

Indicator 6.38.

The Resilience of Forest-Dependent Communities

What is the indicator and why is it important?

Resilience of Forest Dependent Communities is a new indicator of social sustainability. In the development of this indicator, the Montréal Process Technical Advisory Committee suggested that countries provide definitions and select approaches to measurement that best reflect their national experiences. The resultant methodology should enable reporting on the health of forest-dependent communities and trends over time. The definition, operationalization, and data gathering protocol presented herein emerged from research commissioned by the U.S. Roundtable. Additional information on the concepts and techniques underlying this work can be found in the supporting documentation on the project Web site (<http://www.fs.fed.us/research/sustain/>) and in Magis (2004).

Community resilience (CR) is defined as the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise. Members of resilient communities intentionally develop personal and collective capacity that they engage to respond to and influence change, to sustain and renew the community and to develop new trajectories for the community's future.

The contribution of community resilience to the MP C&I is a deeper understanding of social sustainability, specifically as it relates to a community's ability to thrive in contexts of change. A community's resilience will determine its ability to successfully mobilize and respond to societal stress, making it integral to social sustainability. Further, human societies are intimately interconnected with ecological systems. Hence, the resilience of forest-communities will influence their capacity to act as forest stewards, thus, affecting the forest's sustainability.

Eight dimensions operationalize CR into actionable, observable, and measurable elements; *Community Resources, Development of Community Resources, Engagement of Community Resources, Active Agents, Collective Action, Strategic Action, Equity, and Impact*. The *Community Resilience Self Assessment* (CRSA) was developed to provide a comprehensive portrayal of a community's resilience via its performance along the eight dimensions. From it, information is gleaned regarding: the community's resources; how the resources are developed and

used; the participation and collective involvement of community members in community endeavors; and the effect of those collective efforts.

What does the indicator show?

The goal of this ongoing research project is to depict a national picture of the extent to which communities dependent on forests for their wellbeing, livelihoods, subsistence, quality of life, or cultural identity are able to respond and adapt to change.

The CR definition and dimensions emerged from multidisciplinary research to understand and describe the well-being and resilience of communities. The Community Resilience Self Assessment (CRSA) and sampling protocol were developed to measure a community's resilience along the eight CR Dimensions. The CRSA contains 66 questions arranged across the eight dimensions. Respondents were chosen through a purposive sampling method involving key informants, and responses to the CRSA were gathered via the Internet.

The next stage in this project is to establish and administer a sampling process to periodically gather resilience data from forest-based communities across the United States. These data will provide a national picture of community resilience as it relates to forest sustainability, thereby accomplishing the intent of Indicator 6.38.

Initial Results

Administration of the CRSA generates data that describes conditions prevailing in particular communities. Key informants rank the community's resilience along each CR Dimension. Their answers are tallied to generate dimension scores. The CRSA uses a scale of 1–6. A score of 1 equates with very low resilience; 2—low resilience; 3—low to medium resilience; 4—medium resilience; 5—low and high resilience; and 6—high resilience. The following graphics exemplify one way to display the CR data. A radar chart is used in the first four figures to display CR scores for the pilot communities (figs. 38-1 and 38-2).

Six communities were sampled as a proof of concept for this report. Because this sample is very small, generalizations cannot be made. With a broadened sampling base, however, data can be compared across communities and relationships between

dimensions and forest sustainability can be demonstrated. Figure 38-3 shows comparisons between three of the sample communities, that is, Alberton, Superior, and St. Regis.

What has changed since 2003?

Indicator 6.38 is essentially a new indicator, although it is related to Indicator 46 in the 2003 report, which measured the viability and adaptability of forest-dependent communities. The approach taken in 2003 relied on nationally available data on county level conditions, and was therefore restricted in terms of spatial specificity and the sorts of variables it could measure. The CRSA generates community-scale data, which portrays a community’s resilience from the perspective of key informants. Key informants are individuals whose active engagement in the community gives them broad knowledge regarding social, political, economic, cultural and ecological conditions and trends in their community. The CRSA and key informant methodology enable direct measurement of CR, but with some costs in terms of breadth of coverage. Given these changes, it is impossible to draw direct comparisons to the results displayed in 2003.

Regional differences

As the sample size to date is so small, regional differences cannot yet be discussed. An enhanced sample size will enable this level of analysis, however.

Why can’t the entire indicator be reported at this time?

