

**Meeting Notes for the Sustainable Rangelands Roundtable (SRR)**  
**Albuquerque, NM – March 19-20, 2003**  
**Facilitated by Lou Romero, DeLaPorte & Associates, Inc.**

**Welcome Remarks** – Tom Bartlett, Roundtable Host/Convener

Thank you for the level of support and participation you have shown by your attendance at this and previous meetings. During this meeting we hope to revise the draft chapters for each criterion in preparation for external review, review the strategic plan, identify future participants, and develop the agenda for the celebration/transition meeting in Jackson Hole, Wyoming in June.

**Participant self-introductions** – led by Lou Romero, Roundtable Facilitator

Welcome to the new participants. New participants introduced themselves, answering the following questions:

- Name, organization, position?
- Familiarity with subject matter?
- Familiarity with Roundtable's Progress

*A list of participants can be found in Appendix A.*

**SRR Overview** – Tom Bartlett (See Appendix B)

**Communication Plan Overview and Discussion** – Lori Hidingler gave an update on the communication plan, which was presented at the last meeting in Florida (See Appendix D Florida meeting notes)

**Values in First Approximation Report** - Tom Bartlett and Lou Romero led a discussion of the use of values in the first approximation report. The use of value judgments is unavoidable in describing the status of data sets related to the criteria. Judgments should not be made on how the assessment of indicators will turn out when data sets are obtained.

**Interpretation among Ecological, Economic, and Institutional Criteria of Sustainability** –

Brian gave a PowerPoint presentation and led a discussion on integration of criteria. This was based on concepts of capacity maintenance of natural capital, based on the relationship of economic growth to ecological integrity with a focus on biodiversity conservation. Brian gave a brief summary of The Wildlife Society technical review #2002-02 on this subject. He emphasized the relevance of integration to the legal and policy environment and to the interpretation of the SRR report.

**Open Space for Airing Individual Topics** – Lou Romero led a session in which individuals could bring forth topics which they thought had been overlooked or ignored in past meeting of SRR. Four topics were identified: rangeland vegetation community inventory, capacities of the three spheres of sustainability, positive and negative indicators of sustainability, and parcelization of rangelands into ranchettes, impacts and management. Only two topics were discussed in more detail.

**Integration of field data, abiotic variables, and satellite imagery in a Geographic Information System (GIS) for inventory and mapping of rangeland vegetation communities.**

Larry Strong's presentation consisted of 3 components: (1) modeling the relative abundance of common grass species using abiotic variables, (2) cluster analysis of the individual species relative abundance maps to create a map of plant communities, and (3) integration of the plant community map with an existing land cover map developed from the analysis of Thematic Mapper imagery. The presentation generated a discussion of how the techniques could be used with NRI data to create maps for rangeland vegetation communities for non-federal and federal lands and the assumptions of such an analysis. Dave Pyke provided information about a new rangeland component of the NRI. Historical grazing regime was identified as a potentially useful but difficult to create biotic variable that might improve the predictive ability of the species relative abundance models. The presentation also generated discussion of the sources of climatic and soil abiotic variables. A suggestion was made to compare the predictions of the species relative abundance models with species composition and abundance in the rangeland databases in county soils surveys.

**Capacities of three spheres of sustainability.** The introductory chapter of SRR report should include a discussion of the spheres of sustainability (i.e. ecological, economic, social and perhaps political). A discussion of spherical capacities and tradeoffs among spheres could be an approach for such a discussion. GOP and GDP per capita are part of data sets under Criterion V. Limits to economic growth might be a topic of discussion for future SRR reports. The group discussing this open space topic could not agree on other recommendations.

**SRR Strategic Plan as edited from Phoenix Meeting** – Tom Bartlett (See Appendix C)

**Delphi 18 Results** – Tom Bartlett presented the information on desired messages for the Washington DC meetings in May. Helen Rowe was unable to attend because of the Colorado snow storm. (See Appendix D).

**Brainstorm for New Participants for Future Work** - SRR developed a list of possible new participants and areas of expertise needed for future work. The staff will invite those identified to the Jackson Hole meeting.

**Updates on Criterion Chapters:**

**Soil and Water Conservation:**

The group had some difficulty integrating comments from internal review as many of the group were not present. The bulk density indicator is open to interpretation and may not be included in the final edit, depending on the external reviews. The group recommends moving the data matrix table to the back of the chapter, but not to the back of the report.

**Plant and Animal Resources:**

The draft chapter is ready for Linda Joyce to make the final edits for external reviews. The group is working on the last two indicators and is confident the chapter will be ready to go on Monday, March 24.

**Productive Capacity:**

Gary Evans and John Mitchell addressed move of the internal reviews prior to the Albuquerque meeting. The group has received recent comments and has revised the chapter. Because all but one of the group members were unable to attend the meeting, the chapter is being sent to the criterion group for a final review. The chapter should be ready for external review by Monday, April 24.

**Social and Economic:**

The group revised their chapter in response to the reviewers' comments, but lacked sociologist input. The group combined two indicators into one and will have the chapter ready for review by the sociologists over the weekend. The group had no preference on the location of the data matrix.

**Legal, Institutional and Economic Framework:**

The group modified the chapter given the reviewers' comments. They ignored some comments and made internal changes. The edited chapter, ready for external review will be sent by Saturday. The data matrices can go at the back of each chapter.

**Chapters on Introduction and Future Direction:**

These chapters are the responsibility of the Steering Committee. Copies were distributed to SRR participants and comments were encouraged. These chapters will be on the website with the others.

**Other Comments on the Report:**

- Complete report will have a standard format, but will not have a modified writing style.
- The chapters, as sent out for external reviews, will be on the website. Helen will notify participants of the URL.
- No names of authors will be on the individual chapters. After discussion, SRR agreed to develop a contributor section following the format used in the Rangeland Health book. Coordinators will be identified by chapter as well as contributing authors.
- An appendix will contain all participants and affiliations.

