

Meeting Notes for the Sustainable Rangelands Roundtable (SRR)
Denver, Colorado – April 10 and 11, 2001
Facilitated by Lou Romero, DeLaPorte & Associates, Inc.

Welcome Remarks – Tom Bartlett, Roundtable Host/Convener

We're excited about this process and level of support and participation shown by the attendance at this meeting. During this meeting we hope to define our purpose and role and provide background information so that we can work on identifying indicators of sustainable rangelands.

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

Participants should introduce themselves, answering the following questions:

- Name, organization, position?
- Familiarity with this subject?
- Interest you represent?
- Any “burning questions”?
- Participation in this meeting?

A list of participants can be found in Appendix A. Some issues brought up in this session:

- Disconnect between policy and in field reality.
- Want to see efforts of SMR, SFR, and SRR unified.
- Scale must be included.
- How can we institutionalize research into management decisions?
- Importance of connecting with other indicator sets, such as those in the Heinz Report.
- How do we imbed these indicators in an international process?
- How will the new administration support this process?
- How will this process and these indicators benefit managing Native American rangelands?
- Can we do something to bring different interests together for the common goal of sustainability at multiple scales?
- When will we be ready to apply these indicators?

Importance and potential benefits of Sustainability Indicators – by Ted Heintz, DOI

We like to believe that the better information we feed decision makers, the better decisions they will make. Unfortunately, many factors in daily life and other pressures determine their decisions, not simply the facts. Policy makers will argue about what actions will and will not promote sustainability. We need to be able to measure the impacts of these decisions within a feedback loop.

In order for these measures to be used, there needs to be wide support that the measures are appropriate to assess sustainability. “We are more likely to become what we can agree to measure—we need to measure what we agree to become”. If we can agree on indicators of sustainability, then we build common understanding.

In 1993, we embarked on developing the Sustainable Development Indicators, a national report that would organize existing governmental data into a body that could be used to assess national

sustainability. This effort drew upon the work done on the Montreal Criteria. The concept of endowments substituted for maintaining capacity. Endowments were felt to be easily understood as the resources to be preserved. For future generations to be at least as well off as the present, the key is sustaining endowments. Underlying capacities must be maintained and must be increased if we are to grow. These capacities are closely linked to the capacities of systems, i.e. the capacity of rangeland to serve people's wants and needs.

There is a common desire to boil down sustainability into one measure, one indicator. It is impossible to capture the complexity of sustainability into just one indicator. Through indicator sets, we can organize information in such a way that promotes ongoing conversations in relevant policy arenas.

Q&A Does the new administration support sustainability? As a best guess, there will be some against any sustainability work and some who are supportive. There is enough momentum in this country and internationally to support on going efforts, however, without the administration. President's council under Clinton found that there's a great deal of locally driven sustainability work going on outside of DC. Many diverse interests are engaged in sustainability in one form or another. SFR will come forward and administration will have to participate. The administration will probably not re-establish president's council. Link to international efforts have a lot of support.

Overview of Montreal Process Criteria and Indicators, and other Roundtable Efforts; linkages to SRR, by Al Abee (To see Mr. Abee's Talking Points, please see Appendix B.)

The field of natural resources needs a common unifying language of metrics for assessment, planning, and implementation. Sustainable development is a core value as evidenced by federal legislation and by ranchers wanting to pass their land on to future generations. Our challenge lies in managing sustainably despite our boundaries.

In 1996, 12 countries agreed to the Criteria and Indicators for forests. The U.S. agreed to this voluntarily. In 1998, many NGOs convened to write a letter demanding that these C & I be developed due to the inadequacy of national level data, external push that led Mike Dombeck to establish the first Sustainable Forest Roundtable. A high-level meeting was convened and gathered 16 signatures of Federal agencies on a MOU. These agencies agreed to establish common protocols to gather, collect, and report on common indicators of sustainability. Scientific teams would look at indicators and a report would be published in 2003 to report on the sustainability of our national forests. The outcome of this process is to build this language of metrics that will be comparable and compatible across systems. Unfortunately, this process did not include rangelands or minerals and energy.

We want to develop a set of criteria and indicators that are like vital signs. If the vital signs are in good shape, you can assume the body to be in good health. If one goes haywire, you look at more tests. These indicators are our vital signs or our common language of metrics that can be used for collaborative processes.

Comment by John Mitchell: This is a domestic effort and we are developing US standards. There is not funding for a truly international effort. However, it might be interesting to keep abreast of international efforts.

Value of the SRR for rangeland management and policy, by Ann Bartuska

The timing for this roundtable is on target with current issues we want to resolve, such as habitat and landscape fragmentation. Our indicators must be in multiple scales. The national scale is important, but we must make indicators that will be approachable from both national and local scales.

Within the realm of monitoring, let's not get caught up with what we have already. Let's decide what we need to do to measure sustainability and then put these into the existing framework.

There is a lot of good work to build on that incorporates economic, social, and ecological factors in sustainable development decisions, such as in Oregon. The SRR can build on the lessons of the other two roundtables and move faster. It is important to have forces external to the government providing a push, as happened in the SFR. I was heartened by the SRM rangeland assessment and management effort. Perhaps SRM, ESA and other NGOs can provide this external stimulus for the SRR.

It is important to engage all stakeholders. We have SRM, ESA, and university academic support. Who is not here? How do we get them involved? We need representatives for water issues (FWS, State Fish and Game). We also need to stay connected to other similar initiatives. We are committed to this process. We will be involving staff and support. We want to be active.

Sustainability Research for Rangelands; Relationship to national assessments, expected products and final report; other new information since the 1999 SR meeting by John Mitchell

When trying to incorporate multiple scales within one application, it is important to understand hierarchy theory. Higher levels within a hierarchical system constrain and impose limits on lower level behavior. The higher the level, the less it is related to lowest level functions. Regional dynamics will impact national system variables, but the local level will not translate to a national scale. Aggregating site data to a national scale cannot be achieved without pooling information, which causes intrinsic characteristics to be lost.

Several national monitoring systems currently monitor U.S. rangelands and are incorporating new protocols. Unfortunately, they do not monitor all rangelands, nor do they monitor a comprehensive set of indicators. These monitoring programs would benefit from output from SRR. Generally, all agencies and organizations with interests in strategic planning for sustainable management of rangelands should be interested in national-scale indicator systems and national assessments.

A prelude to the SRR was held in April 1999. Attendees agreed on the value in using C&I for assessing our Nation's rangelands. All stakeholders should be involved in the process: NGOs, agencies, and professional societies. Involvement should be encouraged at different levels.

