



Sustainable Rangelands Roundtable

Introduction

Toward the end of the twentieth century, public concern about natural resource degradation began to increase. Governments consequently adopted sustainable development as an appropriate analysis paradigm. For this reason, a group of stakeholders, including representatives from conservation groups, the livestock industry, local, state and federal government, and university partners, has committed to the task of identifying a common set of factors for assessing rangeland sustainability. This open, inclusive partnership, known as the Sustainable Rangelands Roundtable (SRR), is conducting a series of meetings to distinguish a set of criteria and indicators embodying social, economic, and ecological factors that will form a framework for multi-scale assessments of rangelands and rangeland use.

Benefits of Criteria & Indicators for Rangelands

The criteria and indicators will describe individual elements to be monitored to determine trends in resource condition, management, economic benefits and social values derived from rangelands. Efficiencies that land management agencies and stakeholders may derive from this process include:

- ❖ Directing monitoring efforts to areas identified by indicators as being important.
 - ❖ Providing for development of common data collection techniques.
 - ❖ Focusing research by agencies, universities, and organizations on developing methods to measure criteria and indicators.
 - ❖ Facilitating agency performance planning and shifting funding priorities to at-risk areas.
- ❖ Providing opportunities to better evaluate and improve rangeland management to meet social, economic, and ecological goals.

A broadly accepted set of indicators will improve accountability for rangelands stakeholders and Congress, through activities such as: multi-level, coordinated data reporting; assessing compliance with applicable laws; and expanding general understanding of rangelands sustainability. While interpretation or conclusions derived from criteria and indicators may be contentious, the inclusive, open nature of the roundtable process will ensure that the criteria and indicators provide common ground for discussion. Effective communication and implementation of criteria and indicators will enhance the quality of debate about rangeland management issues.



Rangeland ecosystems cover 40 percent of the U.S. and 43 percent of this acreage is managed by federal government agencies; photo courtesy National Cattlemen's Beef Association.

Sustainable Development

The phrase “sustainable development” was introduced in the 1980’s as a modification of the term “economic development.” According to the Brundtland Commission, sustainable development “... meets the needs of the present without compromising the ability of the future generations to meet their own needs.”

World leaders at the 1992 Earth Summit endorsed the Rio Declaration and principles of sustainable forest management. Two years later, a special working group developed seven criteria and 67 indicators to assess sustainable management of temperate and boreal forests. In 1995, the United States formally endorsed these criteria and indicators.

Three years later, the USDA Forest Service initiated the Roundtable on Sustainable Forests, which also identified the need to assess U.S. rangeland sustainability. Within a year, the Forest Service sponsored a stakeholders meeting to consider a roundtable for sustainable rangeland management. As a result, the Sustainable Rangelands Roundtable was established in April 2001.



Rangelands provide critical habitat for many wildlife species. SRR criteria and indicators will track population levels and geographic ranges for representative rangeland species, such as bison and elk.



SRR Participating Organizations

Agricultural Research Service
American Farm Bureau
Arizona State University
Boulder County Parks & Open Space
Bradley University
Bureau of Indian Affairs
Bureau of Land Management
Chippewa Cree Tribe
Colorado State University
Confederated Tribes of Warm Springs
Eastern Oregon Agricultural Research Center
Ecological Society of America
Economic Research Service
Environmental Protection Agency
Forest Service
Gray Ranch and Malpai Borderlands Group
Hopi Tribe
Idaho Conservation League
Invasive Species Advisory Committee
The H. John Heinz III Center
Lady Bird Johnson Wildflower Center
Montana State University
National Association of State Foresters
National Cattlemen’s Beef Association
National Park Service
National Wildlife Federation
Natural Resources Conservation Service
New Mexico State University
Oak Ridge National Laboratory
Oklahoma State University
Pacific Northwest National Laboratory
Public Lands Council
The Quivira Coalition
San Antonio Water System
Society for Range Management
South Dakota State University
Texas A&M University
The Nature Conservancy
University of Arizona
University of California
University of Colorado
University of Idaho
University of Nevada, Reno
US Department of Agriculture
US Department of the Interior
US Fish and Wildlife Service
US Geological Survey
Utah State University
Washington State University
Western State Land Commissioner’s Association
World Wildlife Fund
Wyoming State Grazing Board

SRR Vision

We envision a future in which U.S. rangelands provide a desired mix of social, economic, and ecological benefits to current and future generations.

