

Sustainable Rangelands Roundtable

An overview of a work in progress.

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Allen Torell, John Tanaka, and Mark Brunson (left to right) work on identifying indicators for the "Maintenance and enhancement of economic and social benefits to current and future generations" criterion group.

Interest in sustainable social and economic development has risen dramatically, both nationally and internationally over the past 30 years. During this time, the American public has become increasingly concerned about natural resource degradation and supported intensified environmental monitoring.

To achieve sustainable development, governments must monitor the condition of natural resources in relation to ecological, social and economic factors. In economics, overall economic well-being can be approximated using the gross domestic product (GDP), which indicates if a nation is experiencing recession or economic growth. However, no national, single measure or index for sustainability of natural resources is known to exist.

Representatives from conservation organizations, the livestock industry, local, state and federal agencies, and universities, are engaged in an ongoing program designed to identify measures of rangeland sustainability at a national scale. This group calls itself the Sustainable Rangelands Roundtable and is working to develop criteria and indicators to form a framework for national assessments of rangelands and rangeland use patterns.



"Conservation and maintenance of soil and water resources" criterion group at work during the Washington DC meeting, held May, 2002.

Ideally, the criteria and indicators will describe elements that assess trends in:

- Resource conditions
- Resource management
- Ecological variables
- Economic costs and benefits
- Social values

What Is Sustainable Development?

The term "sustainable development" was introduced in the 1980's as a modification of the concept of economic development. In 1987, sustainable development was characterized as "development which meets the needs of the present without endangering the ability of future generations to meet their own needs." (World Commission 1987).

Leaders at the 1992 United Nations Conference on Environment and Development endorsed the Rio Declaration and principles of sustainable forest management. Two years later, a working group developed criteria and indicators targeted specifically at assessing progress toward sustainable management of temperate and boreal forests. Criteria and indicators describe individual elements of natural, economic and cultural systems that need to be assessed to illuminate trends in ecological conditions, management, economic benefits and social values. Efforts of this Working Group resulted in the creation of 7 criteria and 67 indicators, endorsed by the United States and nine other countries in 1995.

Subsequently, in 1998, the USDA Forest Service initiated the Roundtable on Sustainable Forests. While focusing on forests, this Roundtable also recognized the importance of including rangelands in any national protocol for appraising our Nation's sustainability. This idea merited additional attention, and, in 1999, the Forest Service convened a meeting in Denver to consider a

roundtable for sustainable rangeland management. As a result, the Sustainable Rangelands Roundtable was established in April 2001.

Sustainable Rangelands Roundtable

Sustainable Rangelands Roundtable participants believe that including individuals representing many rangeland interests and emphasizing an open, inclusive process will produce more broadly acceptable criteria and indicators of rangeland sustainability. Additionally, promotion of shared leadership and group responsibility for final products will foster a sense of ownership for widely applicable criteria and indicators.

Sustainable Rangelands Roundtable launched the 2001 meetings by adopting vision and mission statements and guiding principles. Sustainable Rangelands Roundtable participants have committed to two vision statements. The first focuses upon the future of rangelands: "We envision a future in which U.S. rangelands provide a desired mix of economic, ecological and social benefits to current and future generations." The second statement regarding the work of the Roundtable asserts, "We envision a future with widely accepted criteria and indicators for monitoring and assessing the economic, social, and ecological sustainability of rangelands."

The mission statement reads, "The Roundtable will identify indicators of sustainability, based upon social, economic, and ecological factors, to provide a frame-



Ken Nelson, Stan Hamilton, Tom Roberts, and Keith Kuhlman (left to right) engage in debate concerning indicators for the "Legal, institutional and economic framework for rangeland conservation and sustainable management" criterion group.

work for national assessments of rangelands and rangeland use." Practices and standards that roundtable participants will follow are elaborated in the Sustainable Rangelands Roundtable guiding principles (Table 1).

The criteria and indicators developed by the Sustainable Rangelands Roundtable will provide a common, comprehensive framework for monitoring and assessing progress toward sustainable rangeland management. Potential ways in which monitoring sustainability indicators could improve efficiencies of federal and state land management agencies and other organizations interested in rangelands include:

- Target monitoring efforts to areas indicators identify as important.
- Provide for the development of common data collection techniques.
- Focus research by agencies, universities, and organizations on developing methodologies and protocols to measure indicators.
- Facilitate establishment of national workload and funding priorities to at-risk areas.
- Justify new funding appropriations or shifts in funding within agencies and departments.