**Preliminary Draft Agenda for Jackson Hole Meeting, June 3-5, 2003 (Appendix E.)**

## Appendix A: Albuquerque Participants

1. Tom Bartlett, Colorado State University
- ~~1-2~~ Marty Beutler, South Dakota State University
3. Larry Bryant, USDA-Forest Service
- ~~3-4~~ Brian Czech, U.S. Fish and Wildlife Service
- ~~3-5~~ Mark Delfs, USDA-Forest Service
- ~~3-6~~ Cheryl Dyer, Bureau of Land Management
- ~~3-7~~ Bill Fox, Texas A&M University
- ~~3-8~~ Stan Hamilton, National Association of State Foresters (NASF)
- ~~3-9~~ Rod Heitschmidt, USDA-Agricultural Research Service
- ~~3-10~~ Lori Hidinger, Ecological Society of America
- ~~3-11~~ Keith Kuhlman, Western States Land Commissioners
- ~~3-12~~ Dick Loper, Rangeland Consultant
- ~~3-13~~ Kristie Maczko, Colorado State University
- ~~3-14~~ Dan Merkel, retired USDA-SCS
- ~~3-15~~ John Mitchell, USDA Forest Service, Rocky Mountain Research Station
- ~~3-16~~ Ken Nelson, USDA-Economic Research Service
- ~~3-17~~ David Pyke, USGS
- ~~3-18~~ Neil Rimbey, University of Idaho
- ~~3-19~~ Lou Romero, DeLaPorte and Associates
- ~~3-20~~ Ronald Shafer, EPA
- ~~3-21~~ John Spence, National Park Service
- ~~3-22~~ Dave Stewart, USDA-Forest Service
- ~~3-23~~ Lawrence Strong, Northern Prairie Wildlife Research Center
- ~~3-24~~ John Tanaka, Eastern Oregon Agricultural Research Center
- ~~3-25~~ Allen Torell, New Mexico State University
26. Paul Tueller, University of Nevada
- ~~26-27~~ Gary Wood, Bureau of Land Management

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## **Appendix B**

### **SRR Overview - Tom Bartlett**

The purpose of the Sustainable Rangelands Roundtable (SRR) is to identify indicators for sustainable rangelands. These C&I should provide a common framework for monitoring and assessing progress towards sustainable rangeland management, expand the understanding of rangeland sustainability, and enhance the quality of debate about rangeland management issues. We hope that the C&I will improve the coordination, efficiency and quality of monitoring and data collection on our nation's rangelands. SRR gains from links with other indicator efforts, such as the Heinz Report, Roundtable on Sustainable Forests, Sustainable Minerals Roundtable, and others. The process values and respects all opinions and contributions of members and is intended to be open, positive, future focused, and dynamic.

We held a planning meeting in Phoenix December 17-18 with steering committee and at least one representative from each group. We had a productive meeting in which we created a new strategic plan and modified our vision and mission statements (See Appendix C).

The SRR has held four meetings in 2001, five in 2002, and has three planned for 2003. We have over 100 members from Federal state and local agencies, representatives from 16 universities, non-governmental groups & organizations. In addition to our broad membership, the SRR has worked hard to get outside feedback on our work through symposia (SRM annual meeting, 2002) and workshops (ESA 2002, Society for Natural Resources International meeting 2002; SRM annual meeting 2003). The SRR will publish a report on Criteria and Indicators for US Sustainable Rangelands in May 2003.

#### Time line:

- March 24 – Revised chapters completed. Submit to external reviewers.
- April 11 – Receive external reviews and incorporate changes
- May 2, 2003 – Deadline for final chapters
- May 5-9 – Create Executive Summary (Briefing Document) and prepare report
- May 19-23 – SRR in Washington, DC
- December – submit chapters to journal and complete technical edits

**Appendix C: Draft Strategic Plan  
Sustainable Rangelands Roundtable  
“A Strategic Course for the Future”**

The quality of life we enjoy in this country depends in part upon our Nation’s rangelands (grasslands, shrublands, deserts, tundra and alpine meadows). However, most Americans are not aware of the contributions that these lands (which make up one third of the country) make to our every day lives. Reliable sources of clean water, habitat for wildlife, forage for livestock, minerals and energy, a wide variety of recreational opportunities, and areas for solitude and spiritual interaction are some of the goods and resource values derived from rangelands. Growing demands for these goods and values services have led to a need to better understand the relationships among environmental, social, and economic factors related to sustaining rangelands. Key to this understanding is being able to measure the components of these factors.

Accordingly, of the Sustainable Rangelands Roundtable (SRR), a group of resource professionals, government policy makers, academics, researchers, conservation and environmental groups, and industry representatives met in Denver in April 2001. Participants at that meeting provided strong support for begin the work to develop a set of measures of the environmental, economic and social components of rangeland sustainability (called criteria and indicators (C&I)) that would apply to all U.S. rangelands.

Since that time, ten meetings have been held in a variety of locations across the country. The meetings have been open to anyone that wished to contribute or just become aware of the ongoing effort. During this two-year period, the participants have successfully developed the criteria and indicators and will complete the SRR First Approximation Report in May 2003.

In December 2002, SRR leaders met to review the original mission and vision of the SRR and to map operational plans for the future. This group decided that while the C&I had been identified and adequately described, they were still not yet *widely accepted* as specified in our vision statement. In fact, the group felt that the C&I not only needed broad acceptance, but also needed to be *widely used*. As a result, he group developed strategic goals, objectives and action plans necessary to facilitate acceptance and use of the C&I. This strategic plan provides a bold course for the SRR to achieve its mission.

**I. Mission**

The SRR will promote social, ecological, and economic sustainability of rangelands through the development and widespread use of the criteria and indicators for rangeland assessments, and by providing a forum for dialogue on sustainability of rangelands.

