Survey of Public Priorities as a Guide for Sustainable Investment Strategies in the Four Northern Forest States

Researchers completed 1,221 telephone surveys in February, 2008, with roughly 300 complete responses from each of the Northern Forest areas in New York, Vermont, New Hampshire and Maine, encompassing the 42 most northern counties in those states. The telephone survey followed a 2006-07 written survey that involved facilitated discussions with focus groups from communities in Tug Hill and the Adirondack Park in New York State (Cox et al. 2007). The intent of the overall study was to understand the choices Northern Forest residents would make if investment funds were available to help stimulate a sustainable economic and environmental future. Specifically, the study sought to determine if community-level, "bottom up" choices would be similar to region-wide, "top-down" ones. The results could enable policy makers at all levels to understand the differing community and regional investment priorities and to help guide investment decisions at the community, state and regional levels.

Introduction

On May 22, 2008, Congress enacted the 2008 Farm Bill legislation, officially called the Food, Conservation and Energy Act of 2008. One of the many provisions of this new Farm Bill was to bring additional federal resources to the Northern Forest counties. A precursor, the Michaud Bill, proposed to create a regional economic development commission for the four states (similar to the Appalachian Regional Commission) that would develop a sustainable regional economic development strategy and disburse an additional $40 million a year for five years to the participating states and counties for projects that are consistent with the overall strategy. Congressman Michaud's bill received strong support from the entire Northern Forest Congressional delegation and companion legislation was introduced in the U.S. Senate. As enacted in the 2008 Farm Bill, some of the details have changed, for example, annual funding proposed is $30 million for 10 years, however, the general focus on investment in the Northern Forest counties remains.

Meanwhile a preliminary effort was funded by the U.S. Department of Commerce to stimulate economic development planning in the four-state Northern Forest region. The Northern Forest Center (NFC) was awarded a grant of $800,000 by the U.S. Department of Commerce, matched by a similar amount from the four states, to work with state representatives and their respective governor's offices to develop a regional economic adjustment strategy. The NFC published the strategy document "Economic Resurgence in the Northern Forest" in October 2008. It makes ten recommendations for near-term action — one of which suggests new federal investments in a variety of programs dealing with energy security, climate change mitigation and clean water — and proposes creating a national model for other rural regions working to sustain their natural and cultural assets in a 21st century economy. The strategy lists a host of likely federal funding sources available for sustainable community programs and proposes moving quickly to capture funding appropriations in federal fiscal year 2010.

Implicit in both of these federal-level efforts – the 2008 Farm Bill and the Northern Forest Center strategy – is that decisions about investment for a sustainable future in the Northern Forest will be made with a top-down approach. Beneficial as this could be for a region facing significant challenges from a changing global economy, these planning efforts might benefit from information about sustainable investment priorities coming from the communities themselves – a bottom-up approach. To further this end, researchers from the University of Vermont (UVM) and the State University of New York College of Environmental Science and Forestry (SUNY ESF), aided by non-government organizations in the region and a private survey research company, undertook a two-part study funded by the Northeast States Research Cooperative (NSRC).

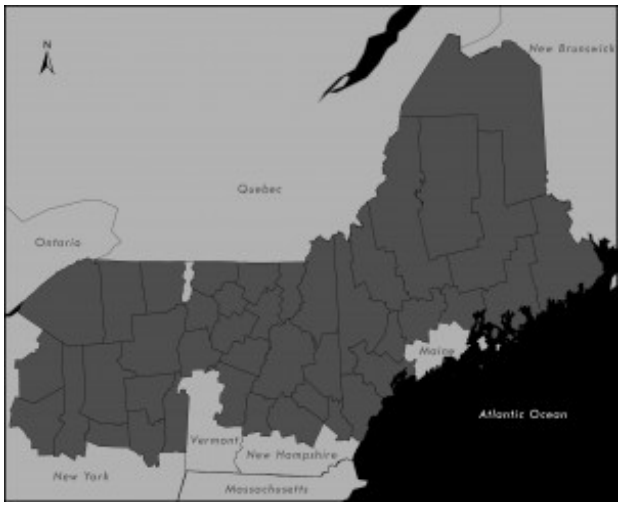
The intent of the overall study was to understand the ideas and priorities of local communities, the North Country region of New York State, and the four-state Northern Forest region as the basis of a vision for the economic, social, and environmental well-being of the Northern Forest. This vision for the future is meant to capture the voice of residents in prioritizing regional, state, and federal investment strategies, as well as form a basis of comparison as to how well regional planners and interest groups represent the ideas and priorities of local communities.