Since then, a set of papers critiqued the seven criteria of the SFR for its relevancy to rangelands. Many SFR indicators appear to be relevant to rangelands

What should be some expected products from here? The FS is committed to producing a report on sustainable rangelands in 2003. The SRR may wish to report its findings in various outlets, including professional society meetings, scientific journals, and popular publications.

The Heinz Report. Robin O'Malley

The Heinz Report is also an indicator project. Their goal is to produce a small set of indicators (17-18) to communicate to policy makers across ecosystems for range, forest, water, and other systems. To this end they asked environmental, social, federal agencies, and business participants if they had only a few indices to report what would they be. Their funding sources are also diverse. About half of the measurements they think important are not available on a national level. They also narrowed their indices by measuring representative indices. Fire was used to represent disturbances, for example.

SRR Process, Leadership, Funding, Logistics and Timeline; Presentation of a draft Mission statement describing the core purpose and role of the SRR... for consideration, discussion and adoption later, by Tom Bartlett

Roundtable general agenda: the first morning will be introductions for new members; therefore returning participants can arrive for the afternoon schedule. The agenda of these meetings is meant to be flexible to fit the needs and dynamics of the group process.

At the end of day two, we assess our progress, determine the topics for Delphi process, and agree on rough agenda for the next meeting.

The Delphi Process will be used between meetings to make progress through discussion on topics from the previous meeting, continue to develop ideas, and discuss needs for the next meeting. Full participation is critical for success. Helen will send out the questions, members respond, Helen will analyze and summarize responses anonymously, and will send these out with further questions. The process is iterative. The Delphi is beneficial as it keeps members involved and decreases the slow start up time for next meeting.

SRR team: Hosts: Tom Bartlett and John Mitchell
Facilitator: Lou Romero, DeLaPorte & Associates, Inc.
Kristie Maczko: Hotel arrangements, notes, and communications
Helen Rowe: Delphi process, web page, communications
Noelle Grether: Travel reimbursements, communications
Al Abee, Larry Bryant, Alison Hill, and Mike Manfredo: Idea staff and coordination

The Sustainable Rangelands Roundtable (SRR) is meant to be an open, positive, future focused, dynamic process that values and respects all opinions and contributions of members. It is important to link with other indicator efforts, such as the Heinz Report, SFR, SMR, SDI.

Time line: we hope to be done by 2003 (eight meetings, four a year).

Support: the attendance of participants. USDA-FS and CSU are matching funds, additional partners will be needed. Note: The Bureau of Land Management is contributing \$20,000 to support the meetings of SRR.

Break for lunch

Lou Romero: Small group exercise led by Lou Romero

Product One: Issues

Directions: Draft a few carefully worded, important issues where roundtable meetings should focus their indicator work. These issues should be “Big Picture”, future focused, holistic, and transcend “artificial” boundaries.

During this session, KristieMaczko wrote a comprehensive list of issues from each group that was projected for the group to see. Collectively, the group made changes to these issues. For the full text of issues and group comments, refer to Appendix C. The full list of issues is summarized below.

1. Will indicators vary according to land use?
2. Will indicators use thresholds, reference states, or set goals?
3. How to define and measure rangeland health?
4. How will we measure how goods and services from rangelands will impact the culture and communities at different scales?
5. Will the SDI endowment outcome model be useful for us?
6. Will biodiversity be an indicator and what will it tell us?
7. Given multiple uses of rangelands, will we need to address who is given access and accompanying access conflicts?
8. How to measure cultural sustainability to all rangeland stakeholders? (Ranchers, Native Americans, recreationalists, mining...)
9. How can we measure productive capacity of the rangelands to include its capacity to produce both market and non-market goods and services? Do we measure both overall amount and condition of rangelands?
10. Do we need to measure the inputs to produce outputs (goods, services and values) and the amounts of the outputs themselves?
11. Are fundamental ecosystem processes and components sustained?
12. What is the nature and extent of human induced ecological stressors, e.g. invasives?
13. Do existing political, legal (laws and regulations), land management and educational institutions provide the capacity to manage public and private rangelands sustainably?
14. What is the extent and degree of changes in disturbance regimes, e.g. invasives, fire, people, weather/climate?
15. What are the nature and extent of changes in rangeland use, e.g. conversion to development or recreational uses, management changes?
16. Can local indicators be folded into the national indicator list? How do we resolve issues of scale?

Some issues for the SRR process:

1. Are all stakeholders represented?
2. Will there be flexibility in the indicator list to reflect changes in social values and science?
3. Will we need to resolve the issue of defining rangeland?

Product Two: Frameworks

Directions for the small groups: Generate a proposed draft format/framework for validating/evaluating indicators. Look at SMR Format, try a Sample Indicator and answer the question, “What questions should the indicator answer?”

During this session, each group made a list of frameworks. For this comprehensive framework list, please see Appendix D. The section below summarizes this list.

1. What is the indicator? (Give descriptive title to communicate intent.)
 1. Useful at different geographic scales? At what scale is this useful?
 2. What does it measure? Is this important?
 3. Why is the indicator important? How does it measure sustainability? (Provide scientific justification.)
 4. Is it repeatable?
 5. Comprehensive? Across time and sites?
 6. Is it reliable (low variance) and valid (not biased)?
 7. Responsive and sensitive short-term?
 8. Affordable?
 9. Quantifiable? Does the data and science exist? Is the data robust?
 10. Qualifiable?
 11. Interpreted same way by people?
 12. Acceptable and Understandable by people?
 13. Useful to people?
 14. Responsive/sensitive to impacts in a relatively short time frame?
 15. Is this a redundant indicator? Is this indicator critical?

Wednesday, April 11

Brief Review of Tuesday’s Accomplishments and Completion of Product 1 in large group –
Led by Lou Romero

Product Three: Recommendations

Directions for small groups: A set of specific tactical recommendations – how to promote greater awareness, acceptance, and support for the development of indicators for Sustainable Rangeland Management. Please discuss:

- Forces working for the development of indicators.
- Forces working against the development of indicators.
- Whether all stakeholders are being represented?

- How do we maintain momentum between meetings?

During this session, group recommendations were presented on flip charts followed by group discussion. Collectively, the group made changes to these issues. For the full text of recommendations and notes of the group comments, refer to Appendix E. In this section below, the group list is summarized.

