



Sustainable Community Development Step 4: Develop Sustainability Indicators to Measure Progress¹

M.E. Swisher, Sandra Rezola and James Sterns²

Overview

This document discusses the importance of developing sustainability indicators used to measure progress in a sustainable community. The document also includes characteristics of effective indicators and tips about how to develop indicators.

Develop Sustainability Indicators to Measure Progress

Communities are multidimensional, reflecting diverse realities and consisting of complex interactions and networks. Yet traditionally, communities have been assessed using indicators that mask their true complexity by treating the economy, society and the environment as distinct or only weakly related. Increasingly, the limitations of using traditional indicators in community assessments are becoming apparent. For instance, median income, as a commonly used measure of socio-economic status, reveals very little about a community's distribution of wealth, cost of living, or inequities that exist in access to natural, social or physical resources. Similarly, water quality as a traditional indicator of environmental health, reveals little about the residential, commercial or industrial activities that may be causing the pollution, potential health problems associated with poor water quality, or the effects of water pollution on local biodiversity. Sustainability indicators should reflect what is happening in the larger system, or the "big picture," through observation of a smaller part of the system. Indicators to assess progress toward community sustainability must therefore be as creative and multidimensional as the communities they are intended to serve.

Indicators Of Sustainability

An indicator reflects the status or progress of something by quantifying and simplifying the phenomenon. Indicators of sustainability allow a community to determine where it is, where it is going, and how far it is from its chosen goals. Effective sustainability indicators assist communities in identifying problems while revealing the linkages between a community's economy, society and environment.

-
1. This document is FCS7217-Eng, one of a series of the Department of Family, Youth and Community Sciences, Florida Cooperative Extension Service, IFAS, University of Florida, Gainesville FL 32611: First published: September 2003. Reviewed by Jerry Culen, Ph.D., associate professor and Amy Simone, Ph.D., assistant professor, Department of Family, Youth and Community Sciences, and Burl Long, Ph.D., professor, Department of Food and Resource Economics, University of Florida, Gainesville, Florida, 32611. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>
 2. M.E. Swisher, Ph.D., associate professor, Department of Family, Youth and Community Sciences, Sandra Rezola, M.S., Institute of Food and Agricultural Sciences, and James Sterns, Ph.D., assistant professor, Department of Food and Resource Economics, University of Florida, Gainesville FL 32611.

The Institute of Food and Agricultural Sciences is an equal opportunity/affirmative action employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Service office. Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida/Christine Taylor Waddill, Dean.

Indicators of sustainability should ideally be developed by the stakeholders within the community after a visioning process. This allows the indicators to be relevant to the community's goals and objectives and understandable to the community members. Participatory indicator development also promotes ownership over the indicator monitoring, evaluation and results, increasing community capacity and accountability. Indicators of sustainability must also provide reliable information on the system being measured. Sources of data must therefore be timely, accurate and consistent.

Data for indicators of sustainability may be more difficult to acquire than traditional community data that may be more readily available but less telling as a measure of sustainability. Don't be discouraged by the lack of data available for your measures. Realize that a creative, novel approach to data collection will likely be required to arrive at a broader, more complete picture of your community.

While indicators of sustainability will vary for each community, good indicators share the following characteristics.

Characteristics of Effective Sustainability Indicators:

1. The indicator reveals links between the economy, society and the environment.
2. The indicator is relevant to all sectors of the community.
3. The indicator addresses the carrying capacity of the community's natural resources and acknowledges ecological limits.
4. The indicator provides a long-term view of the community, looking forward 25 or 50 years rather than 5 or 10.
5. The indicator addresses the question of economic, social and environmental diversity.
6. The indicator is sensitive and adaptable to changing circumstances and conditions.
7. The indicator is clear, simple and unambiguous.
8. The indicator is reliable, providing accurate data and measuring what the community wants to measure.
9. The indicator demonstrates to community members how individuals contribute to the overall picture of sustainability.
10. The indicator allows the community to recognize how local sustainability is tied to and dependent on regional and global sustainability, and vice versa. Therefore local progress does not come at the expense of other communities.

Developing Sustainability Indicators

After the community has created a vision and action plan, which specifies goals and objectives, the participants should discuss the linkages between the identified issues of concern. For instance, if childhood asthma is an area of concern, it might be linked to air pollution, transportation, social inequity and other community factors. Consider all possible connections; regardless of how unrelated they may initially appear.

Thereafter, have participants brainstorm indicators that could reflect these interlinkages. In order to generate as many ideas as possible, prevent criticism or exclusion of any indicators

during the brainstorming process. Encouraging an uncritical, enthusiastic atmosphere will allow more people to feel comfortable contributing and developing ideas.

After the brainstorming, evaluate your indicators to determine whether they meet the criteria for good indicators of sustainability. Discuss the data required for the indicators selected. Is the data already available or does it need to be collected? If the data have not been previously collected, what methods of collection will be employed? Often baseline data will be required to measure benchmarks, or milestones on your path to reaching project objectives.

Finally, consider how the indicators can be incorporated into the community's daily life for monitoring and evaluation. Achieving community sustainability requires involvement from the public, private and civic sectors. Determine how sustainability can be better integrated into policy regulating transportation, energy, and land use. Evaluate the role of the private sector in hindering or advancing the goals of sustainability. Encourage private/public partnerships that promote investment in the local economy and in education and recreation. Through greater collaboration between government, local businesses and citizens, representatives of the community's diverse sectors can become more involved in sustainability efforts. Utilize the grid below to determine whether each indicator is relevant to all sectors of the community.

	Public Policy	Citizen Participation	Business Investment
Environmental Quality			
Economic Productivity			
Social Justice			

Over 200 communities around the country have developed sets of indicators that reflect the linkages between economic, environmental and social well-being and provide a road map to a more sustainable future. Examples of indicators of sustainability that are being used in community initiatives include the following:

- Disparity in resident infant deaths per 1,000 live births between people of color and white people. *Jacksonville, Florida, Indicators for Progress*. This indicator reflects levels of community education, racial inequality, poverty, and environmental injustice, among other things.
- Fuel consumption per capita and vehicle miles traveled per capita. *Seattle Indicators of Sustainable Community*. Vehicle use and gasoline consumption can reflect dependence on non-renewable natural resources, pollution, loss of open space and wildlife habitat, decreased social health as a result of stress and pollution, and a declining sense of community.
- Number of individuals on nonprofit boards and public boards and commissions who have successfully overcome any of the root causes of poverty. *Central Oregon Partnership*. This indicator was created to measure social capital and the root causes of poverty.

- Business involvement in community and schools. *Maine Economic Growth Council's Measures of Growth 2002*. Partnerships between businesses and schools or other community groups provide benefits for the community and the business while promoting sustainable economic growth.
- The estimated amount and percent of municipal solid waste being recycled. *Boulder, Colorado's County Civic Forum's Community Indicator's Report*. Reflects resources use efficiency and waste generation.