When presented with a hypothetical 20 percent increase in tourism, residents in those regions said it would cause a slight decrease in their overall satisfaction of life.

Support for more tourism by region in Oregon



Central Oregon residents may feel the way they do about tourism because that region of the state aggressively promoted tourism decades ago. Traffic congestion, explosive population growth, and inflated land and housing prices are now common in Deschutes County.

The town of Sisters had just over 700 residents in 1990. Over the next three decades, the population of Sisters more than quadrupled. Kline said the community has been fairly successful at drawing in tourists, with its stylized store fronts that give it the feel of an old Western town.

In the nearby City of Bend, where tourism is one of the main economic drivers, the population quadrupled over the same period, making it one of the fastest growing cities of its size in the United States. Housing prices in Bend from 1990 to the third quarter of 2023 rose more than 700 percent—more than twice the national average.

For many, such growth has been a boon. But there's also the sense among some that the transformation has diminished the wide-open-spaces Oregon vibe that attracted many

residents in the first place. Their apparent resentment is an unintended result of touting Bend as an outdoor mecca.

"This resentment comes later, after tourism takes a foothold," Munanura said. "Central Oregon realized too late the impacts of tourism. This awareness of implications is important for tourism planners and managers across the state."

Residents in areas that have already experienced a booming tourism economy may see it as too much of a good thing, the scientist found. Although tourism has economic benefits, increased tourism can also bring increased traffic, inflated prices, and more pollution, which decrease the quality of life for current residents.

While increased economic potential is enticing, quality of life and preserving community character are also significant concerns.

"We discovered that Oregon residents, when deciding if they support tourism, are more worried about how tourism will affect their communities than they are about the environmental impact," Munanura said.

"This suggests that public officials seeking to gain support for tourism, especially in rural areas that typically depend on timber and see forests as commodities, should emphasize the community benefits of forest-based tourism, like creating service jobs, and help residents prepare for these positions," Munanura said.

Leading to Change

"The value of our work is to point to ways to mitigate those concerns by gauging how residents feel about tourism and helping communities make decisions that avoid pitfalls," said Kline.

The study has changed the way Travel Oregon does business and has prompted it to conduct resident sentiment surveys every other year.

"It expanded our focus so that we're carrying out our marketing campaigns with a destination stewardship approach," said Todd Davidson, chief executive officer of Travel Oregon. "We still promote but with an eye toward sustaining the quality of life in this special place."

In Central Oregon, for example, the organization's website features destinations that visitors and residents can enjoy during slower times of the year and in locations away from the heaviest concentration of tourists—all with the intention of easing pressure on the area.

Tourism may not be the answer to all the economic challenges faced by rural communities, but it can help. As Kline and Munanura found, it comes down to how local residents feel about it, and how its potential negative effects are managed.

"It's not that we're promoting tourism," Kline said, "But if a community is going to promote tourism, it is important to consider people's feelings about quality of life. It's all about finding the right balance."

Building Bike Trails

Kline and Munanura's research primarily assesses local attitudes before tourism projects get underway, but they also help after the fact to see how recreationists are using new infrastructure, such as the Whiskey Run mountain biking trail system in Coos County.

The trails were built through the efforts of Travel Southern Oregon Coast, Coos County, Whiskey Run Bike Association, and Wild Rivers Coast Alliance. Formed in 2018 and funded largely by lodging taxes from the nearby Bandon Dunes Golf Resort, Travel Southern

Kayakers on Sparks Lake, Deschutes National Forest. USDA Forest Service photo.



Tourism researcher Ian Munanura (Oregon State University) and Travel Oregon research specialist Javier Parada Torres work on a user survey of the Whiskey Run mountain bike trail system. Photo courtesy of Ian Munanura.

Oregon Coast's mission is to bring tourism opportunities to Coos and Curry Counties.

"Our goal is to collaborate with local entities to enhance economic development through sustainable tourism," said Julie Miller, the executive director of Travel Southern Oregon Coast.

The trail system is in the Coos County Forest, which continues to be actively managed for timber. Five years into construction, thousands of riders use the 32-mile trail system each year. About a third are from Coos County. The rest are from other parts of Oregon, and about 18 percent come from out of state. Travel Oregon, the state's main tourism agency, estimates that bicycle tourism accounts for about \$400 million in annual revenue to the state.