The first part of the study conducted facilitated discussions with focus groups from communities in Tug Hill and the Adirondack Park (published in this journal as Cox et al., 2007). Focus-group participants were asked to think about their respective communities one generation ahead, about 30 years in the future. A written survey was developed from focus group input and mailed to the focus group participants and interested participants in the three neighboring Northern Forest states. Focus-group results were presented to the participants and to members of the Adirondack/North Country Association (ANCA) in November, 2006. At this meeting it was suggested that the survey instrument – an eight-page questionnaire with 47 questions and presenting 50 investment project choices — should be adapted for a larger sample representative of the full demographic composition of the human communities in the four-state Northern Forest region.

NSRC awarded a second grant to SUNY ESF and UVM to follow up on the first initiative and conduct a telephone survey across the region. In February, 2008, 1,221 telephone interviews were completed in 42 counties. This paper summarizes the results of the telephone survey, highlights the differences in investment choices between states and compares the telephone survey results to the original focus group results.

Methods

Figure 1. Northern Forest Counties



A prime objective of the telephone survey was to obtain a representative sample of the resident households within the Northern Forest counties (see Figure 1). In a three-step process, first, counties were identified that had a majority of their area within the boundary of the Northern Forest as defined by the 1994 Northern Forest Lands Council study and in various studies by the Northern Forest Center. We used ArcGIS 9.2 (ESRI 2006) to compile and overlay the Northern Forest boundary with the county, town, and zip code boundaries for the study area. Second, all zip codes with 60% or more forest cover (NLCD 2001) and developed hamlets or villages surrounded by those with 60% or greater forest cover were identified and mapped. Third, a target sample of 300 respondents for each state was chosen. With a total sample size of 1,200 for all four states, we estimated that the sample results have a margin or error of plus or minus (+/-) 3%, for a 95% confidence interval of 6%. With 300 respondents for each state, a state-by-state comparative analysis would have a confidence interval of +/- 6%, for a 95% confidence interval of 12%.

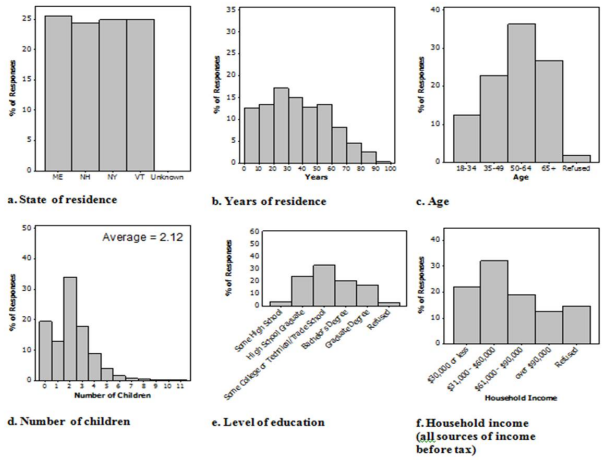
A target sample for each county was devised based on proportional allocation according to their respective population. Responses from year-round residents were prioritized and seasonal or part-time residents were not included in the sample. To ensure that a household was in fact located within the Northern Forest area of a particular state and that the household was the primary residence for the family, screening questions were asked at the beginning of each interview.