**II. Vision**

We envision a future in which:

- Rangelands in the U.S. provide a desired mix of economic, ecological, and social benefits to current and future generations.
- Criteria and indicators for monitoring and assessing the economic, social, and ecological sustainability of rangelands are widely accepted and used.

### III. Guiding Principles:

1. Collectively, indicators should guide monitoring efforts to measure rangeland sustainability in the U.S. at the national scale. Where possible, indicators should guide monitoring efforts to measure rangeland sustainability at multiple scales.

2. Ensure that indicators employ the appropriate temporal and spatial scales for assessing 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 RSF.

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 SRR.

7. The Roundtable process will feature outreach to stakeholders, open dialogue, and respect for differing opinions.

8. The SRR will be supportive of and compatible with improve on-the-ground management of rangelands.

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### IV. Strategic Goals -- Key Objectives/Commitments -- Tactical Actions

SRR's primary goal continues to be criteria and indicator development and refinement. Additionally, the SRR will expand efforts to identify data sets and data needs for indicators. However, for the work of the SRR to make an impact on decisions relating to the Nation's rangelands and to insure that rangeland systems are sustained, the leadership has identified the following additional goals, objectives and actions.

#### Coordination Goal – The SRR will:

Within the next year, participate in the establishment of institutional arrangements among key organizations supporting C&I efforts to develop a national strategy for C&I/Assessment programs that integrates across (does not mean combine) environmental and natural resource systems and that defines the role of SRR and other efforts within the next year;

Initiate a review of the data acquisition and assessment efforts of various organizations addressing rangeland C&I to be completed within 2 years; and

Continue to provide a forum for dialogue among stakeholders addressing criteria, indicators and assessment of rangeland sustainability at different scales for the next 3 years.

**Objective 1.** Obtain commitment from Federal government agencies to establish formal agreements with SRR and sponsoring entities to describe their roles and responsibilities, within 6 months, which includes implementation of periodic reporting for interpretation and assessment of rangeland sustainability.

**Tactics** - Discuss the institutional arrangements with other roundtables at next roundtable network meeting or conference call.

- Develop and promote assessment capabilities among a wide range of users.

**Objective 2.** Convene a workshop of scientists and organizations collecting rangeland and rangeland related data to identify available data sets, data sources, data gaps, data incompatibilities, and data quality in order to build future SRR efforts.

**Tactic** - Obtain commitment from agencies in next 6 months, in principal, to support and sponsor some costs of the workshop. Consider a symposium with registration.

**Objective 3.** SRR will communicate with ongoing local and regional C&I/assessment efforts to initiate in a local and regional stakeholder dialogue to gauge acceptance and use of national-level C&I, and relationships to on-the-ground management assessments.

**Tactics** - Initiate one pilot by early 2004. A pilot project could be contracted by a sponsor(s)/agency(ies) instead of initiated by SRR.

- Identify stakeholders doing their own thing plus those organizations not yet involved.
- Use SRR report to reach out to stakeholders.
- Initiate a cooperative program with agencies developing local, management-unit C&I to better understand how the C&I are interrelated across multiple scales.
- Use empirical data to facilitate dialogue on rangeland sustainability.
- Allow any pilot to continue over a two-year period.
- Consider scope involving scale, natural resources and other to be defined.

**B. Outreach Goal** – The SRR will conduct bold and aggressive outreach and marketing initiatives, resulting in the recognition of the importance of sustainable rangelands and the wide acceptance and use of SRR ecological, economic, and social C&I for rangeland sustainability. By June 2005, SRR will be recognized as the source of sustainable rangeland information. Outreach and marketing success will be evidenced by: (1) increases in the number of publications involving SRR C&I and associated applications; (2) education entities recognition of values of SRR C&I and incorporation of C&I into their curricula; (3) government agencies, environmental organizations, industry, and researchers use of C&I to assess rangelands and associated human communities; and (4) existence of a constituency that actively champions SRR C&I within agencies

**Objective 1.** The Outreach Working Group and Steering Committee will finalize the communications plan by March 2003.

**Tactics** - Communications Plan outline was completed on 19 Dec 2002.

- It identifies the different constituencies and stakeholders, and prioritizes efforts.
- Draft Communications Plan will be sent to Outreach working group for feedback.
- Finalize Communications Plan.

**Objective 2.** Implement Communications Plan

**Tactics** - Identify budget needs by month and activities for 2003 to implement Communications Plan.

- Implement Communications Plan timeline in 2003 by assigning appropriate members to tasks.

**Objective 3.** Develop suite of materials for different constituencies and stakeholders by 2004.

**Tactics**- Promote greater utilization of government and public educational institution communication capacities for educating the public on SRR C&I instruments.

- Characterize groups by mission/vision and personal contacts by March 2003.
- Identify relationship between each group and SRR mission/vision by March 2003.
- Identify best method to reach each group and SRR contact by March 2003.



- Draft and finalize materials and presentations by May 2003 and revise over 2003.
- Polish and develop the summary of the 2003 report into four pages. Needs to be professional and succinct. Hire writer, marketer to help draft this package. Summary must be finished in time for the briefing.
- Distribute/present over 2003 and beyond.

**Objective 4.** Develop examples of interpretations and assessments using SRR C&I at multiple scales by June 2005.

**Tactics** – Begin with first approximation report.

- Task each criterion group to identify a person to work with an Example Working Group by March 2003.
- Example Working Group develops and provides tentative examples by June 2003.
- Incorporate into future communications plans and materials/presentations (as appropriate).

**Objective 5.** Meet individually with agency heads and relevant Congressional staff once a year.

**Tactics** - Identify by January 2003 relevant agencies and Hill staffers with whom it is important for us to meet (BLM, FS, USGS, EPA, FWS, ARS, NRCS, Ag Stats, NPS, DoD, BIA, BoR, etc.).