"About a year and a half into the project, we decided we wanted to get information from the users of Whiskey Run on how to have a better experience," Miller said. "We hired Ian and his team at Oregon State [University] to do a needs assessment. They came out and did a great job interviewing 257 Whiskey Run riders about what they wanted."

Writer's Profile

John Kirkland has been writing about science, higher education, and business for more than 20 years. He lives in Portland, Oregon.

LAND MANAGEMENT IMPLICATIONS

- Residents' support for tourism is essential to the long-term success of local tourism industries. Information about residents' attitudes toward emerging recreation-based tourism helps planners and managers who are working to economically diversify communities following local timber industry declines.
- The most receptive audience for positive messaging about tourism-based economic development likely are residents holding ecocentric forest values.
- Raising awareness about the positive effects that tourism can have on rural economies and taking action to mitigate potential negative impacts to the community can likely strengthen support for tourism.
- Focusing on efforts to manage tourism development in ways that complement—rather than replace—remaining timber industries may enhance support for tourism among commodity-oriented residents.



Mountain bikers at the Whiskey Run trail system in Coos County, Oregon. Photo courtesy of Ian Munanura.

Users suggested adding a repair station, a picnic area, a campground, and restrooms. Most of these improvements are now in place while work continues on the campground.

The survey also revealed that most cyclists using the Whiskey Run trails are white, male, and affluent. Based on that information, the researchers have designed a region-wide study to understand barriers to forest-based recreation for people from diverse cultural backgrounds.

"The real voyage of discovery consists not in seeking new landscapes, but in having new eyes."

—Marcel Proust

For Further Reading

Kline, J.D. 2001. Tourism and natural resource management: a general overview of research and issues. Gen. Tech. Rep. PNW-GTR-506. Portland, OR: U.S. Department of Agriculture, Pacific Northwest Research Station. 19 p. <https://doi.org/10.2737/PNW-GTR-506>.

Munanura, I.; Kline, J.D. 2022. Residents' support for tourism: the role of tourism impact attitudes, forest value orientations, and quality of life in Oregon, United States. *Tourism Planning and Development*. 50(3): 1–17. <https://www.fs.usda.gov/research/treesearch/64050>.

Munanura, I.; Kooistra, C.; Lindberg, K.; Needham, M. 2019. Oregon resident perspectives about tourism: final report from a 2018 survey. https://nature.forestry.oregonstate.edu/sites/default/files/FinalReport_ORTourismAttitudes.pdf.

Munanura, I.E.; Needham, M.D.; Lindberg, K. [et al.]. 2023. Support for tourism: the roles of attitudes, subjective wellbeing, and emotional solidarity. *Journal of Sustainable Tourism*. 31(2): 581–596. <https://doi.org/10.1080/09669582.2021.1901104>.

Munanura, I.; Parada, J.A.; Kline, J.D. 2023. A cognitive appraisal theory perspective of residents' support for tourism. *Journal of Ecotourism*. 52(3): 1–20. <https://www.fs.usda.gov/research/treesearch/66380>.



Pacific Northwest Research Station
USDA Forest Service
1220 SW 3rd Avenue, Suite 1400
Portland, OR 97204

Official Business
Penalty for Private Use, \$300

Scientist Profiles



JEFF KLINE is a research forester with the USDA Forest Service Pacific Northwest Research Station. His current research includes examining how private landowners respond to wildfire risk and climate change, evaluating tradeoffs in public land management, and understanding barriers to forest access among underserved communities. Kline earned a bachelor's degree in environmental resource management from Pennsylvania State University, a master's degree in resource administration and management from the University of

New Hampshire, and a doctoral degree in environmental and resource economics from the University of Rhode Island.

Kline can be reached at:

USDA Forest Service
Pacific Northwest Research Station
3200 SW Jefferson Way
Corvallis, OR 97331

Phone: (541) 224-3552
E-mail: jeffrey.kline@usda.gov



IAN MUNANURA is an associate professor at Oregon State University in the Department of Forest Ecosystems and Society and the College of Forestry. He has a Ph.D. in parks, recreation, and tourism management from Clemson University in the United States, a master's degree in tourism and conservation from the University of Kent in England, and a bachelor's degree in management from the University of Rwanda. Munanura's work integrates

sustainable tourism, rural community development, and participatory wildlife management practices.

Munanura can be reached at:

301K Richardson Hall
Oregon State University
1500 SW Jefferson Way
Corvallis, OR 97331

Phone: (541) 737-4271
E-mail: Ian.Munanura@oregonstate.edu