1. Get more agencies (expand beyond Forest Service) and groups on board to:
 - a. To agree to help develop and use indicators
 - b. Decide how indicators will/will not be used
 - c. Commit to participation and support (\$\$)
2. Seek out participation from other grassroots groups and NGOs.
3. Develop outreach group for the SRR.
4. Prepare short briefing paper (brochure or white paper) to clearly state benefits of SRR.
5. Distributable formal and informal information products (consensus of roundtable) produced during and at the end of the process. These can include website (w/ current approximation as dynamic process), National Academy report at end, agreement to share w/ others when opportunity arises.
6. Link to other indicator efforts (Forest Health, National Fire Plan).
7. Agree on definitions and terms for “rangeland”, “sustainability”, “indicators”, and “scale”.
8. Document our meetings and progress so that new members can be brought up to speed quickly.
9. Scheduled a year out in advance.
10. Piggy-back with major national meetings.
11. Keep in central hubs – need to know you can make meetings.
12. Frequent reminders – Personal contact, Delphi emails, and Website.
13. See progress – quick feedback on products.
14. Knowing what is coming up – will we make significant progress at each meeting? What is the end-point and end product?
15. Make the leadership for the SRR more visible and include SRM with CSU leadership.
16. Downplay International Connection – Increase perception of a bottom-up initiative/decrease “Montreal Process” language.
17. Create a business plan
 - a. Budget plan to estimate costs and identify stable funding sources for initiative
 - b. Operational plan for the development of indicators
18. Must connect initiative to new administration.
19. Campaign to build public/stakeholders awareness of concept of sustainability (especially necessary for “general” public). Use “white paper” to get information disseminated. The indicators can also be used to teach sustainability.
20. Reassure stakeholders that indicators are designed to be value-free, reliable over time, descriptive but not prescriptive, not intended to drive control farther from local manager.
21. Build understanding of utility and positive value of indicators (so we measure ‘em, so what?).

22. Need participants to reach out within all professional societies (ESA, SRM, TWS, SCB, etc.).
23. Should host a meeting expressly for promoting SRR to under-represented groups (professional, commodity, NGOs) – shoot for Reno meeting.
24. Need to conceptualize the link between local monitoring and national indicators.
25. Meet with producer groups to explain C&I and have them critique the C&I for forest, how it might be applied to rangelands. This meeting might help bring these groups to the table.
26. Meeting with environmental groups. Explain C&I and have them critique C&I for forests, how it might be applied to rangelands. This meeting might help bring these groups to the table.
27. Re-examine vision statement for words such as decisions; incorporating educational aspects, expand utility of social, economic aspects.
28. Submit article on C&I to journals such as Rangelands, Beef magazine, Livestock journal, newspaper focused on agriculture.
29. Have ESA and SRM write letter to federal agencies/departments to encourage them to host a meeting of the SRR.

Break for Lunch

In large group, Lou Romero led discussion on mission and vision statements for the Roundtable. Kristie Maczko projected possible mission and vision statements for the group. The group discussed, modified and added to these statements. For the resulting product of this session, please see Appendix F. These statements will continue to be worked on through the Delphi Process. The following are the mission and vision statements that received the most group support.

Mission: To develop a framework and identify indicators for assessing the overall sustainability of rangelands within the U.S.

Vision: We envision a future in which rangelands in the U.S. contribute to sustainability considering social, economic, and ecological factors.

Large group work on creating Guiding Principles for the SRR

The same group editing process occurred with the Guiding Principles during this session as with the previous mission and vision session. The notes below are the product of that session. The group will continue to modify these through the Delphi Process. For notes on the group discussion, see Appendix G.

1. 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.
2. Indicators must be suitable nationwide. Collectively these indicators should guide monitoring efforts that would measure rangeland sustainability in the U.S.
3. Acknowledge and utilize, as appropriate, other indicator initiatives.

4. There are numerous policy questions related to rangelands. We will focus on the selection of indicators and avoid getting sidetracked by discussions not directly related to this work.
5. Ensure that the indicators address issues of temporal and spatial scale (e.g. short-term vs. long-term, local vs. national).
6. The Roundtable process will feature outreach to all stakeholders, open dialogue, and respect for differing opinions.
7. Collectively, criteria and indicators will address economic, social and ecological aspects of sustainability.
8. Value-neutral wording will be used in SRR products and presentations.
9. We don't want to predetermine the results of the assessment. Avoid selecting or not selecting criteria and indicators with the intent of predetermining the results.

Summary of Accomplishments, led by Lou Romero

1. Diverse group, but many compromises reached
2. Appreciated level of esprit d'corps
3. Acknowledged that important stakeholders are missing from the table (sheep, cattle, coal, environmentalists, tribes, etc.)
4. Clarified points that require more thought
5. Arrived at a level of common understanding of the task
6. Developed strategic task list
7. Stayed on course in face of adversity
8. Identified the concern that process is going forward without total agency buy-in
9. Short-term specific tasks identified for SLC meeting
10. Developed a set of recommendations for the organizing group to develop a plan for moving forward w/ indicator work
11. We met many new people
12. Worked on Mission, Vision, and Guiding Principles
13. Identified significant issues where indicators may be necessary (laid a foundation to build upon)

Next steps and future meeting date selection, led by Tom Bartlett and Lou Romero

Delphi Process Suggestions

1. Deadline in Email Message Header
2. Specific focus questions; open-ended
3. Delphi-like rather than true Delphi; true convergence may not be observed
4. Consider summarizing Delphi questions and anonymous responses on the website
5. At least one week response time
6. User-friendly format for all communications (RTF and Doc)
7. Guidelines for response to Delphi questions
8. Consider secure site for info exchange

Topics or Activities for Salt Lake

1. Revisit SRR Mission, Vision, Guiding Principles
2. Look at criteria and indicators

3. Work on definitions of terms, i.e. range, sustainability, indicators
4. Understand and design protocols for scale
5. Revisit issues to see if any have been resolved and allow for new participant additions
6. FACA??
7. Establish working groups for specific tasks
8. Field trip to some site to observe how indicators might work
9. Timeline, business plan, work plan, milestones

Future Meeting Dates and Locations

June 4 and 5	SLC
July 24 and 25	Reno
Nov 5 and 6	Phoenix, Tucson, Omaha, St. Louis, Minnesota, KC, Seattle, San Antonio, Dallas

Group suggestions:

- Skew towards spring, fall, winter
- 3-day meetings to maximize benefits for travel costs
- Weekend meetings, or Sunday/Monday; shoot for beginning or end of week
- Year-round to maintain momentum