Criteria & Indicators for Sustainable Rangelands – A Work in Progress

Criterion 1: Maintenance of Productive Capacity on Rangeland Ecosystems

Rangelands have the capacity to provide the current generation with a wide variety of goods and services as desired by society at a given time. Maintenance of productive capacity implies that future generations also will be able to obtain their desired mix of market and non-market goods from rangelands. It is important to note that productive capacity includes more than forage-based products, such as livestock, and must include non-consumptive goods and services, such as wildlife habitat and open space. Seven indicators have been identified to quantify total acreage, livestock, wildlife, invasive plants, non-forage products, and biomass production.

Criterion 2: Maintenance of Ecological Health and Diversity of Rangelands

Ecological health and diversity are characteristics of natural systems that science has identified, and the general public has accepted, as important indicators of rangeland sustainability. As such, there is a need to develop a set of standardized assessment and monitoring methods and protocols to measure the health and diversity of U.S. rangelands. Twelve indicators have been drafted to capture aspects of ecological health and diversity ranging from broad-based assessment of the location and amount of rangeland in the U.S. to detailed assessments of rangeland structure and processes.

Criterion 3: Conservation and Maintenance of Soil and Water Resources of Rangelands

The identification and quantification of rangeland indicators related to soil and water will approximate the status of sustainability of rangelands and associated human communities. Thirteen indicators—seven soil-based and six water-based—have been identified. Soil erosion by water and wind, soil organic matter, soil compaction, soil aggregate stability, bare ground, and soil food web structure are addressed by soil-based indicators. Biodiversity of aquatic organisms, water quality, stream channel geometry, wetland geographic extent, and duration of flow in intermittent streams are considered in the water-based indicators.

Criterion 4: Maintenance and Enhancement of Multiple Economic and Social Benefits to Current and Future Generations

The ability of rangelands to produce goods and services desired by society is assessed in socioeconomic terms, however, few range-specific measures of social and economic attributes exist. The importance of monitoring the social component of

sustainability becomes more obvious as difficulties faced by rangeland managers are publicized. Socio-economic indicators provide a measure of societal values reflecting allocation of scarce economic resources. Fifty-eight indicators have been developed across six categories, focusing on demographic change in rangeland dependent areas, community well-being, structure of economic activity, structure of government and social services, character of local social networks, and use/production related issues. These issues must encompass both traditional forage-based uses and non-traditional, non-consumptive uses, such as recreation.



Diverse rangelands provide increasingly popular opportunities for outdoor recreation; photo courtesy National Park Service.

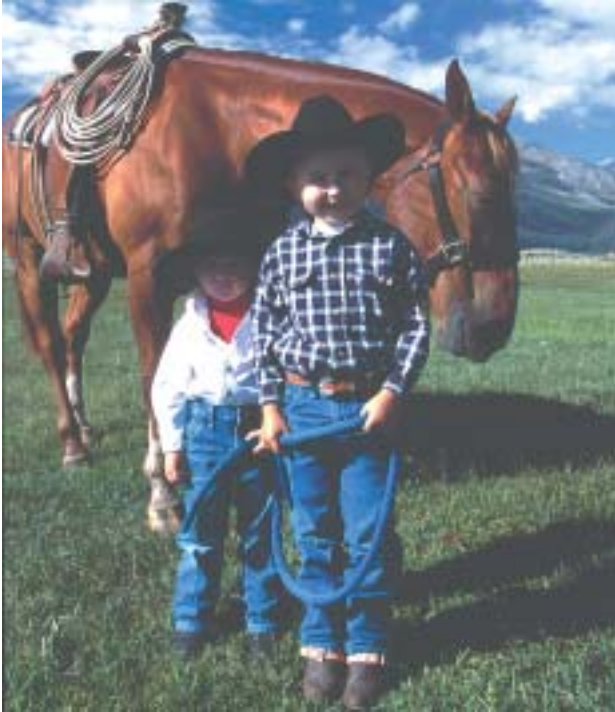
Criterion 5: Legal, Institutional, and Economic Framework for Rangeland Conservation and Sustainable Management