The approach presented here addresses the nature of Indicator 6.38 for the communities that have been sampled. The next phase of this project is to develop a rich-enough sample to reveal the traditions and trends in the Nation’s forest-dependent communities and specific relationships between CR and forest sustainability. Hence, the next phase of the development of Indicator 6.38 in the United States is to expand considerably the number of communities utilizing a purposeful framework aimed at developing comparability across space and time.

Figure 38-1. Sample radar plot showing Community Resilience Self Assessment (CRSA) scores for Alberton, MT (sampled in 2009–2010).

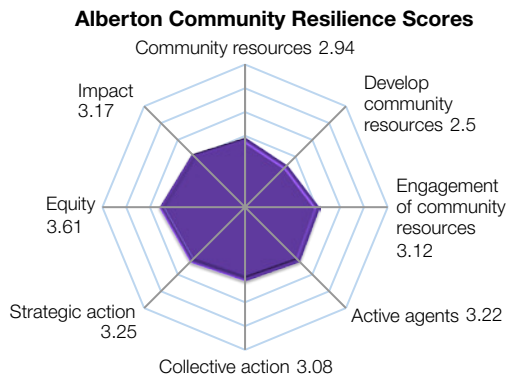


Figure shows CRSA index scores (1 = lowest, 6 = highest)

Figure 38-2. Sample radar plot showing Community Resilience Self Assessment (CRSA) scores for Superior, MT (sampled in 2009–2010).

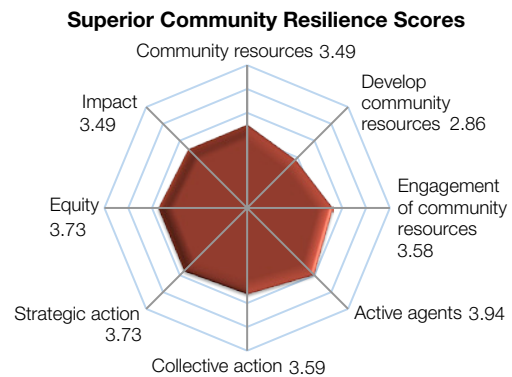
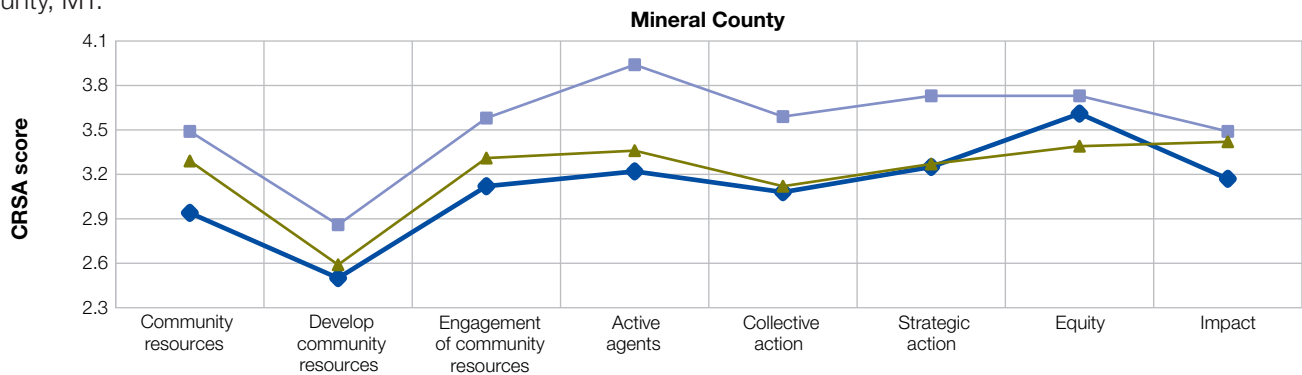


Figure shows CRSA index scores (1 = lowest, 6 = highest)

Figure 38-3. Combined Community Resilience Self Assessment (CRSA) scores for three communities in Mineral County, MT.



Community Resilience Dimensions

Community	Community resources	Develop community resources	Engagement of community resources	Active agents	Collective action	Strategic action	Equity	Impact
Alberton	2.94	2.5	3.12	3.22	3.08	3.25	3.61	3.17
Superior	3.49	2.86	3.58	3.94	3.59	3.73	3.73	3.49
St. Regis	3.29	2.59	3.31	3.36	3.12	3.27	3.39	3.42