A broadly accepted set of indicators would improve accountability for rangeland stakeholders and Congress. It would set the stage for:

- Multi-level, coordinated data reporting.
- Assessing compliance with applicable laws.
- Improving a general understanding of rangelands sustainability.

The Sustainable Rangelands Roundtable process enhances the quality of debate possible on rangeland management issues.

A set of effectively communicated criteria and indicators can potentially help educate the public about current rangeland conditions, as well as portray causal factors integral to improving and maintaining this resource. In fact, it may be possible to report on the long-term importance of rangelands to our Nation with the level of detail and consistency that has been achieved with economic indicators such as the aforementioned gross domestic product.

Table 1. Seven Guiding Principles of the Sustainable Rangelands Roundtable.

1. Collectively, indicators should guide monitoring efforts to measure rangeland sustainability in the United States at the national scale. Where possible, indicators should guide monitoring efforts to measure rangeland sustainability at multiple scales.
2. Ensure that the indicators employ the appropriate temporal and spatial scales for assessing the criteria.
3. Collectively, criteria and indicators will address social, ecological, and economic aspects of sustainability.
4. Use a criteria and indicator framework as a common language and operational framework for defining and assessing sustainability. Begin by considering the criteria and indicator framework of the SFR.
5. Review and consider, as appropriate, other indicator initiatives.
6. There are numerous policy questions related to rangelands. We will focus on the vision-mission agreed to by the Sustainable Rangelands Roundtable.
7. The Roundtable process will feature outreach to stakeholders, open dialogue, and respect for differing opinions.
8. The Sustainable Rangelands Roundtable will be supportive of and compatible with improved on-the-ground management of rangelands.

The Roundtable Process.

The collaborative spirit established through crafting common vision and mission statements has pervaded interactions among Sustainable Rangelands Roundtable participants during and between meetings. The Sustainable Rangelands Roundtable focuses its efforts through a series of working meetings, enhanced by formal and informal interaction between meetings, using action-oriented working groups and subject-oriented criterion groups. Participants spend meeting time developing, reviewing, and revising criteria and indicators within the five criterion groups (Table 2).

- Questions of spatial and temporal scale.
- Definitions.

The Sustainable Rangelands Roundtable success depends heavily on the time and effort of the participants. In addition to the 4 or 5 two-day meetings per year, participants also contribute time and effort between meetings through the Collaborative Delphi, a survey and response process, as well as through tasks assigned by working groups and criterion groups. The Sustainable Rangelands Roundtable makes an effort to expand participation and add fresh perspectives to their common understanding of rangeland sustainability by inviting representatives from local groups to each meeting.

Local interests, associations, and agencies currently represented in the Sustainable Rangelands Roundtable include: the United States Department of Agriculture – Forest Service, Natural Resources Conservation Service, Economic Research Service and Agricultural Research Service; United States Department of the Interior – Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish & Wildlife Service, National Park Service, U.S. Geological Survey; Oak Ridge National Laboratory, Pacific Northwest National Laboratory, the Western States Land Commissioners Association; sixteen universities, and eighteen local, state and national organizations. The latter range from professional groups such as Society for Range Management, Society for Conservation Biology, and Ecological Society of America, to producer groups such as the National Cattlemen’s Beef Association, and conservation groups including the National Wildlife Federation and the Idaho Conservation League.

The SRR recognizes that involvement of a wide variety of rangeland stakeholders will generate a more effective, broadly applicable set of indicators, as well as improve acceptance and implementation of criteria and indicators. Sustainable Rangelands Roundtable remains an

Table 2. Five criteria of the Sustainable Rangelands Roundtable.

1. Maintenance of Productive Capacity on Rangeland Ecosystems
2. Maintenance of Ecological Health and Diversity of Rangelands
3. Conservation and Maintenance of Soil and Water Resources of Rangelands
4. Maintenance and Enhancement of Multiple Economic and Social Benefits to Current and Future Generations
5. Legal, Institutional, and Economic Framework for Rangeland Conservation and Sustainable Management

As criterion groups continue to refine indicators, they review indicators across criterion groups to minimize gaps and overlaps. SRR criterion groups also meet with other roundtable criterion groups to share information and strive for consistency within the three roundtables.