Appendix A Denver Participants

1. Al Abee , USDA-Forest Service
2. Tom Bartlett, Colorado State University
3. Ann Bartuska, USDA-Forest Service
4. Rodney Baumberge, NRCS
5. Marty Beutler, South Dakota State University
6. Mark Brunson, Utah State University
7. Larry Bryant , USDA-Forest Service
8. Evert Byington, USDA-ARS
9. James Cash, USDA-ERS-MTED-APB
10. Dennis Child, Colorado State University
11. Herman Garcia, NRCS
12. Paul Geissler, USGS
13. Noelle Grether, Colorado State University
14. Stan Hamilton, NASF
15. Linda Hardesty, Washington State University
16. H. Theodore Heintz, Jr., U.S. Department of the Interior
17. Rod Heitschmidt, USDA-ARS
18. Lori Hidinger, Ecological Society of America
19. Alison Hill, USDA-FS
20. Lynn Huntsinger, University of California at Berkeley
21. Linda Joyce, USDA-Forest Service
22. Thomas D. Lustig, National Wildlife Federation
23. Kristie Maczko, USDA-Forest Service
24. Mike Manfredo, Colorado State University
25. Clayton Marlow, Montana State University
26. John Mitchell, USDA-Forest Service
27. Ken Nelson, USDA-ERS-MTED-APB
28. Robin O'Malley, The H. Heinz III Center for Science, Economics and the Environment
29. Duncan Patten, Montana State University
30. David Pyke, USGS
31. Tim Reuwsaat, USDI BLM
32. Terry Riley, The Wildlife Management Institute
33. Tom Roberts, USDI BLM
34. Lou Romero, Delaporte and Associates
35. Helen Rowe, Colorado State University
36. Bob Shaw, Colorado State University
37. Lou Swanson, Colorado State University
38. John Tanaka, Eastern Oregon Agricultural Research Center – Union
39. Doug Tedrick, Bureau of Indian Affairs
40. Allen Torell, New Mexico State University
41. Bill Travis, University of Colorado
42. David Wheeler, USDA-Forest Service

Appendix B

Talking Points from Al Abee

1. The Roundtable initiative is about developing a common, unifying language of metrics for collaborative assessment, planning, and decision-making processes.
2. I think we can agree that the American people need three things from the land: a sustainable supply of raw materials; jobs in rural communities; and values associated with healthy ecosystems, such as clean water and recreation. We need to deliver all three. One measure of success for protocols like the Montreal Process C&I will be the extent to which they shift the debate about sustainable resource management away from two-dimensional arguments about tradeoffs to one that addresses strategic questions about the compatibility of commodity production with ecological and socioeconomic goals. There will always be shifts in the balance of 'products' we manage for, in the scope and scale of our plans, and in partnerships involved. We need to continue to practice adaptive management and shift the focus from a debate about "products," or outputs, to one about the approach the nation must take to insure an outcome of ecosystem sustainability. This Roundtable can go far in providing the basis for efforts leading towards that end.
3. Sustainability is a core value of American people. Ranchers and industrial landowners care about the long-term productivity of their respective lands. The notion of sustainability is also deeply embedded in the legal foundation of the Forest Service. The 1897 Organic Act's statement of purpose for the national forests states: "*No national forest shall be established except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber.*" While this language was not exhaustive in its meaning, it reflects early understanding that social health and public welfare are affected by and dependent upon natural resources and the management of the landscapes in which they occur. This legislative cornerstone mandating and promoting ecosystem sustainability, has since been augmented over the years through other foundational federal environmental laws (i.e., National Environment Protection Act, National Forest Management Act, Sustained Yield and Multiple Use Acts, Clean Air & Water Acts, T&E Species Act, etc.), as well as with an eclectic set of environmental state laws of our 50 states. Thus the Nation has been on the journey towards sustainability for a long time.
4. The nature and distribution of resources, land ownership patterns, and jurisdictional nature of U.S. work environment make collaborative processes problematic. Land ownership patterns are complex. Over 75% of land west of the Mississippi is managed by a multitude of Federal and State entities. The BLM and FS are two of the largest land managers. Species distribution patterns add to the complexity. The US is divided you into an eclectic, administratively and jurisdictionally fragmented work environment that is overlain by the home ranges of both plant and animal species. Both forest and rangelands cover multiple jurisdictions. Federal, state, and industrial organizations independently developed measurement systems that are not comparable or compatible with each other. This makes communication across jurisdictions problematic.

5. The tool that we lack is a unifying measurement framework that crosses ownerships integrating social, economic, and ecological indices of sustainability suitable for collaborative processes.
 - a. We lack common data standards and collection protocols between neighboring land managers.
 - b. Consensus: There is little public consensus on how to frame public dialogue regarding Sustainable Resource Management.
 - c. Analysis: We are weak in integrating environmental, economic and social issues at multiple scales.
 - d. Harmonizing plans: We have difficulty in developing common goals and shared responsibilities with our neighbors.
 - e. Funds: We have difficulty focusing scarce funds to highest priority areas.

This confusion undermines collaborative processes, causes lack of trust, litigation, and often postured us in a crisis management mode. Many of you may remember that logjam of litigation over the spotted owl in the Pacific Northwest during the 80's and 90's.

6. Legacy Data is the largest single barrier to collaborative assessment, planning, and decision-making processes. Every one collects information to largely agency specific standards. Currently the U.S. annually spends 100's of millions of dollars on data collection without the capability to assess the sustainability of our rangeland ecosystems, or to effectively conduct collaborative processes designed to address common concerns. As noted, we lack a unifying measurement framework that crosses ownerships integrating social, economic, and ecological indices of sustainability suitable for collaborative processes.

7. The U.S. National Criteria and Indicators of Sustainable Resource management (internationally agreed to by the 12 countries of the Montreal Process), is providing such a unifying framework for public dialogue, analysis, measurements, planning, and assessments. The national C&I are a relatively simple statement of seven key goals (criteria), with associated measurements (indicators), designed to promote an understanding of what constitutes sustainable management of temperate and boreal forests and rangelands. The seven criteria are:

1. Conservation of Biological Diversity
2. Maintenance of Productive Capacity of Ecosystems
3. Maintenance of Ecosystem Health and Vitality
4. Conservation and Maintenance of Soil and Water Resources
5. Maintenance of Forest Contributions to Global Carbon Cycles
6. Maintenance and Enhancement of Long-term Multiple Socio-Economic Benefits to Meet the Needs of Societies
7. Legal, Institutional, and Economic Framework for Forest Conservation and Sustainable Management

8. This is a domestic effort. We are using the seven (7) national criteria as a framework to organize indicators for forest and rangeland resources. The criteria for sustainable forest management are those developed under the Montreal Process. This Roundtable for sustainable rangelands will want to identify indicators that characterize the social, economic,

and ecological components of rangeland sustainability. Although there are three Roundtable initiatives, this effort should not be viewed as a reductionist approach: Rather, by each using the same 7 criteria, integrated analysis and reporting will be encouraged. The separate Roundtables were established to enable full representation of vested interest groups.

