

Status of Institutional Criteria and Indicators

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Abstract

The mission of the Sustainable Rangelands Roundtable is to identify indicators of sustainability based on social, economic, and ecological factors, to provide a framework for national assessments of rangelands and rangeland use. In order to identify such indicators, the SRR has chosen five larger categories called criteria, which encompass soil and water; social and economic factors; capacity of systems; health and diversity; and legal-economic-institutional framework. Indicators within the legal-economic-institutional framework criteria seek to define the extent to which the U.S. legal (laws, regulations, guidelines), institutional, and economic framework supports the conservation and sustainable management of rangelands. This paper will describe progress and challenges for this particular aspect of the Sustainable Rangelands Roundtable.

Introduction

The criterion on the legal, institutional, and economic framework assesses how the overall policy framework of the United States does or does not facilitate the long-term conservation and sustainability of rangelands. Issues about the legal, institutional, and economic framework for sustainable rangeland management complement those of a bio-physical nature. Within this criterion, matters of fairness and equity, economic efficacy, cultural traditions, legal rights and obligations, advancing management theories and skills, and overall national interests greatly influence the long term sustainability of our Nation's rangelands.

Indicators

The criterion on the legal, institutional, and economic framework asks whether mechanisms are in place to support conservation of rangelands, and does so by breaking the criterion into five (5) subparts with a total of twenty (20) separate indicators (Table 1). Participants in the Framework Group realized that the implementation of on the ground management alterations designed to promote the sustainability of rangelands would depend on whether there were institutions that encouraged management alterations, and whether rangeland managers had the training and resources to understand the need for appropriate management, and the tools to assess the effectiveness of varying management.

For example, the willingness of the private owner of rangelands to take action that would rest rangelands from livestock grazing for a period of time might well depend on the state and national tax policy which could provide economic incentives for resting the land. For publicly owned rangelands, the

ability to manage them for some commodities that might promote sustainability of certain resources might depend on whether there were public planning processes in which interested citizens could participate, and whether decisions made in those public planning processes were implemented and reliable. Finally, the willingness of users of rangelands to live with changes in management could depend not only on whether they could have their day in court, but also on whether markets existed to allow them to take advantage of changes in management (e.g. if a federal grazing permittee is required to reduce his stocking level, can he make up the income loss by selling access across his private lands to adjacent federal lands for hiking, backpacking, hunting, and fishing).

The criterion subcategories and their indicators were drawn almost verbatim from work done by the Roundtable on Sustainable Forests (RSF).

Challenges and Opportunities

We have discussed the issue of scale as it relates to assessing these sub-criteria. For assessing institutions within the United States, the scale question turns on whether the institutions arise from national, state, or local (or county) governments. For rangelands, all three scales must be assessed in most instances.

The data exist (for the most part) which allow description of the institutions, mechanisms, and capacities in the United States. For example, on the web and in a law library, you can record laws, cases, and regulations governing rangeland management; can inventory mechanisms, which encourage or require planning for rangelands; and can access information on educational and research institutions which train people to use information to manage rangelands.

Table 1. Subgroups and indicators of the criterion on the legal, institutional, and economic framework for rangeland conservation and sustainable management.