A telephone survey compatible with the written questionnaire was developed based on the first part of the study (Cox et al. 2007). The written version had some complexities in a few questions that were difficult to

replicate in the telephone survey setting and thus some questions had to be eliminated in order to complete each interview within a 15-minute call. The telephone survey instrument was tested on February 6, 2008 and the telephone survey data collection commenced on February 7, 2008. The average completion time for the survey was 13 minutes, making it somewhat lengthy for a telephone survey. However, the target response of 1,200 completed surveys from the four state Northern Forest region was reached within two weeks, on February 20, 2008. Apportionment of the survey responses among the four counties within each state was close to the research target. Of the 42 counties, 11 equaled their target number of completed responses; 10 counties were below target from between 1 and 12 responses; 21 counties exceeded their targets by 1 to 9 completed responses.

Results

Figure 2. Demographics of the survey respondents (n = 1,221).



The telephone survey reached a more representative demographic group than the focus-group-driven written survey. Notably, we had wider representation from all four Northern Forest states (Figure 2a), a wider spread of years of residence in the Northern Forest (Figure 2b), more evenly-distributed age structure (Figure 2c), a wider range of the number of children in the household (Figure 2d), and more even distribution of education levels (Figure 2e) and household income (Figure 2f). Responses were split nearly evenly between males and females (49.8% male, 50.2% female); and 30.2% of the respondents owned forest or farm land in the Northern Forest region besides the land for their home and immediate surroundings.

The survey questions were split into four main sections. The first set of questions asked the respondents for their level of agreement with an opinion statement (Table 1). For example, “A strong rural identity is a community quality that is very important to me,” to which 30% strongly agreed, 57% agreed, 6% neither agreed nor disagreed, 6% disagreed, 0.16% strongly disagreed, and 2% either didn’t know, had no opinion, or refused to answer the question. (Note that we have rounded the response percentage figures in the text; the more precise numbers remain in the tables.)

The second section of questions were originally developed in the written focus group survey as two contrasting opinion statements and the respondent would mark where they stood on a scale from one to nine where complete agreement with one opinion was equal to one and complete agreement with the contrasting opinion was equal to nine. This was difficult to replicate with the telephone survey, so one statement was selected and asked for the respondent’s level of agreement with that one statement, making the second section of questions similar to the first set (Table 2).

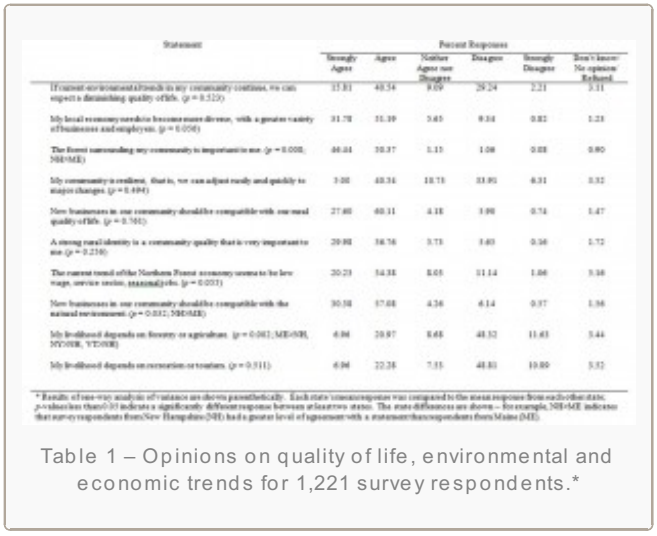


Table 1 – Opinions on quality of life, environmental and economic trends for 1,221 survey respondents.*

The third section of the survey asked respondents, “If new federal funding is allocated for projects in the Northern Forest, for which of the following would you

Northern Forest, for which of the following would you support using that money?" Table 3 summarizes results for their level of support for the five main categories which were as follows: social and cultural programs (examples include projects supporting museums, historic sites, performance halls, and interpretive signage); environmental protection projects (examples include projects supporting water source protection, wildlife habitat provision, and ecological restoration); human development activities (examples include projects supporting job training, education, and human health); physical infrastructure improvements (examples include projects supporting roads and highways, telecommunications, water and sewer, and electricity generation and delivery); and economic development activities (examples include projects supporting regional tourism planning, recruitment of new industries, and business services). Respondents were also asked this question in a different way – "which category would you say is most important?" The results can be found in Figure 3 broken out by state. The ranking of the categories differed when the question was asked in this way. It was asked in this way to be able to more directly compare results from the first survey, as discussed in the following discussion section.