9. At the conclusion of the first interagency roundtable with agency heads and NGOs, participants mutually pledged to work together to develop a Memorandum of Understanding to define the responsibilities of cooperating agencies and partners to:
 - Participate in scientific teams including examining the criteria and indicators to establish a common list of national level, ecological, social and economic measures and protocols.
 - Identify current sources of information, seek to establish a collaborative national inventory platform from which to gather data, and collect and report on indicators specific to agency mission.
 - Contribute to the development of a National Report on Sustainable Forest Management by 2003.
10. The MOU was completed and signed Oct 16th 2001. The MOU provides the umbrella for the Rangeland roundtable. This MOU establishes a mechanism for cooperation among Federal agencies having data responsibilities pertinent to the sustainable forest management goal announced in Presidential Decision Directive NSC-16 and endorsed in the Santiago Declaration. The MOU provides:
 - A common interagency forum for Federal coordination to resolve issues integral to collecting, monitoring, analyzing, reporting, and making data available on an ongoing basis related to the C&I.
 - A process for helping the Federal agencies develop a national report by 2003 for the Montreal Process on the state of the Nation's forests and progress towards sustainable forest management in the United States (U.S.). Thus the roundtable initiatives are separate but parallel efforts that are related.
11. A desired outcome of this Roundtable process is to establish a common framework of national measures that help to unify a highly administratively and ecologically fragmented landscape. The national C will provide a common language of measurements independent of ownership or political boundaries, and that integrate social, ecological, and environmental indices of sustainability. This will facilitate collaborative assessment, planning, and decision-making processes to address the viability needs of species, along with other indicators of sustainable resource management.
12. When complete, the measures to be developed will:
 - Characterize Sustainable Resource Management
 - Demonstrate performance of 'vital signs'
 - Provide a common language of measures –A framework for collaborative processes
 - Inventory and assessments
 - Planning goals and objectives
 - Monitoring & Reporting on performance measures
 - Provide a landscape context for sub-national activities

Appendix C Issues and Discussion

Directions: Draft a few carefully worded, important issues where roundtable meetings should focus their indicator work. These issues should be “Big Picture”, future focused, holistic, and transcend “artificial” boundaries

In this appendix, italicized names indicate the group leader, issues appearing in a lighter type were determined by the group to be redundant to this issue list.

Group 1: Ann Bartuska, Rodney Baumberge, John Tanaka, Lynn Huntsinger, Evert Byington, Linda Hardesty, Paul Geissler, Tom Lustig, Tim Reuwsaat, Dave Wheeler

1. Can indicators be developed independent of land use?

Discussion points:

- a. What is land to be used for, do we need to figure this out before we engage in an indicator process?
 - b. With the vast number of rangelands and stakeholders, agreeing on a desired future condition is beyond the scope of this group.
 - c. What are rangelands providing or not providing? What were prior uses of the land?
 - d. How do we determine the best use of the land?
 - e. The issue raised here is more do we need to know the use before making the indicator, yes or no. The values of use are not important. Example: land used for strip mining may not need to be measured for antelope habitat. A wildlife refuge might need to be measured differently.
2. Should we measure the current situation and then develop criteria for where we want it to go? Make sure all stakeholders are included?

Possible alternatives (it was decided that more careful reading and writing was needed for this issue to be able to reach agreement):

What is the historic time frame for indicator development? A linkage between past, current, and future conditions; range of variation.

Does sustainability involve a return to conditions that existed at some prior point in time?

Ensure that identified indicators are separate from thresholds or goals.

Discussion points:

- a. How do we capture how the land is changing? How do we figure out past conditions and whether trends are improving or getting worse?
- b. How do we link past, present and future condition?
- c. How can we establish reference points and/or threshold levels? What kind of variation would we be willing to accept? How can this be measured?
- d. Will we include the concept of an unalterable condition; that sometimes a goal of going back to some state would involve extensive treatments?

- e. Scale- it is important to distinguish between faulty instrumentation and scale issues. We need to be clear about what scale we are looking at for thresholds and reference points.
- f. Sustainability: some argue for keeping things as good as they are today, others say this is not good enough.
- g. The key for an indicator is what do we measure in order to make a judgment about where we want it to go.
- h. Our indicators should be different from goals or thresholds.

3. How do we define and measure rangeland health?

What is the baseline?

Use vs. functionality

Indicators based on functionality (potential, current)

Discussion points:

- a. This is similar to question 2 above.

4. Can we evaluate functionality separately from use and values? (redundant)

5. Can we measure or evaluate the impact of the goods and services that come off of rangelands on the culture and character of communities (including economic and non-economic goods and services) at multiple scales?

Discussion points:

- a. We will need an adequate suite of indicators to consider all aspects of sustainability.
- b. How can we address scale here to include rural communities but also larger scales?

6. Endowments, outcomes?

Discussion points:

- a. Is the SDI Endowment Outcome model useful for us?

Group 2: Al Abee, Herman Garcia, Ken Nelson, Bill Travis, Robin O'Malley, Robert Shaw, Terry Riley, Tom Roberts, Doug Tedrick, James Cash

1. Biodiversity: Do changes in biodiversity impact rangeland sustainability? Do changes in biodiversity affect the productive capacity of rangelands to produce goods, services, and values, and access to those resources?

Discussion points:

- a. Remove deleterious as a value laden term
- b. Assumption that biodiversity affects productive capacity is not supported in ecological literature.
- c. Biodiversity may affect some goods and services, but not all.
- d. Rephrased statement into a question.

2. Access: Is access an important issue to rangeland sustainability because of conflicts to use of the resource? These conflicts are both consumptive and non-consumptive. Quantity of access

and its effect on sustainability; volume of use. What indicators should be used to measure changes in access?

Discussion points:

- a. Some uses incur more damage than others, for example, with more roads come more invasive species.
- b. Be careful not to make judgments of uses. Look at increases or decreases of access over time then trends can be determined to be positive or negative by those evaluating this information.
- c. Is access an important issue?

3. Custom and Culture i.e., ranching, recreation, mining, Native Americans

Rangelands are associated with a suite of cultures and customs, which are affected by changes in social context (policy, demographics, etc.) and the physical environment. But, if the culture is important to rangeland sustainability, how do we define and measure it, and assess its sustainability?

Discussion points:

- a. Cultures and customs should not only represent ranchers because there are many other stakeholders of rangeland that should be represented by our indicators and process.
- b. How do we measure cultural sustainability, by how many leave these areas?