- Identify relationship between each agency and SRR mission/vision by March 2003.
- Identify the appropriate SRR representative(s) and other partners to meet with each agency head by March 2003.
- Develop schedule for meetings for 2003 by March 2003.
- Identify agency contacts to help set up meetings with agencies and Hill staffers (grease the skids) by March 2003.
- Set up meetings and go wow them during the week of May 19, 2003, over the course of 2003, and annually.

**Objective 6.** Encourage environmental, scientific, academic and producer groups to champion the importance of ecological, social and economic sustainability of rangelands in the U. S.

**Tactics** - Package good product that synthesizes the 2003 report (See objective 3)

- Assess who is not involved now that should be brought into this process as champions. Include state agricultural directors, Western Governors, Sportsmen's caucus.
- Sell our product to the leadership of our SRR participants to make them champions. Also target others not included in our participation as champions. Invite leadership of our participants and targeted others to May briefing in DC to unveil the product—the making of champions. Our participants must make sure their leadership attends May briefing.
- Championing must be done by August for 2004 budgets and November for 2005 budgets. Champions will inform Congress and the Administration of the importance of C&I for sustainable rangelands.
- Follow up, prod, plead our champions to take up the cause.

### **C. Sustainability Research Goal**

The SRR will promote research to develop methodologies in which to measure and collect data for sustainable rangeland indicators, as well as identify priority research on the interrelationships of ecological, economic, and social indicators and their appropriateness to sustainability of rangeland systems.

**Objective 1.** By 2008 all research funding organizations have a defined, stable and long-term program emphasizing sustainable rangeland C&I research.

**Tactics** - Develop a national database of rangeland indicator protocols and indicator research projects from existing sources to supplement comparable private sector information sources (relates to coordination workshop objective 2).

- Assess the proportion of ongoing research and funding that now support SRR indicators.
- Prioritize researchable questions related to SRR indicators and encourage the shifting of rangeland research to provide understanding requisite to this goal. Factors to be considered during this process include: benefit-cost analysis for effort invested; assessing the probabilities for successful indicator application and stakeholder acceptance of C&I.
- Work with NAS, USDA, USGS, NSF, and other research or research-funding groups to implement changes in existing natural resource research programs. This includes foundations, NGO's, and appropriate agencies.
- Work with research agencies (universities, labs, etc.) to shift priorities.

**Objective 2.** Periodically review developed C&I and determine, through research methods, if improvements can be made to the indicators and methodologies to measure the indicators.

### **D. Stable and Adequate Funding Goal**

SRR will secure stable and adequate funding over the next five years to 1) promote sustainability of rangelands through the development and widespread use of C&I, and 2) provide a forum for continued and expanded dialogue on sustainability of rangelands. Funding will support ongoing SRR efforts, further implementation of SRR's revised vision, and accommodate future reporting needs.

**Objective 1.** Increase the amount of funding from current federal agencies supporting SRR.

**Tactic** - Utilize SRR agency personnel to secure continued funding (this should be supported by SRR participants via letters of institutional and personal support, public presentations, website, professional organizations, etc.)

- Develop a detailed long-term (5 year) budget which includes all funding needs to accomplish the mission, vision, strategic goals and objectives to show a well thought out plan (for example, how much needed for reports, workshops, marketing items, etc.)

**Objective 2.** Expand the number of agencies funding SRR.

**Tactic** - Utilize SRR agency personnel to secure continued funding (this should be supported by SRR participants via letters of institutional and personal support, public presentations, website, professional organizations, etc.)

**Objective 3.** Establish recurring federal multi-agency cooperation and pooling of funding to complete SRR goals

**Tactic** - Institutionalize inter-agency cooperation through MOUs tied to line item budget allocations (these should be pooled to support SRR activities)

**Objective 4.** Establish recurring NGO cooperation and pooling of funding to support dialogue on usefulness of C&I for rangeland sustainability.

**Tactics** - Recruit private groups – industry and NGOs – and foundation involvement with explicit intention for them to cooperatively provide funds and other resources to support broad stakeholder forums (from local to national scales) that integrate SRR

- Identify one or more NGOs and/or Foundations committed to sustainable rangeland use and establish a five-year grant dedicated to public forums on C&I usefulness for different scales.

**Objective 5.** Provide champions (agency, industry, NGOs, and Congressional) with convincing information on SRR funding needs.

**Tactics** - none identified.

## Appendix D

### Results: Delphi 18, Refining the Five Key Messages

#### Original Explanation for Delphi 18:

The Outreach Working Group has requested a Delphi to identify five key points that can be used in their efforts. May 19-23 will be a 2003 SRR Report Release week, during which time we will meet with Congressional staffers, executive directors of NGOs, and higher level staff of Federal agencies. In addition, we have poster sessions planned for some producer meetings, as well as ESA. In order to better represent the views of the SRR, we are asking participants to identify issues they would like to see emphasized in such meetings and presentations.

In the first round on this topic, SRR respondents listed up to five key messages they felt should be communicated in outreach efforts. In this second round, you will be asked to narrow these down. Results will be available by the Albuquerque meeting.

#### Original Questions and Delphi 18 Responses (26 respondents):

**1. In the table below I have listed the categories and number of responses for each from the Delphi 17 results (see appendix for full text). Please read the Delphi 17 results in the appendix and mark your five most preferred categories with an “x”.**

Response category	Number of responses	Mark your top 5 choices with an “x”
1. Improve rangeland monitoring systems to measure sustainability for better management	20	23
2. Ecological, economic, and social aspects of sustainability are included in these indicators	6	19
3. Definition and importance of rangelands	7	17
4. Targeting research needs	12	15
5. Reasons to fund SRR to promote implementation of C&I	6	13
6. What needs to be done in order to implement the C&I	8	12
7. The SRR process	9	9
8. Diffusing controversy over sustainability	6	6
9. Describing the C&I	7	5
10. Grazing policies and practices	4	5
11. Other	1	3
12. Scale sensitivity of indicators	4	1