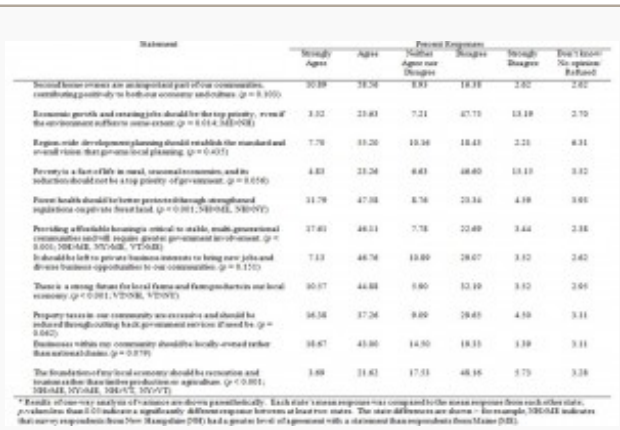


Table 2 – Stated levels of agreement with 11 statements about their communities for 1,221 survey respondents.*

Statement	Percent Responses				
	Strongly Support	Support	Oppose	Strongly Oppose	No opinion
Social and cultural programs ($p = 0.032$; NY>ME)	20.48	52.58	17.44	3.03	6.47
Environmental protection projects ($p = 0.016$; NH>ME)	44.55	41.44	7.21	2.87	3.93
Human development activities ($p = 0.432$)	39.31	51.68	5.16	1.06	2.78
Physical infrastructure improvements ($p = 0.404$)	38.90	49.96	5.98	1.56	3.60
Economic development activities ($p = 0.019$; NY>VT)	25.96	55.20	11.22	2.21	5.41

* Results of one-way analysis of variance are shown parenthetically. Each state's mean response was compared to the mean response from each other state; p-values less than 0.05 indicate a significantly different response between at least two states. The state differences are shown – for example, NH>ME indicates that survey respondents from New Hampshire (NH) had a greater level of support for an investment category than respondents from Maine (ME).

Table 3 – Stated levels of support for five investment categories for the 1,221 survey respondents.*

The fourth section of questions offered specific public investment ideas and asked each respondent to decide if the investment project was very important, somewhat important, not very important, or not at all important (Table 4). For example, respondents were asked if they thought it was important to "upgrade public water and sewer systems," to which 38% said it was very important, 37% said it was somewhat important, 15% said it was not very important, and 4% said it was not at all important, while 6% had no opinion.

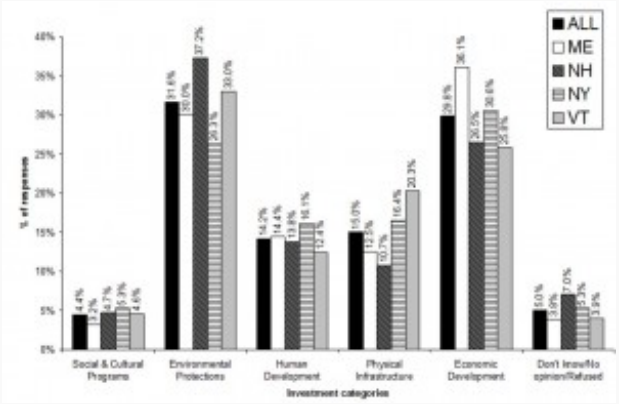
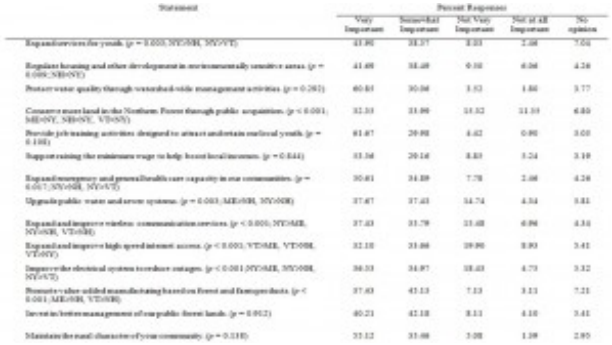


Figure 3. Overall results from the question: Which of the following five public investment categories would you say is most important?