4. Productive Capacity of Rangelands: Is the production of goods and services affected by both the overall amount of rangeland, and the condition of those rangelands? Can we measure the nature and extent of soil and water (biophysical) resources in a way that defines the productive capacity of the rangelands to produce both market and non-market goods and services?

5. Production of Goods, Services, and Values

It is important to measure the amounts of goods, services, and values produced by rangelands, and the inputs used in producing these goods, services, and values.

Discussion points:

- a. There are market and non-market goods produced from rangelands and changes in what is produced from rangelands can switch from one to the other. Is a decline in one arena made up for in another area? How to balance the three basic tenets of sustainability. Must this be included in the indicators?
- b. The use of non-declining resources is status quo, if future generations are to get the same amount. Is this what we want?
- c. Rangelands can provide forage as a renewable resource. The endowment must be kept at a certain sustaining level.
- d. How will technology fit into substitution?
- e. There is substitutability amongst outputs and uses of endowments; all can be included within certain definitions of sustainability. Perhaps we need to select indicators first and then think of substitutability.
- f. Some rangelands are not at the capacity we think they should be?
- g. Perhaps this issue could be captured in the well written paragraph (requested in Group 1's issue #2)

Group 3: Alison Hill, Marty Beutler, Mark Brunson, *Rod Heitschmidt*, Dennis Child, Duncan Patten, Ted Heintz, Lori Hiding, Mike Manfredo

1. Are fundamental ecosystem processes and components sustained?

Potential indicator categories -

Biodiversity

Nutrient cycling

C+++ cycling

Water cycling

Soil quality

Discussion points:

a. Are these fundamental ecosystem processes prerequisites for sustainability?

b. Changed into question.

2. What is the nature and extent of human induced ecological stressors?

e.g. Invasive species

Contaminants

Abusive consumption (tanks, 4-wheelers, bombing)

Discussion points:

a. Need to control these if we are to be sustainable over time.

b. Make into a question.

3. Conversion of rangeland to/use

Urbanization

Other agri-ecosystems

Fragmentation/parcelization

Discussion points:

a. similar to access point brought up by group 1

4. Maintain/enhance human benefits derived from rangelands

Livestock production

Cultural-lifestyle

Recreation/tourism

Non-use value

Non-traditional products – medicinal plants etc.

Scientific educational

5. Do existing political, legal (laws and regulations), land management and educational institutions provide the capacity to manage public and private rangelands sustainably?

Legal guidance?

Level of trained expertise

Stakeholders acceptance of management policy/procedures/use

Group 4: Larry Bryant, Allen Torrell, *Lou Swanson*, David Pyke, Clayton Marlow, John Mitchell, Fritz Knopf, Linda Joyce, Stan Hamilton, Tom McDonnel

1. What is the extent and degree of changes in disturbance regimes, e.g. invasives, fire, people, weather (climate)?

2. What are the nature and extent of changes in rangeland-use, e.g. changing ownership, recreation, management, output (what is consumed), development?

Discussion points:

- a. We need to deal with land use changes. We see there is intensification, non-traditional uses, subdivisions in some areas, depopulation of other, more rural, areas.

3. Who are the stakeholders? Who else needs to be at the table? [not an issue for indicator development, but for the SRR to consider]

4. Flexibility in indicator list to reflect changes in social values and science. (Roundtable consideration)

5. Resolve the definition/terms for “rangeland” (Explore existing definitions)

Discussion points:

- a. It is important when these indicators are measured to know what encompasses rangeland, so that the appropriate areas are monitored and compared.

6. Integration/linkages of indicators

Can local indicators ultimately be folded into the national indicator list? (multiple scales) What is the relationship between local indicators and the national indicator list?

Discussion points:

- a. There is disagreement over whether these national level indicators can be used on a local scale (John Mitchell) and whether there will be acceptance of the indicators if they are missing local indicators (Ann Bartuska).

7. Conservation of soil and water resources/productivity (biodiversity)

Appendix D Frameworks

Generate a proposed draft format/framework for validating/evaluating indicators.

Discussion

- Look at SMR Format
- Try a Sample Indicator
- What questions should the indicator answer?

Group 1:

What should an indicator be/have/do? How to validate it?

1. Useful at different geographic scales?
2. Does it measure something important?
3. Is it repeatable?
4. Comprehensive? Across time and sites?
5. Is it reliable (low variance) and valid (not biased)?
6. Responsive and sensitive short-term?
7. Doable economically?
8. Quantifiable?
9. Qualifiable?
10. Interpreted same way by people?
11. Acceptable and Understandable by people?
12. Useful to people?
13. Responsive/sensitive to impacts in a relatively short time frame?

Group 2:

1. What's the indicator?
2. What does the indicator measure?
3. At what scale is the indicator useful?
4. Why is the indicator important?
5. What's the scientific justification?
6. What data are needed?
7. Do the data exist?
8. How to choose among competing indicators?

Group 3:

Good Indicator?

1. Understandable?
2. Measure important/meaningful trait?
3. Related to sustainability?
4. Reliably sensitive?
5. Affordable?
6. Robust data?
7. Accessible data?
8. Scalable in time and space (generalizable)

Group 4:

1. What issue does the indicator address?
2. What does the indicator measure?
3. Does it replicate another indicator?
4. What data will be required?
5. Do data exist?
6. Can we afford it?
7. Does the science exist?
8. Adopt descriptive titles that communicate intent.
9. At what scale does the indicator apply?
10. Explain the indicator's relevance to sustainability (the criterion).
11. Stakeholder buy-in.

Appendix E

Tactical Recommendations

This Appendix contains all of the small group suggestions (listed by number) followed by subsequent large group discussion.

Directions to small groups: A set of specific tactical recommendations – how to promote greater awareness, acceptance, and support for the development of indicators for Sustainable Rangeland Management. Please discuss:

- **forces working for the development of indicators**
- **forces working against the development of indicators**
- **Whether all stakeholders are being represented?**
- **How do we maintain momentum between meetings?**

Strategies as reported by each group

Group 1(Representation of Stakeholders):

1. Get as many agencies and groups to agree to help develop and use indicators, and how they will/will not be used.

Discussion: Outsiders to the SRR process may view indicators as a threat or as going nowhere. We need more groups make uses more specific and for “buy in”.