As progress on developing criteria and indicators for sustainable rangelands moves forward, special projects and problems arise. To address these items, the Sustainable Rangelands Roundtable forms small working groups to perform specific tasks on behalf of the Sustainable Rangelands Roundtable, or to offer recommendations on how Sustainable Rangelands Roundtable should resolve emerging issues. Four such working groups now exist (Table 3), dealing with:

- Outreach efforts.
- Coordination with other indicator initiatives.

Table 3. Tasks of the Four Sustainable Rangelands Roundtable Working Groups

Working Group	Tasks
Outreach Working Group	<ul style="list-style-type: none"> • Involve additional organizations. • Develop effective outreach materials. • Coordinate with outreach efforts of other roundtables. • Maintain Sustainable Rangelands Roundtable momentum.
Scale Working Group	<ul style="list-style-type: none"> • Identify an interpretation of appropriate spatial and temporal scales. • Examine complex relationships among national, regional, and local scales to determine whether spatial aggregation is suitable and/or useful for application of indicators. • Investigate situations where indicators or their interpretation might change as scale changes and instances when the metric (measure) varies among levels of scale.
Coordination Working Group	<ul style="list-style-type: none"> • Avoid duplication of effort and indicator redundancy. • Enhance information sharing and cooperation with the three other roundtables, RSF, the Sustainable Minerals and Energy Roundtable (SMR), and the Sustainable Water Resources Roundtable (SWRR) as well as other indicator efforts.
Definitions Working Group	<ul style="list-style-type: none"> • Address the political issues involved in delineating rangeland and forestland to ensure that all vegetation communities are included in criteria and indicators efforts of the roundtables.



Facilitator Lou Romero (right) discusses sustainability processes with Phil Janik, Chief Operating Officer for the USDA-Forest Service.

open process, welcoming all individuals interested in promoting the sustainable use of our Nation's rangelands.

Timeline & Products

Sustainable Rangelands Roundtable has adhered to a schedule designed to produce an initial report about criteria and indicators for sustainable rangeland management by 2003. This document should complement a comprehensive national report, being prepared by the Forest Service, on the state of the Nation's forests. The Sustainable Rangelands Roundtable held four meetings in 2001, will have five meetings in 2002, and three sessions in 2003.

Achievement of broad acceptance and adoption of Sustainable Rangelands Roundtable criteria and indicators will require external reviews and feedback from a broad spectrum of scientists, policy makers, and interest groups. The first of these reviews occurred at the 55th SRM Annual Meeting in Kansas City, where Sustainable Rangelands Roundtable presented a symposium and distributed proceedings to inform rangeland professionals about ongoing efforts and future plans.



"Ecological health and diversity on rangelands" criterion group evaluates their list of indicators.

A similar workshop was held in August 2002 at the Ecological Society of America annual meeting in Tucson, Arizona. The second symposium targeted a narrower audience, and was designed to provide an opportunity for participating ecologists to review the ecologically-related criteria and indicators and give feedback. These focused critiques will contribute to the formal 2003 report.

Collaboration between the Sustainable Rangelands Roundtable and other groups working on indicator sets, including:

- Roundtable for Sustainable Forests
- Sustainable Minerals and Energy Roundtable,
- Heinz Working Group on grasslands/shrublands,
- The Nature Conservancy,
- EPA, and
- The President's Council on Sustainable Development

will serve to facilitate progress toward creation of a robust, useable, commonly accepted and shared set of indicators for assessing how well people, in the United States, collectively promote good stewardship and management of all their lands.

We presume that the Sustainable Rangelands Roundtable will be successful in creating a suite of criteria and indicators that will be acceptable to a broad range of agencies and organizations. However, land management agencies still will require adequate resources to support long-term monitoring programs needed to assess these indicators. Public involvement and awareness of rangeland sustainability issues will also be essential to bring about requisite changes. As Phil Janik, co-chair of the Roundtable on Sustainable Forestry, has said, "Sustainability is not a destination, but a journey; no deadlines are set, but work progresses towards a goal over time."

For additional information, see the Sustainable Rangelands Roundtable web page

<http://www.cnr.colostate.edu/RES/srr/index.html>,

or contact Tom Bartlett at 970-491-7256, et@cnr.colostate.edu or Helen Rowe at 970-491-3908, jvy@cnr.colostate.edu.

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