#### 2. Other comments? (Optional.)

- The definition of rangelands and a consideration of their importance is likely of the greatest importance followed by the development of appropriate monitoring procedures

- We'll need to spend some time coming up with the right wording to convey each of the ideas above (and those captured in the comments below that correspond to them)
- In number 9 above, I assume you mean "defuse" controversy.
- Either in #8 or in "other", I think the most key message we need to deliver is that there are capacity tradeoffs among the ecological, economic, and social spheres.
- Since you will be meeting with Congressional Staffers, executive directors of NGOs and Fed agency staffs you should be prepared to answer the question 'So, what do you want from us?' I suggest you have a clear no nonsense response to this question. Your response might be different to the different audiences. It would serve us well to think about this in advance.
- Comment below:

The Delphi 17 responses were analyzed as if each of the 5 responses could be taken separately. Is it possible that when each (some) of us responded with what we thought of as 5 responses of a unit? 5 responses that comprised the picture of SRR that we thought was important as a whole, not necessarily 5 individual responses that could be taken separately. It would be interesting to look at the Delphi 17 responses in a conditional context. You have categorized the responses into 12 categories. When someone responded, did their responses all fall within one category or across your categories. For example, the 5 I suggested came from 4 different categories (by your classification).

Ecological, economic, and social aspects of sustainability are included in these indicators

**Describing the C&I:**

**Diffusing controversy over sustainability:**

**Describing the C&I:**

**Targeting research needs:**

This type of classification has considerable impact with respect to the numbers. If the top 5 individual responses are taken, then the five messages are in the table below.

1. Improve rangeland monitoring systems to measure sustainability for better management
2. Targeting research needs
3. The SRR process
4. What needs to be done in order to implement the C&I
5. Definition and importance of rangelands

In my responses, for example, 2 of the 5 were classified as Describing the C&I – so my response weighted 40% of our messages to Describing the C&I. On an individual basis, Describing the C&I represents 8% approximately of the responses. And this may be the case, however, unless a wholistic approach is taken, we might not know that.

So what I am suggesting is that for each of the 18 responses (guessing here by the total responses), you develop the percent emphasis based on the 5 responses they gave you. For me it would be the following;

20% Ecological, economic, and social aspects of sustainability are included in these indicators

40% **Describing the C&I:**

20% **Diffusing controversy over sustainability:**

20% **Targeting research needs:**

I think this would be helpful to go back to the Delphi 17 data and do this type of analysis, as it was the first set of responses you got. You would then have 18 such responses, and then compute the percent emphasis as an average across the 18 responses, or you could look at this data in a number of other ways. I just think it important to see if these 5 responses by each of us reflected a larger picture than 5 individual points.

I also think that the responses to Delphi 18 might also represent a larger picture if taken as a group for each response.

A note on 'Reasons to fund SRR to promote implementation of C&I' This, on the surface, sounds very self-serving. It would be valuable to have SRR funded to continue this work, however, it should not be one of the five main points of our pitch, but rather an obvious conclusion that an interested party would draw if they listened to our pitch of the 5 most important points.

It may also be important to note that the respondents may not see their responses classified in the appropriate category as was done above. The suggestion to tell a story with the current data ---Motivate need for rangeland information by developing a story comparing the pressures on rangeland to the pressures on forests and how this information might help:

- a. Population increases in 'rangeland' versus forestland areas
- a-b. Water demands in these areas
- a-c. Land area shifts from rangeland to ... in these areas
- a-d. The kinds of decisions that need to be made in both
- a-e. Costs of the FIA/Forest Health inventories

Was classified as a research needs category. This was not a suggestion to define research needs so much as to lay out what we currently spend on other inventories so that a tradeoff can be surfaced in terms of the cost. Somehow we need to say what kinds of information and what kinds of decisions could be helped by having the C&I information and contrast that with what we currently spend on other types of information used in decisionmaking.

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## Appendix: Delphi 17 Results

**Original question: What key messages would you like SRR outreach efforts to convey to the public during the Washington DC briefings and presentations/panels to various producer and scientific groups? (List up to five messages below.)**

### **Compiled Responses (21 respondents):**

#### **Diffusing controversy over sustainability:**

- No black helicopters: This is a national/regional scale effort to assess the health of rangelands and associated human communities, but will not and cannot be used to “point the finger” at any particular landowner.
- I am not sure how to put this one in a congenial way. The sustainable development debate is mired in a bog of dueling ideological perspectives. As good a way as any of pushing this debate to a new and more constructive level is for a more empirically informed discussion to occur that is based upon data that is broadly agreed upon.
- Sustainability is really in the eye of the beholder. While a (any) group may agree on the indicators, interpretation of the same data may lead to different conclusions.
- Stress that this information will help refocus divisive arguments and more rangeland management from the courtroom to the land
- The need to replace management of federal natural resources by litigation to quantitative assessment with qualified and appropriately trained professionals.
- Issues pertaining to the wise use of rangelands are often contentious and emotional. The SRR provides an inclusive approach for reaching consensus over critical C&I of sustainable rangeland management. Agreeing to a slate of indicators, and what they mean, is an important first step towards developing a mutual understanding about strategic goals of public land management, and understanding the importance of private rangelands to the well-being of our country

#### **Improve rangeland monitoring systems to measure sustainability for better management:**

- Explain that these lands, in many cases, have been abused and in order to manage them correctly it is absolutely necessary to monitor them for changes both positive and negative and that this is where the Sustainable Rangeland Roundtable comes in.
- Additional monitoring and management actions are needed to assure the sustainability of our rangelands.
- Federal and state agency land managers, and owner/managers of large tracts of rangelands will benefit by committing to the use of Criteria and Indicators as a principle land management concept.
- A process for consistently measuring the quality of rangelands relative to the ecological potential can be implemented
- Better data leads to better dialog leads to better decisions
- National and regional level data needs to be collected in a systematic manner if this, or any national assessment, is going to be useful.
- [We need to address] the absolute necessity of monitoring rangelands over time to develop trends on the aspects covered in the criteria and indicators where abilities already exist to monitor.

