



Sustainable Rangelands Roundtable

*Social, Ecological, and Economic
Indicators for Ranch Assessment*

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Sustainable Rangelands Roundtable

- Is a collaborative partnership process with a 10 year history
- Over 100 participants from more than 50 organizations including rangeland scientists, land managers, ecologists, economists, sociologists, environmental advocates, federal and state agency representatives, producer groups and producers



Sustainable Rangelands Roundtable

Mission Statement: The Sustainable Rangelands Roundtable promotes social, economic, and environmental sustainability of rangelands through the development and widespread use of criteria & indicators for rangeland assessments, and by providing a forum for dialogue on the sustainability of rangelands.

Areas of Emphasis for SRR

- **Advocacy & Promotion:** Advocate and Promote Rangelands Sustainability Paradigms and Practices for Assessment and Management
- **Integrated Rangeland Assessment:** Facilitate development of a multi-agency integrated assessment of status and trends of ecological, social and economic rangeland sustainability measures to track maintenance of rangeland ecosystem services
- **Integrated Rangeland Research:** Promote Integrated Ecological, Economic, and Social Rangeland Sustainability Research
- **Communication & Coordination:** Communicate & coordinate efforts to further rangeland conservation and sustainability assessment



The Task

- Identify a suite of social, ecological and economic indicators to accurately assess rangeland sustainability at multiple scales
- Ensure that all participant perspectives were considered throughout the process

Rangeland Sustainability

- Integrates social and economic aspects of human well-being with ecosystem integrity, and environmental limits and capacities.
- Reflects shifting social values and economic development geared toward resource conservation.





Sustainability Suggests

- Both current and future generations can obtain their desired mix of goods and services from rangelands.
- Ecological, social, and economic elements of rangeland management decisions will be considered with equal importance.
- The mix of goods and services desired by society from rangelands is varied and ever-changing.



Threats to Natural Resource Sustainability

Critical issues impacting natural resources including rangelands are:

- Fragmentation
- Invasive species
- Loss of open space
- Fire

Sustainable Rangeland Roundtable Timeline

- 2001 - SRR began
- 2003 - First Approximation Report on Criteria and Indicators for Sustainable Rangelands released
- 2005 – Noble Foundation Implementation Workshop
- 2006 – Rangeland Ecosystem Services Workshop
- 2007 – Ranch Sustainability Assessment Effort Began
- 2008 – Oregon Multi-Agency Pilot Project (MAPP) and Rangeland Ecosystem Services Booklet Completed
- 2009 – Conceptual Model published in the *Journal of Society & Natural Resources*

SRR Criteria and Indicators



Encompass social values, economic benefits, and ecological factors

- ❖ **Criteria** - statements about conditions or processes that are goals of sustainability
- ❖ **Indicators** - measure human well-being, the economy, and rangeland resource conditions



SRR Criteria

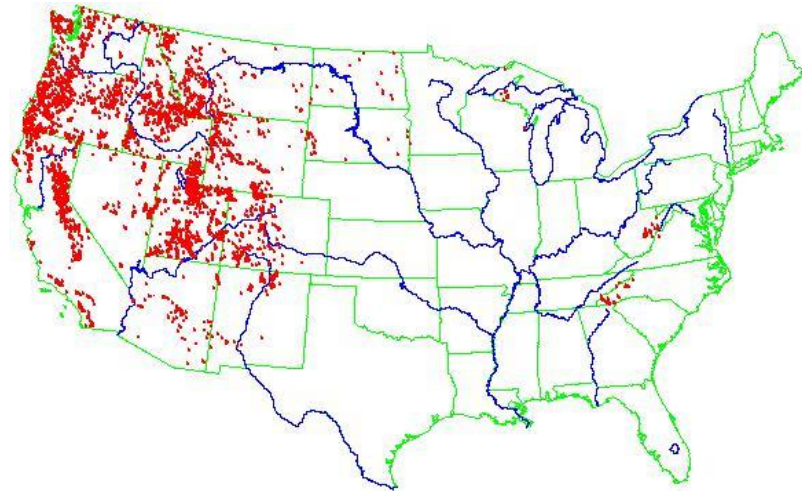
- Conservation and Maintenance of Soil and Water Resources
- Conservation and Maintenance of Plant and Animal Resources
- Maintenance of Productive Capacity
- Maintenance and Enhancement of Multiple Economic & Social Benefits to Current & Future Generations
- Legal, Institutional, and Economic Framework for Rangeland Conservation and Sustainable Management