2. Seek out other groups (especially those w/ grassroots ties) – Western governors, National Association of Counties (NACO), National Association of Conservation Districts (NACD), Resource Conservation and Development Councils (RC&D), Grazing Lands Conservation Initiative (GLCI), producer groups (Woolgrowers and National Cattlemen’s Beef Association), environmental groups, national weed groups, faith-based resource management, “small” landowners, tribes, National Realtors, Homeowners Associations (small landowners?), land trusts, and umbrella organization to represent local groups

Discussion: We need to pursue agencies that aren’t here. We could set up an outreach working group such as the Sustainable Forest Roundtable has.

3. Link to other efforts (Forest Health, National Fire Plan)

Discussion: Take advantage of existing working groups and large-scale efforts.

4. Prepare short briefing paper – brochure, white paper

Discussion: Paper would be used for general dissemination to get information out to explain the vision and work of this roundtable. Provide examples of how indicators will and will not be used (hard to do because we don’t know, can’t make promises). Commission that developed Proper Functioning Condition (PFC) made a similar promise that was later broken (said it wouldn’t be used for monitoring but it was). The goal of SRR is to be used for a national assessment for 2003, but we know that it’s not a site-specific indicator. The way economic data is combined, you can’t get corporation level data from GDP information, but it is used to produce the GDP.

There is no local application for GDP or for the indicators and data collected that will be used by the SRR. This is true for private lands but on public lands the data monitoring falls under the freedom of information act (FIA). How do we protect site specific data, can we mask the specific data? This data should have some degree of utility on regional levels; if it doesn't, it probably won't be accepted. We aren't going to collect data for 2003 report we will use already collected data. FIA can't reach conclusions as to how land is being managed on one plot. This is all a scale issue.

5. Increase coordination with other groups that are working on indicators

Discussion: Work with groups that are developing indicators already. How does this roundtable fit in with people who are working on indicators? Often other groups are doing broader indicators that include rangeland.

6. Agree on definitions and terms for "rangeland", "sustainability", "indicators", and "scale"

Discussion: Definition of national indicators: an indicator is a statistical series of measurements, one measure repeated producing a time series of data, empirical measures, and not projected measures. We are just reporting on current measures not forecasting measures.

We might not want to define sustainability because there are so many different definitions. Everyone will come to his or her own views as to what sustainability is.

Maintain Momentum Between Meetings

1. Good documentation- bringing in new members

Discussion: We don't want to reinvent the wheel at each meeting. Do we record groups that decline the invitation to attend? We might want to just get feedback from groups because if we try to include too many groups it will become unmanageable. We want to make sure that every new attendant gets all the background from this meeting.

2. Scheduled a year out in advance

Discussion: People's calendars fill up nine or ten months in advance.

3. Piggy-back with major national meetings

Discussion: Holding our meetings simultaneously with other national meetings that members of the roundtable will be attending.

4. Keep in central hubs – need to know you can make meetings

Discussion: Keep in Great Plains. Hold meetings in cities where Southwest flies. From West Coast you lose a day going to Denver so it isn't much worse to go all the way to the East Coast.

5. Frequent reminders
 - a. Personal contact
 - b. Delphi emails
 - c. Website
6. See progress – quick feedback on products
(Quick interim products)
7. Knowing what is coming up – will we make significant progress at each meeting?
8. Knowing there is an end-point and an end product.

Discussion: What is the end point of this program? (None currently.) The Forest Service is committed to producing a report in 2003. We need to develop what will go on after we give input as to what indicators should be. How can we implement this and how will it be beneficial to what we do?

Rangelands crosses more agencies than do minerals and forests. All stakeholders must be convinced that there are benefits. It is important to identify milestones to measure our own progress.

Doesn't benefit the Wildlife Federation because they have a limited staff and prefer working with Congress to develop programs, which is more beneficial to their group and others like them. By the time indicators are condensed, many groups can't benefit from them. Most groups involved are action oriented and the indicator process doesn't benefit these types of groups. Indicators help to judge the aggregate effect of all decisions. If indicators don't tell us what is going on people won't buy into them.

Group 2:

1. Identify leadership for initiative-
Should be highly visible
Professional – SRM
Academic – CSU
Should be resourced to greet-meet
Get buy-in and do political work by June/July meetings

Discussion: Need to deal with perception that this is a government or Forest Service program. Including SRM would broaden the scope. Get in touch with other organizations that missed this meeting, so they can be caught up for the June and July meetings. Make other groups realize that this process isn't run by the agencies and educational institutions alone. Not sure if it needs to be done by CSU or by the general membership.

2. Increase Partners
Decrease government involvement?
Increase involvement of under-represented groups (Western Governor's Association, Private Land Owners, ASI, Farm Bureau, Environmental Groups, Earth Justice)

Discussion: Don't really need to decrease government involvement as much as increase private sector involvement.

3. Downplay International Connection
Increase perception of a bottom-up initiative/decrease "Montreal Process" language

Discussion: Don't want the perception that this was forced from the outside by an international program. It needs to be presented as a bottom up program, not as being planned from the top down. Montreal process can be used as a framework but not the main point.

4. Create a business plan – Budget plan to estimate costs and identify stable funding sources for initiative, Operational plan for the development of indicators

Roundtable good for ideas, but small working groups must do the majority of the work building indicators

Discussion: This group needs to develop an operational plan for development of indicators. Part of that plan should include a budget plan to estimate costs and point out stable funding sources. Small groups meeting outside of the roundtable must do most of the indicator development. Possibly have experts develop indicators and SRR will discuss and decide upon what they present. We need to ask for funding in a structured way. Add more depth to the initial plan Tom Bartlett presented. Even once indicators are identified, it will take some scientific study to solidify the indicators. All people are not interested in all topics so you can group people of similar interests to work on specific indicators. Conference calls can be very useful. Forest working group started with indicators so they had it a lot easier than the mineral and the rangeland roundtables. It makes it a lot harder because this group has to decide what the indicators should be.

5. Must connect initiative to new administration
Seek political/financial support from:
CEQ, OMB, OSTP, NSI, NAS, DOD

Discussion: Most agencies don't have appointed heads yet because administration isn't developed yet.

Group 3:

1. Increased effort to bring stakeholders to the process early. Need participation from private interest groups
2. Campaign to build public/stakeholders awareness of concept of sustainability (especially necessary for "general" public)
3. Need to work w/ agencies other than FS (BLM, NRCS, FWS, NPS, DOD, EPA) to commit in a way (e.g. \$\$\$) that goes beyond wait-and-see participation

Discussion: Get people to commit to development and use by a number of groups. Outside groups that will pressure agencies (especially ones that work with private landowners) to

participate need to be identified. One example of interagency involvement is the Southwest Strategy Group.

Scale is really an issue. Local groups want to get involved looking at indicators. However, when the scale is national and then local groups can't get involved.