- RISKS/OPPORTUNITIES – articulate some of the risks of NOT going forward (e.g. piecemeal management of resources, etc.); similarly, discuss some of the opportunities (e.g., coordination in resources management tied to common goals, responsive to resource change rather than reactive, new research initiatives, informed public, etc.)
- C&I will allow resource managers, policy makers, researchers, environmentalists, and industry to have a common frame of reference and knowledge base for discussions on rangeland sustainability.
- Sustainability is really in the eye of the beholder. While a (any) group may agree on the indicators, interpretation of the same data may lead to different conclusions.
- Criteria and Indicators are an understandable group of questions (?) that lead us to answer whether rangelands are being conserved and managed in a sustainable manner.
- the need for and benefits of National level C&I
- That it is possible to assess the fate of rangelands and take corrective action when required providing adequate resources are allocated for assessment and monitoring.
- There are no valid substitutes to having soil survey information and ecological site descriptions as the basis for rangeland planning and management.
- The utility and applicability of the process (SRR) in the ultimate development of a set of indicators that is seamless across the country.
- The suite of indicators when taken as a whole provides valuable information about rangeland health/condition. The indicators should not be used individually but in totality.
- Sustainability can't be achieved (or measured) by addressing only one or a few parameters or conditions of rangeland.
- We cannot sustain these land uses unless we sustain the health of our rangelands. SRR is trying to figure out what a core group of indicators are that can be measured to give us a national-level report card of rangeland sustainability.
- A process is being developed to assess, with some level of consistency, the sustainability of one of the three principal natural resources of the US – rangelands.
- The applicability of the process (SRR) and its results to better allocate resources from the Agency level to state or regional levels to respond to local needs.

**Ecological, economic, and social aspects of sustainability are included in these indicators:**

- This is probably the largest single scientific effort ever aimed at identifying the links between biophysical and socioeconomic aspects of rangelands – thus it represents a real advance in scientific integration regardless of what happens next. (In other words, the government's money was well spent.)
- A foundation for assessing the social, cultural, economic and legal aspects (the human component) as well as the ecological aspects is being developed by today's managers and scientists for future generations' use, assuring a long term process for understanding the sustainability of rangelands.
- The integrated nature of social, ecological, and economic perspectives in defining sustainable.
- Sustainability must address environmental, social, economic and political issues.
- Sustainability is related to physical, ecological, economic, social, legal criteria.
- An integrated approach to monitoring rangeland sustainable management is most effective when it includes all three component legs – ecological, economic, and social criteria.
- There are capacity tradeoffs among the ecological, economic, and social spheres.



**Scale sensitivity of indicators:**

- Present in as visual a way as is feasible (but not complicated) the complexity of integrating indicators among the criterion areas – e.g. The conceptual issues associated with inferring local conditions when using national and regional data, and therefore the preference to be able to develop indicators that are more sensitive to issues of scale.
- Monitoring systems must be functionally sound, scientifically based, and flexible to fit across diverse environments.
- I think we should very clearly describe the intent of the indicators that have been developed. They are not necessarily meant to assess a specific spot on the ground and they need to be kept in the broad context they are meant—sort of a landscape/drainage basin basis.
- Spatial context – a recognition of the spatial variability of the resource and it’s managers and how we have identified problems and opportunities to attain a national perspective (hopefully it can seem as if this is “do-able” – an example of what will likely be a quick success might be helpful)

**The SRR process:**

- SRR was a broad consensus-based effort – not driven by academic, agency, or interest group objectives – and such has application across a wide range of stakeholders and uses.
- Because the SRR has had contributions from a diverse set of stakeholders, our confidence level is high that most people can find their interests served somewhere in the list of 67 indicators so far identified.
- SRR is a collaborative partnership where stakeholders are able to contribute to the process of developing C&I for rangeland sustainability.
- Try to address the idea that the indicators developed by the SRR have been identified and described by a cross section of the best range scientists and managers available in the United States and identified and described by a cross section of the best range scientists and managers available in the United States.
- Relationship context for why we are here – go beyond institutional relationships to reflect the individual efforts of those from a variety of backgrounds that are dedicated to sustainability (hopefully this will enable individuals to relate to what we are doing and how it fits into THEIR “big picture”.)
- The utility of the process (SRR) in the development of a set of indicators that is scientifically and politically acceptable, wherein politically means the greens and browns in the environmental spectrum.
- SRR is a broad-based stakeholder organization, seeking to promote sustainability through the implementation of a set of criteria and indicators.
- That it is possible for a very diverse group of individuals with varying interests and expertise to work together for the common good of rangelands and other natural resources.
- SRR was a rigorous, consensus-based process that produced indicators of national and regional rangeland health/condition.

**Reasons to fund SRR to promote implementation of C&I:**

- That the value of SRR will not be fully realized if SRR activities are pre-maturely terminated with this report.

- It won't cost that much (on the monetary scale that Washington works) to maintain an office that gathers data for these indicators – therefore we have a real opportunity to make improvements in information-gathering to influence decisions about America's natural heritage.
- The federal government spends hundreds of millions of dollars annually to monitor the forests and rangelands of the United States. Much of this effort is wasted because programs are neither comprehensive nor efficient when it comes to detecting important long-term trends pertaining to productive capacity, rangeland health, or how well these lands are meeting the needs of communities, counties, and states. The SRR C&I will provide a valuable mechanism for improving and making more efficient the way we monitor at a national scale.
- Carrying the program through to fruition, i.e. that this is a concerted effort of rangeland scientists across the nation and represents some of the best we know regarding large-scale monitoring of rangeland systems and that to gain the benefit of this work, we must insure that this is not another report that looks pretty and is put on a shelf without implementation.
- The need for further/growing support both of time of individuals involved and funding of the program as a whole to insure the optimum success of the program as a whole.
- The adoption of Criteria and Inventory concepts by will require substantial outlays of fiscal and human resources both initially and over time. The results will be more understanding of rangeland ecosystems and better long-term land management.