Indicators within the legal-economic-institutional framework criterion define the extent to which U.S. laws, regulations, guidelines, and policy frameworks support conservation and sustainable management of rangelands. Economic indicators complement social measures by assessing changes resulting from adjustments in social, ecological, legal, and political systems. Within this criterion, issues of equity, economic efficacy, cultural traditions, legal rights and obligations, advancing management theories and skills greatly influence the long-term sustainability of our Nation's rangelands. This criterion is divided into five sub-criteria with a total of 20 indicators, focusing on the legal, institutional and economic framework to support conservation and sustainable management, as well as the capacity to measure and monitor changes on rangelands and to conduct and apply research and development to management.

SRR Mission

The Roundtable will identify indicators of sustainability, based on social, economic, and ecological factors, to provide a framework for national assessments of rangelands and rangeland use.

Future SRR Plans and Milestones



The SRR will contribute toward a future in which U.S. rangelands meet the needs of the current generation without compromising the ability of future generations to meet their needs; photo courtesy National Cattlemen's Beef Association.

SRR activities are charted firmly into 2003 and may continue well into the future. The SRR has committed to prepare a first approximation report in 2003. Material from this document is expected to contribute significantly to a 2003 Federal Government land status report. SRR's 2003 report will be a milestone in our ability to monitor and report upon the state of our Nation's rangelands. The SRR and its work will enhance inter-agency cooperation for years to come.

Congress has directed the Secretaries of Agriculture and Interior to jointly charter an interagency group, coordinated with professional societies, NGOs, and industry groups, to address rangeland assessment and monitoring at both local and national scales. Undersecretary of Agriculture for Natural Resources and Environment Mark Rey has asserted that having all agencies within these departments conducting work in a similar manner across multiple rangeland jurisdictions will move our nation ahead in understanding the state of our Nation's rangeland resources. Application of SRR criteria and indicators should accelerate agreement on elements and

methods of evaluation. The indicators are collaboratively formulated by academicians, ranchers and producers, environmentalists, and government land management agency staff.

While the magnitude of the SRR's domestic success depends upon land management agencies ability to fund and staff long-term monitoring programs that adequately quantify the criteria and indicators, SRR initiatives in rangeland sustainability position the U.S. at the forefront of innovation in the international arena. SRR conveners plan to share their experiences and expand their effort by engaging rangeland management professionals from around the world in an information exchange session at the 7th International Rangeland Congress, to be held August 2003 in Durban, South Africa. Dialogue will review the value of national rangelands sustainability projects and explore potential utility of similar efforts on an international scale.

The ongoing, evolutionary nature of the SRR has been captured by Phil Janik, recently retired co-chair of the Roundtable on Sustainable Forests. Janik stated "Sustainability is not a destination, but a journey; no deadlines are set, but work steadily progresses towards a goal over time."

Upcoming SRR Meetings and Workshops

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| Jul 18-19 | <i>Stakeholder Comment Session at NCBA Summer Meeting - Reno, Nevada</i> |
| Jul 30-31 | <i>SRR General Meeting - Billings, Montana</i> |
| Aug 7 | <i>SRR Workshop at Ecological Society of America Meeting - Tucson, Arizona</i> |
| Oct 29-30 | <i>SRR General Meeting - San Diego, California</i> |
| Jan 2003 | <i>SRR General Meeting - Fort Myers, Florida</i> |
| Feb 2003 | <i>SRR Workshop at Society for Range Management Meeting - Casper, Wyoming</i> |

For additional information, please visit <http://www.cnr.colostate.edu/RES/SRR>