Discussion

The telephone survey confirmed and largely supported many of the results from the focus group survey reported in Cox et al. (2007). As in the first survey, respondents agreed overwhelmingly that a strong rural identity is important to them. In both surveys respondents had a fairly negative view of the future if current trends continue over the next 30 years. Quality of life is going down, according to the respondents. Residents were not happy with the current trends of the Northern Forest environment and they see an economy dominated by low wage, service sector seasonal jobs. In the telephone survey respondents strongly agree (16%) and agree (41%) – for a total of 57% – that if



current environmental trends continue 'we can expect a diminishing quality of life'; 29% disagreed with this statement and 2% strongly disagreed. Respondents strongly agree (20%) and agree (54%) that 'the current trend of the Northern Forest economy seems to be low wage, service sector, seasonal jobs'. They agreed overwhelmingly (83% strongly agree or agree) that the local economy needs to become more diverse, that new businesses should be compatible with the rural quality of life (88% strongly agree or agree) and should be compatible with the natural environment (87% strongly agree or agree with this statement).

There were two new questions inserted into the telephone survey at the request of the U.S. Forest Service. One addressed the importance of the forested landscape and the other focused on community resilience. Respondents agreed almost totally (96%) that "the forest surrounding my community is important to me"; however, in response to follow-up questions, they largely disagreed that their respective livelihoods depend on forestry or agriculture, recreation or tourism, both by ratios of two-to-one. This was interpreted to mean that, although they live in a forested landscape, their economic lives are largely disconnected from the forest itself. Respondents seem to value the forest around their community, but not because their livelihoods depend on it. However, respondents disagreed two-to-one that recreation and tourism rather than timber production or agriculture should be the foundation of the local economy, even though this contradicts recent trends.Respondents were almost evenly split on their assessment of their community resilience (that is, the community can adjust easily and quickly to major changes), with 45% agreeing and 40% disagreeing. These responses reflect the varying circumstances in each community.

There was significant disagreement between the states in these responses in just three of the 10 statements (Table 1), and Table 2 shows there was a statistically significant disagreement between some of the states in five of the 11 statements. The final statement in Table 2, "The foundation of my local economy should be recreation and tourism rather than timber production and agriculture", highlighted considerable differences between the four states on this economic priority issue.

Respondents were asked about five public investment categories in two different ways. First, respondents were asked for their level of support – strongly support, support, oppose, strongly oppose, don't know/no opinion/refused – for each individual category separately. The environmental protection category received the strongest support (45% said they 'strongly' supported this investment category, 41% 'support', 7% opposed, 3% strongly opposed, and 4% refused, had no opinion or did not know). This category was followed by human development activities (39% strongly supported this category); next came physical infrastructure (39% strongly supported this); followed by economic development activities (26% expressed strong support). The social and cultural category was 'strongly supported' with a score of just 21%, last on the priority list for respondents.

However, when combining the "strongly support" and "support" responses together, the order of preference changes, placing human development projects first (91% support or strongly support), then physical infrastructure (89%), environmental protection (86%), economic development (81%) and lastly, again, social and cultural programs (73%). It should be noted, however, that in three of the five investment categories there was a significant difference between some of the states in their choices for levels of support (Table 3).