**What needs to be done in order to implement the C&I:**

- [We should describe] the adaptive nature of the criteria and indicators and that even though we have a list of indicators, the work is not done, we must continue to refine and redefine if necessary, to put together the best suite of indicators that can be done. That is to say that once the list is complete, it is not permanent, but is fluid and can be revised as technology, management practices and social/political desires change.
- Land Grant Universities, and other educational and training organizations, must develop their programs to develop professional teachers, researchers, and land managers familiar with the Criteria and Indicators approach to conservation and sustainable management.
- Inventory and monitoring programs must be redesigned to answer the questions posed by Criteria and Indicators. This will require considerable adjustment and cooperation among the land management organizations. It will also require agreement on inventory and monitoring protocols and coordination in development and maintenance of data base projects.
- Temporal context – it has taken a long time to get to where we (Ecologists, agriculturalists, etc.) are today AND the SRR's efforts seem to be a temporal inflection point marking a new course for management. It will take substantial commitment for some time before we see the fruits of our labor (hopefully this will manage expectations with regard to getting things done "tomorrow")
- That there are no 'quick fixes' to the improved management of the Nation's rangeland resources; on-the-ground professionals with appropriate training are required to interact with all user of these resources.
- Sustainability of ecosystems must be addressed across resource groups (e.g., forests, rangelands, water, etc.)

- There still is a need to set priorities on indicators because it is impossible to measure or address all indicators at the same level. Setting priorities might be appropriate relative to each resource management agency.
- While we have 67 indicators so far identified, we recognize that may seem to be too many, and SRR is willing to try harder to reduce that number further to a core group of indicators.

#### **Describing the C&I:**

- It should be clearly stated that these indicators are dynamic and may be modified or changed to address the biophysical, ecological, economic or social parameter intended.
- Assessment involves all of the nation's rangelands – public and private.
- National-level indicators are currently available—list those for which we have data—the task is feasible, but also tell why others are critical
- SRR indicators were chosen based on best available science.
- Rangelands are a valuable resource--Tell a story with what we currently have available: Take a subset of the indicators for which there is data, and tell a national-level story such as 1) Extent of rangeland area, RPA/NRI has some data here—it is being converted to urban/ag/etc, 2) the fire condition class for 40% of grassland ecosystems indicates that fire regimes have been moderately altered from their historical range, and the risk of losing key ecosystem components is moderate, 3) soil water?? 4) economic??, 5) legal??
- The health of U.S. rangeland ecosystems can be assessed consistently across public and private ownerships.
- A baseline for analyzing future effects of land management policies is being developed

#### **Targeting research needs:**

- We have identified information gaps that should be plugged, regardless of whether the SRR indicators are accepted and implemented as a set – therefore this effort can be useful for identifying future priorities of relevant research funding and information-gathering agencies (e.g., USDA-ERS, CSREES).
- [We need to emphasize] the critical needs in research both for development of protocols for those indicators that lack data or methods and in management science on how adaptive management and ecosystem based approaches can be used in the monitoring and management of rangeland systems for increased sustainability.
- Make sure that they understand that many of the indicators identified do not have adequate data sets available at this time to identify change so we will have to begin development of data sets to use as a baseline that can be used to assess changes in the future.
- The utility of the process (SRR) in illustrating the importance to funding the necessary research into refining or populating the indicators determined from the process.
- Perhaps express the concern that it has been very difficult to identify data sets that are truly useful in measuring and monitoring the various indicators. This may be a difficult one since we are essentially suggesting more appropriations for this effort. However, additional cooperation by existing agencies on how they gather and disseminate their data on a regional and national basis would be a potentially important way to get some of the required data sets.
- Many indicators do not have tested protocols developed, thus there is a need for research to develop protocols with known accuracy, precision and bias.

- Many of the physical and biological indicators require basic information on soils and ecological sites for all rangelands in the U.S., thus this information needs to remain one of the highest priorities until this basic information is completed.
- Because many of the indicators have no established (or accepted) metrics, efforts should be made by appropriate agencies and NGOs to address these deficiencies.
- C&I will highlight gaps in our knowledge and understanding of rangeland ecosystems and the human communities that rely on them and direct data collection, monitoring, and research efforts.
- Many of the indicators deemed important for monitoring the contributions of rangelands to the sustainable development of the United States are not reportable because of a lack of data. Examples include land use patterns, carbon sequestration, status of riparian zones, fire frequency and extent, and the total impact of invasive species. The SRR has identified indicators, as well as needed protocols for monitoring them, to answer most of these questions.
- Our country is at unique time when research needs and priorities are being evaluated by research organizations and funding entities, including Congress, alike. Research funds are becoming increasingly scarce, requiring their wise expenditure on programs that will help solve management problems. Knowing where research can lead to a better understanding of how rangelands contribute to the sustainable development of the United States can help focus and justify needed rangeland-related economic, ecological, and social research.
- Motivate need for rangeland information by developing a story comparing the pressures on rangeland to the pressures on forests and how this information might help:
  - a. Population increases in 'rangeland' versus forestland areas
  - a-b. Water demands in these areas
  - a-c. Land area shifts from rangeland to ... in these areas
  - a-d. The kinds of decisions that need to be made in both
  - a-e. Costs of the FIA/Forest Health inventories