Sixty percent of rangeland in US is in private ownership.

Unless we identified data that is already collected, we may come out with recommendations to collect data that isn't currently collected. Will this data be collectable?

4. Reassure stakeholders that indicators are designed to be value-free, reliable over time, descriptive but not prescriptive, not intended to drive control farther from local manager
5. Build understanding of utility on indicators (so we measure 'em, so what?)

Short Term Products and Tasks (Group 3)

1. Distributable formal and informal info products (consensus of roundtable) produced during and at the end of the process. These can include website (w/ current approximation as dynamic process), National Academy report at end, agreement to share w/ others when opportunity arises
2. We need to work within all of our professional societies (ESA, SRM, TWS, SCB, etc.)

Discussion: Work with groups and societies other than SRM. By having personal connections we can overcome the unknown.

3. Meeting of leaderships of major organization (professional, commodity, NGOs) – shoot for Reno meeting

Discussion: How do we meet the stakeholders? We want to include them as soon as possible. Is there a place and time when we could invite identified key groups? We should have a bonding meeting and a meeting that provides information dissemination. Possibly hold one in Washington DC and one in the west.

*These need to be comprehensively identified.

Group 4:

Set of Ideas for Group Discussion –

1. Need to enhance the positive value of the indicators
 - a. Indicators will bring focus to the arguments; arguments by experts on different rules

Discussion: Can bring extremists together

- b. Indicators will offer a marker for accountability; accountability on sustainable management of rangelands; for example, if sustainable mgmt. Of rangelands is being used to market a product.

2. Need to conceptualize the link between local monitoring and national indicators. Rangeland problems are site-specific. Local monitoring is cultural to decision-makers. National indicators – how do they link to local? The buy-in from local stakeholders is important. Local stakeholders could be concerned about the use of indicators, just used to get producers off of the land, for example. Local stakeholders are also important in influencing Congress through local representatives. National indicators may be easier to support if the organization is national, however the local support is critical. Developing the local support will require articulating the relationship between local and national indicators.

3. Educational aspect – indicators can have an educational aspect to explain and discuss rangeland sustainability; that rangeland sustainability includes the ecological, economic, and social aspects. This allows the economic and social to be discussed.

Tasks – Group 4

1. Task for host – meet with producer groups to explain C&I and have them critique the C&I for forest, how it might be applied to rangelands. This meeting might help bring these groups to the table.
2. Task for host – meeting with environmental groups. Explain C&I and have them critique C&I for forests, how it might be applied to rangelands. This meeting might help bring these groups to the table.
3. Task for host – develop a 2-page think-paper that can be used to expand the stakeholders in the roundtable process. Ideas in No. 1 above need to be resolved to help write the 2-pager. *Try to develop the 2-pager by the SLC meeting.

Discussion: This might be used to market SRR. The relationship between certifying forests and national indicators could be explored.

4. Task for host – encourage ESA and SRM to write a letter to the departments to encourage them to host a meeting on the SRR. Departments to be included: USDA, USDI, USDC, USDD, EPA

There was a sense that we need a champion such as SRM and ESA, to engage buy-in from the federal government. This patterns events that supported the Forest Roundtable.

5. Additional Stakeholders – Western Governor’s Association, CAST, NACD, WRCC committees, Experiment Station/Extension Directors of Western States, Western Land Commissions, American Farm Bureau, Western Deans, National CBA

6. Task for Hosts – Re-examine vision statement for words such as Decisions; incorporating educational aspects; expand utility of social, economic aspects
7. Task for host – submit article on C&I to journals such as Rangelands, Beef magazine, Livestock journal, newspaper focused on agriculture.

Appendix F

Mission and Vision Statements

The statements in italics received the highest amount of support at the meeting.

Mission:

(Definition by Lou Romero: A good mission statement does the following:

- Succinctly describes the organization's fundamental purpose; its reason for existing.
 - It speaks to the business of the organization.
 - It stakes out the scope of its work.
 - Speaks to the value delivered to its customers.
 - It indicates the types of products and services.
 - Distinguishes its purpose from other organizations.)
1. To contribute to a comprehensive national assessment of the sustainability of U.S. rangelands. The Roundtable will identify indicators that may be used to assess the aggregate sustainability considering social, economic and ecological factors and that provide a framework for monitoring and periodic assessment.
 2. *To develop a framework and identify indicators for assessing the overall sustainability of rangelands within the U.S.*
 3. The Roundtable will develop indicators of sustainability based on social, economic, and environmental factors, to provide a means for assessing the status and trends of rangelands.

Vision:

(Definition by Lou Romero: A broad, compelling, succinct leadership statement articulating a desired and possible future condition to strive for.

- It embodies the Organization's mission and values and is responsive to major societal trends.
 - It should inspire, motivate and facilitate understanding regarding the direction the organization intends to move toward.
 - It allows comparison of present conditions with the future desired state to draw conclusions for key goals items and strategic initiatives.
 - Powerful, effective visions have three qualities: bold, attractive and doable.)
1. We envision a future in which private and public actions concerning rangelands contribute to social, economic and ecological sustainability in the U.S. (This statement does not mean that all lands must contribute equally to all three aspects of sustainability.)
 2. *We envision a future in which rangelands in the U.S. contribute to sustainability considering social, economic, and ecological factors.*

3. We envision a future in which rangelands are healthy and contribute to the needs of society.

Discussion on vision statement:

Economically sustainable- one may argue that some ecological interests do not care about economic sustainability. Some areas might that might be ecologically sustainable might not be economically sustainable, i.e. preservation might be a loss economically. On the other hand some mining interests might argue that not all areas will be ecologically sustainable. Can rangelands be all three at once?

Current and future generations- perhaps we don't want sustainability for humans but for the preservation of natural areas into the future.

Maybe all three tenets (ecological, economic, social) have to be on equal three stooled footing.

This does not apply to specific pieces of land, but the aggregate needs to be sustainable.

If land is managed for a certain use, that use should be a sustainable use. (No it is overall sustainability.)

We are getting stuck on having to incorporate social, ecological, and economic tenets of rangelands for every piece of land.

Appendix G

Discussion on Guiding Principles

Uncomfortable with buying into criteria that is from outside that might constrain the process.

Montreal Process seems foreign. Adopt what seems useful. Begin by operating within the C & I framework.

Want unity for overall management. If we want others to buy into what we have, we should make efforts to work with what came before us.

Look at criteria and if they are incomplete then we need to change them. We have to assess and agree on the criteria then we fill these out with indicators. We cannot come up with a bunch of indicators then try to make up criteria to put them in.