Soil and Water - Indicator 4

- Area and % of rangeland with significant change in extent of bare ground
 - Methods and procedures are not standardized
 - Lack adequate sampling designs for regional to national aggregation
 - Bare ground can be measured using existing remote sensing data bases but inaccuracies are likely
 - Experimenting with hyperspectral data

Plants and Animals - Indicator 17

- Extent and condition of riparian systems



USDI-BLM, in cooperation with Utah State University, maintains an aquatic invertebrate database of 20,000 samples collected at more than 7,000 sites. EPA also has a national water quality database, STORET, that may be publicly accessed.

Productivity Capacity - Indicator 24

- Number of domestic livestock on rangeland

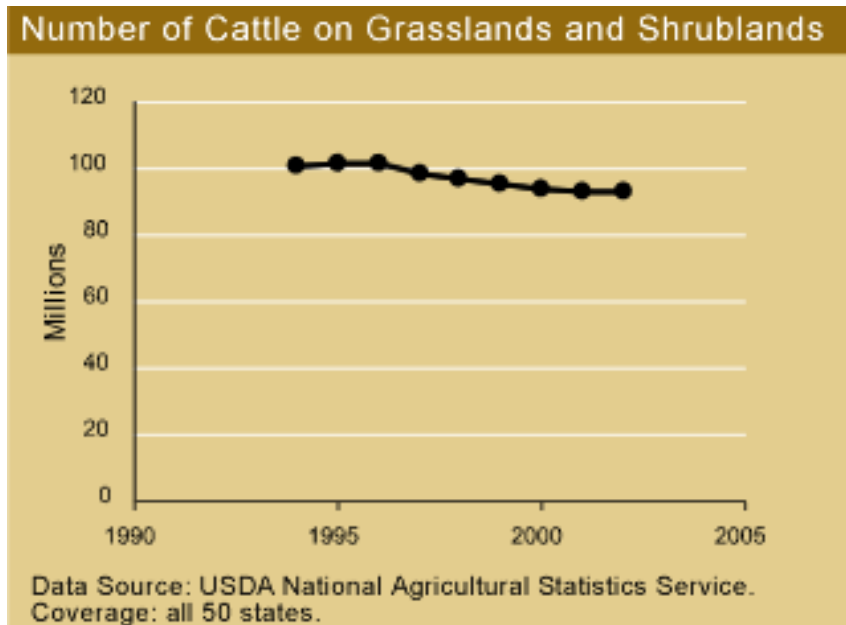


Figure on left is from *The State of the Nation's Ecosystems*, updated in 2003 by The H. John Heinz Center for Science, Economics and the Environment, <http://www.heinzctr.org/ecosystems/grass/cattle.shtml>.

Social and Economic - Indicator 27

- The value of forage harvested from rangeland by livestock



Private land grazing fees showing nominal fees and those adjusted for inflation using the index for prices paid for feed from the NASS report (1990-1992=100).

Program

- Goals and Objectives of Ranch Sustainability Assessment
- Ranch Assessment in an Agency Context
 - NRCS
 - FS
 - BLM
- Ranch Assessment Ecological Indicators
- Ranch Assessment Socio-economic Indicators
- Assessing Rangeland Goods and Services
- Ranch Business Planning
- Questions and Discussion

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