Criterion subcategory	Indicator	Purpose
1. Extent to which the legal framework (laws, regulations, guidelines) supports the conservation and sustainable management of ranges, including the extent to which it:	<p><u>Indicator 48:</u> Clarifies property rights, provides for appropriate land tenure arrangements, recognizes customary and traditional rights of indigenous people, and provides means of resolving property disputes by due process.</p> <p><u>Indicator 49:</u> Provides for periodic range-related planning, assessment, and policy review that recognizes the range of rangeland values, including coordination with relevant sectors.</p> <p><u>Indicator 50:</u> Provides opportunities for public participation in public policy and decision making related to rangelands and public access to information.</p> <p><u>Indicator 51:</u> Encourages best management practices for rangeland management.</p> <p><u>Indicator 52:</u> Provides for the management of rangelands to conserve special environmental, cultural, social and/or scientific values.</p>	This sub-criterion is based on the premise that rangelands can only be sustained if there are institutions that support activities which allow for and enhance sustainability.
2. Extent to which the institutional framework supports the conservation and sustainable management of rangelands, including the capacity to:	<p><u>Indicator 53:</u> Provide for public involvement activities and public education, awareness and extension programs, and make available rangeland related information.</p> <p><u>Indicator 54:</u> Undertake and implement periodic rangeland-related planning, assessment, and policy review including cross-sectoral planning and coordination.</p> <p><u>Indicator 55:</u> Develop and maintain human resource skills across relevant disciplines.</p> <p><u>Indicator 56:</u> Develop and maintain efficient physical infrastructure to facilitate the supply of rangeland products and services and support rangeland management.</p> <p><u>Indicator 57:</u> Enforce laws, regulations and guidelines.</p>	The first sub-criterion looks at the mechanisms needed for sustainability, while this describes whether there are resources & opportunities to support those mechanisms.
3. Extent to which the economic framework (economic policies and measures) supports the conservation and sustainable management of ranges through:	<p><u>Indicator 58:</u> Investment and taxation policies and a regulatory environment which recognize the long-term nature of investments and permit the flow of capital in and out of the range sector in response to market signals, non-market economic valuations, and public decisions in order to meet long-term demands for range products and services.</p> <p><u>Indicator 59:</u> Non-discriminatory trade policies for range products.</p>	This sub-criterion looks only at economic policies which might be important to rangeland sustainability.
4. Capacity to measure and monitor changes in the conservation and sustainable management of ranges, including:	<p><u>Indicator 60:</u> Availability and extent of up-to-date data, statistics, and other information important to measuring or describing indicators associated with criteria 1-7.</p> <p><u>Indicator 61:</u> Scope, frequency, and statistical reliability of range inventories, assessments, monitoring, and other relevant information.</p> <p><u>Indicator 62:</u> Compatibility with other countries in measuring, monitoring and reporting on indicators.</p>	This sub-criterion looks at whether data are available to measure and compare the condition of rangelands.
5. Capacity to conduct and apply research and development aimed at improving range management and delivery of range goods and services, including:	<p><u>Indicator 63:</u> Development of scientific understanding of range ecosystem characteristics and functions.</p> <p><u>Indicator 64:</u> Development of methodologies to measure and integrate environmental and social costs and benefits into markets and public policies, and to reflect range related resource depletion or replenishment in national accounting systems.</p> <p><u>Indicator 65:</u> New technologies and the capacity to assess the socioeconomic consequences associated with the introduction of new technologies.</p> <p><u>Indicator 66:</u> Enhancement of ability to predict impacts of human intervention on rangelands.</p> <p><u>Indicator 67:</u> Ability to predict impacts on rangelands of possible climate change.</p>	This forward looking sub-criterion looks at the system's ability to incorporate new information and discoveries.

However, despite the availability of the data, there will be no way to know how that institution is actually affecting rangelands, other than occasional anecdotes. For example, we can list various economic policies affecting the use of rangelands, both public and private, but cannot isolate what actual difference a particular policy may have made in the management of a parcel.

Conclusion and Future Work

The Framework Criterion Group is attempting to assemble a "First Approximation Report" for these twenty indicators as the next step before trying to actually polish (compress) the indicators in this criterion. This report will provide an introduction of the extent of a legal, institutional, and economic

framework for sustainable management, a discussion of the indicators, and a summary that highlights major points and identifies indicator gaps. Indicator discussions will describe them, provide salient background information, including information needs, and interpret their capacity to assess the criterion. The criterion group felt it prudent to go through the exercise of a first approximation report before attempting to edit the indicators. In our first attempts at "first approximation" materials, we discovered the exercise was most valuable in helping understand the kinds of information that the indicator should attempt to assess, as well as the many limits on the ability to do so.