Respondents were also asked to rank the categories in a second way, the question being "which of those five public investment categories would you say is most important. Is it: 1. social and cultural programs, 2. environmental protections, 3. human development, 4. physical infrastructure, 5. economic development, 6. Don't know/no opinion/refused." Overall, 32% of respondents ranked the environmental protection category as most important followed by economic development activities (30%), physical infrastructure improvements (15%), human development activities (14%), and social and cultural programs (4%). Five percent of the respondents didn't know, had no opinion, or refused to answer the question. (Figure 3 shows the overall result and the state by state breakdown for this question.) Asking the question this way allowed us to compare the first and second surveys directly. Telephone survey results different from those of the first survey, in which physical infrastructure needs were rated the highest for allocating new resources (26%), followed by economic

development (21%), environmental protection (20%), and human development (19%). It is notable that social and cultural projects were ranked fifth in importance (13% in the first survey, just 4% in the telephone survey) by the respondents participating in both surveys.

These investment choices by category can be analyzed further showing that investment priorities may differ by gender, state, age, education and income. We have chosen to highlight in this paper the differences by state. A spreadsheet with all the data is available at http://conserveonline.org/workspaces/northernforestsurvey/documents/northern-forest-survey-data and can be analyzed by these demographic characteristics. Top specific investment projects (highlighted in Table 4) in the telephone survey were for providing job training activities designed to attract and retain local youth (62% rated this as very important). Next on the priority list rated as very important was: protecting water quality (61%), maintaining rural character (55%), raising the minimum wage (54%) and expanding health care services (51%). In the first survey the following infrastructure projects were rated highly – expanding wireless communications, high speed internet and improving the electrical systems. But in the telephone survey these projects came much lower down on the priority list (37% rated wireless communications as 'very important', 37% for electrical systems, 32% for high speed internet). The lowest priority investment on both surveys was conserving more land by public acquisition and by purchasing conservation easements (ranked 10 out of 10 by four out of the five focus groups and at just 32% in the telephone survey). New York state respondents seemed to express this disagreement more strongly than the other three states, but it was the lowest priority project among all Northern Forest respondents. Comparing state results it is useful to note that there were significant differences between nine out of the 14 selections (Table 4) in their choices of priority projects.

From the first survey we learned that there is overwhelming support (90% agreed) for "education as the top priority towards building a prosperous economy" and this is reinforced in the telephone survey by their choices for top investment priorities – that is, for job training and retaining youth in their communities and providing services for young people. (Given the overwhelming support for education in the first survey we did not ask this question again directly in the second survey). However, investments in colleges and universities and investment in technical schools were low on the priority lists in the five focus groups in the first survey and showed some interesting variations among these smaller groups (for example, the Northern Forest group ranked technical schools #2 on the People Projects list, North Country ranked them #7, Tug Hill at #5, Inlet/Old Forge at #9 and Minerva/Newcomb #8 on a scale of 1 to 10).

Conclusions

The results of this research are intended to enable policy makers at all levels to understand the differing community and regional investment priorities and to help guide and influence investment decisions at the community, state and regional levels. The results of the telephone survey confirmed much of the information from the first more detailed survey. The original written survey offered participants and respondents a much longer list of project choices, that is, 50 as opposed to the 14 projects in the telephone questionnaire. This was done simply because of the constraints of a telephone versus a written survey format. Both sets of survey results show that respondents overwhelmingly want to retain the rural character of their communities and favor economic development but not at the expense of environmental protection. Almost all of the telephone survey respondents agreed that the forest surrounding their communities was important, but largely disagreed that their livelihoods depended on forests, farms, recreation or tourism, implying that Northern Forest residents value the forest around their communities but not because their livelihoods necessarily depend on it.

Top investment categories in the telephone survey were environmental protection and economic development, followed by physical infrastructure, human development and social and cultural programs. There were significant differences between some of the states on three of these five categories. The priority list of categories in the telephone survey is different from the results of the first survey, in which physical

infrastructure needs were rated as most important. Explanation for these differences between states and between surveys was beyond the scope of these surveys but it is important to emphasize that there are differences and that if and when a regional commission is created its members and staff should be aware that top down or one-size-fits-all investment strategies and projects may well not be accepted by the communities across the region.