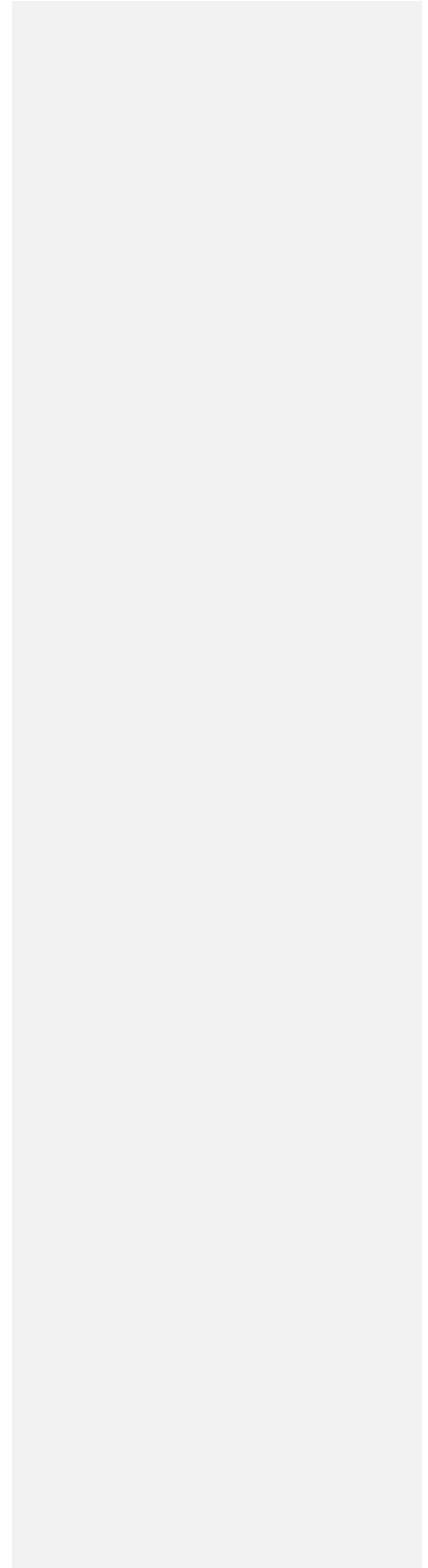
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#### Definition and importance of rangelands:

- The most important message that can be conveyed is that Range is a kind of land and not a land use. Without this message being received there is little need for any others.
- Rangeland is the United States largest historic natural vegetation type by land area.
- Emphasize the vast land area that qualifies as rangeland in the U.S.
- Be explicit that rangelands are a type of land consisting of grasslands, shrublands, tundra, etc. Many land uses can be placed on rangelands, including livestock grazing, recreation (for example bike riding, hiking, camping, fishing, hunting, bird-watching), some timber harvest, some firewood cutting, scientific research, etc. We aren't just about livestock grazing.
- Rangelands are important and should be sustained.
- Rangelands include all areas that have predominantly grasses and shrub vegetation, including areas that are not grazed by domestic livestock.
- It would be important to outline the importance of rangelands as a kind of land that produces many kinds of products and services and that these lands must be carefully managed for future generations.

#### Grazing policies and practices:

- Appropriate domestic livestock and wildlife rangeland grazing practices can generate ecological, social and economic Rangeland Sustainability
- Appropriate domestic and wildlife rangeland stock densities determine the producers' economic sustainability on Rangeland.
- Domestic livestock grazing rangeland can be a prescribed rangeland vegetation management treatment.
- Historically, much US Rangeland has been converted to annual cropland. Current crop economics generated much of the return to potentially grazable perennial vegetation that does not currently function as Sustainable Rangeland.



**Appendix E**  
**Sustainable Rangelands Roundtable**  
Draft Agenda as of March 2003  
Jackson Hole, Wyoming  
June 3-5, 2003

**Objectives:**

1. Conclude initial C&I identification phase.
- 1-2. Integrate new participants.
- 1-3. Focus and sharpen strategic plan and operational tactics.
- 1-4. Itemize, organize, and prioritize next steps.

**Tuesday, June 3, 2003**

- 8:00 am Steering Committee Meeting  
1:30 pm **Lunch**  
3:00pm SRR Orientation and Overview for New Participants  
Introductions, background material, strategic plan, and status of C&I work  
*Tom Bartlett, Dennis Thompson, John Mitchell, Lou Romero*  
5:00pm **Adjourn**

**Wednesday, June 4, 2003**

- 8:00 am Welcome and self-introductions – *Tom Bartlett and Lou Romero*  
8:30 am SRR Update – *Tom Bartlett*  
8:40 am Review results of Washington DC briefings and meetings – *Larry Bryant, Dennis Thompson, Tim Reuwsaat*  
9:10 am Working Group Activity Reports:  
Coordination Working Group – *Duncan Patten*  
Outreach Working Group – *Lori Hiding*  
Scale Working Group - *Paul Geissler*  
Definitions Working Group – *Paul Geissler*  
9:40 am **Break**  
10:00 am Critique of SRR Process – *led by Lou Romero*  
11:30 am A Strategic Course for the Future – *Tom Bartlett*  
12:00 pm **Lunch**  
1:10 pm Break into Goal Groups and work on Strategic Plan components to sharpen focus; make more explicit; and prepare for adoption. Includes adding and/or improving primary and supporting goals.  
2:40 pm **Break**  
3:10 pm Group Reports and Discussion to Adopt Strategic Plan Improvements  
4:45 pm **Adjourn Day 1**  
6:00 pm First Approximation Report Celebration, *National Wildlife Art Museum*

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**Thursday, June 5, 2003**

- 8:00 am Senator Cliff Hansen Keynote Address
- 8:30 am Original Criterion Groups meet for data set identification and evaluation; JRM planning; and internal coordination/work plan development. (*includes morning break*)
- 11:30 pm Criterion Group report out
- 12:00 pm **Lunch**
- 1:30 pm Review and discuss organizational structure and participant commitments
- Criterion data group participants
  - Goal group participants
  - SRR FYI list additions
  - Identify criterion and goal group leaders
- 2:30 pm **Break**
- 3:00 pm Goal Groups Meet to develop work plan and internal schedule to include between-meeting work
- 4:00 pm Review Accomplishments, Next Steps and Agenda for Next Meeting
- 5:00 pm **Adjourn**