Specific investment projects that garnered much support in the telephone survey included job training activities designed to attract and retain youth and providing services for youth. Other well-supported projects included protecting water quality, maintaining rural character, expanding health care services and raising the minimum wage. There were significant statistical differences between some the states for nine out of the 14 selections in their choices of priority projects. Again, explanation for these different priorities was beyond the scope of these surveys but it is important to recognize that community development preferences are not homogeneous across the region, which speaks to the importance of maintaining local participation in the identification and funding of investment strategies and projects.

While in the first survey three infrastructure projects — namely expanding wireless communications, providing high-speed internet and improving the electrical systems — were highly rated investment priorities, this was somewhat biased because of the topographic and institutional constraints in the Adirondack Park. These projects came surprisingly much lower down on the priority list in the telephone survey which covered the whole Northern Forest region, even though these communications infrastructure projects are listed in the top ten priority actions developed by the Northern Forest Center (2008). Again, this should be a warning signal to a future regional commission that regional or top down determined priorities may not fit the priority investment needs of all the states or all the communities within them.

These research findings are important because they begin to address the issue of homogeneity among the four areas that comprise the Northern Forest region. Clarification on homogeneity is timely because the Northern Forest Center is now in its second decade of existence. During its inception in the mid-1990s, regional conformity in environmental issues, economic concerns, and community development priorities was a basic requirement for the identification and demarcation of the four-state area as a distinct “region.” Early success at fund raising as well depended on a talent for identifying regional issues of wide concern, in other words, the ability to use fairly broad strokes in characterizing the region’s most pressing issues in a way that resonates with funding organizations. The regional Northern Forest committee, with representatives from each of the four states, also had to speak with one voice as much as possible through the infancy and adolescence of the organization.

This research does not deny or reduce the importance of a regional perspective in addressing environmental issues of regional importance. Those issues are crucial to the environmental health of the Northern Forest. What this research does highlight is that in terms of the human dimensions of the Northern Forest, the social, economic, community, and cultural considerations, there appears to only be homogeneity on the broadest of sentiments, for example, that “new business in our community should be compatible with our rural quality of life” ($p=0.761$). In contrast, for many of the more specific issues addressed in our survey (e.g., housing, farming, recreation, forestry) there were significant statistical differences among the four states, indicating that when it comes to the human dimensions, there may be few “regional” issues.

The findings highlight a distinction that needs to be made between “planning” for change, which entails identifying the problem and applying for new funding to address it, and the very different process of implementing change throughout the Northern Forest. For the implementation stage, these survey findings indicate that rare would be the program where “one size fits all” throughout the Northern Forest, rather, there could and should be a wide variety of possible solutions for facilitating community and economic change at the local level. While that approach increases the complexity of regional planning along the human dimensions, the management issues are not insurmountable. The challenge for the Northern Forest Center and its partners throughout the four-state area is to develop new strategies and protocols for accommodating local variation

on regional change, procedures that would not only accommodate but encourage specific community development projects to be identified, implemented and managed at the local and sub-regional level.

We contribute these survey results to future discussions of regional economic development, for example, to the regional economic commission that would be created under the provisions of the 2008 Farm Bill. We also offer these results to the four state governors, congressional offices, and others active in planning for the future, including the Northern Forest Center, the North Country Council, the members of the Northern Forest Sustainable Economy Initiative, the Adirondack /North Country Association (ANCA), the Common Ground Alliance, the Adirondack Park Agency (APA), Adirondack Association of Towns and Villages (AATV), and to the Adirondack Research Consortium (ARC) as the basis for future planning and action. The surveys produced not only the raw data for the summary tables included in this article but also many additional comments from the telephone respondents which could be explored for their insights. Given the recommendations from the Northern Forest Center's strategy document, they should be encouraged to assess existing local, state, federal and private programs and resources that address the issues discussed in the survey results, and where needed, suggest new or modified programs that do help communities as they envision and strive for a productive and sustainable future.

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