Sustainable Rangelands Roundtable
Austin General Session
Tuesday, June 15, 2010

Welcome & Introductions

John Mitchell (RMRS-CO), Doug Powell (BLM), Rob Roudabush (BLM), Ken Spaeth (NRCS), Paul Patterson (USFS), James Bernard (Consultant), Corrie Knapp (CSU) , Kevin Barnes (USDA/NASS), Larry Butler (NRCS TX State Conservationist-Retired), Matt Reeves (RMRS-MT), Dean Bibles (Public Lands Foundation; BLM-retired), Bob Breckenridge (Idaho National Laboratory), Dan McCollum (RMRS-CO), Cliff Duke (ESA), Jeanette Kaiser (USFS), Kristie Maczko (SRR-UWYO), Lori Hidinger (ASU), John Tanaka (U WYO), Chuck Stanley (NRCS), Ted Heintz (CEQ, DOI – retired), Urs Kreuter (TAMU)

Vision & Opportunities

Introduce the idea of a new issue-based strategy to use indicators to help inform decision makers about critical issues and request reflection and consideration of this idea throughout the meeting.

Project Updates

Monograph Status. The report on criteria and indicators came out in 2003. Reviewed by Information and Education committee (Karen Launchbaugh) will be completed by Wednesday (June 16). Monograph will be published soon.

W1192 Committee. Land grant University program that 25% needs to be spent on multi-state projects. SRR helped to bring together a project involving range economists focused on the wildland/urban interface, invasive weeds and fire. The new structure may allow SRR to reengage some of these folks.

Outreach Activities.

Completed:

- 4NCGL-Grazing Lands Conference (Dec 09). Did an exhibit and presentation/workshop on ranch assessment framework.
- SRM (Feb 10). Did another ranch assessment workshop—standing room only. SRR sessions at SRM are usually not that busy.
- MAL2-Managing Ag Landscapes (NRCS)- Ecosystem services poster.
- Agro-forestry roundtable (by invitation to DC). Issue of planting trees and status of land; land classification for conservation incentive payments. Interest in stakeholder management.

Upcoming:

- ESA meetings-Kristie will create a new poster integrating climate change and ecosystem services.
- NASCA-Look at the middle group between ranch level and national level. Attempt to connect with state-level folks.

- GLCI- National Steering Committee-SRR programs. GLCI able to do more lobbying.
- Public Lands Council- Recent change in leadership. Invited to talk about ranch assessment framework.
- ACES-Conference on ecosystem services-scheduled for Phoenix—work on climate change and ecosystem services.

Partner Resource Roundtables.

- Cliff, John T., Kristie, Ted Heintz and James were able to attend an all-roundtable meeting in December. Found some overlaps between indicators. Believe that there is a benefit to getting together and thinking on a landscape scale.
- James attended the Palo Alto Sustainable Water Resources Roundtable Meeting. This group was focused on issues, not indicators. Were more interested in urban issues than rural. Interesting project out of UCSB about the net amount of water and energy expended in transfers between N and S CA.

Ranch Level Assessment

Draft of ranch-level sustainability workbook is completed (integrates 17 indicators). Worked with WY Business Council to create workbook. Currently piloting the workbook with a ranch family in WY. SRR received WSARE funding for SRM/NRCS trainings about the ranch process and educate resource and business planning side. Talking with NRCS about pilot program alongside conservation planning—add viability planning. An external review of the draft guidebook will be completed by the end of July.

Ecosystem Goods and Services

In February of 2008 the booklet on ecosystem goods & services (EG&S) came out. Associated projects include: 1) Energy production and EG&S. This paper has been submitted to BioScience and there are plans to create more general pieces. 2) Climate Change. This paper will look at policy/management in the face of climate change. Dan is currently working on a draft for Global Environmental Change. Both of these projects might provide good steps for moving towards assessment report.

OR Pilot Project

The BLM, FS and NRCS decided to come together to test 4-5 indicators and use 2 existing sampling frames (FIA, NRI) to get to collect data and assess how it could be aggregated for a national assessment. The OR assessment included 13 counties and over 50 million acres. The report is currently being worked on and will provide internal understanding. Currently there is no money for continuing the project and no "next steps." DOI is focused more on regional assessments. Project was able to 1) combine results of the data sets, 2) come up with a mechanism to collect data on BLM lands and 3) learn how to allocate resources to cover the area.

Associated happenings:

- FS is expanding FIA as we speak. Reach is extending unto FS and other federal lands. Trying to look at how data is collected so it may be aggregated.
- 2010 RPA is coming out soon—not a lot of emphasis on rangelands because there is no data.

- BLM is currently looking at options for sampling schemes—Herrick (Jornada) is working to develop this.

NASS Data (Kevin Barnes)
NASS is the statistics service for the USDA and collects confidential data directly from producers. Presentation described what types of data are collected and when they are collected. All data is maintained in ERS data enclave and is available to researchers. They are currently working on long term plan about data needs and would like to help develop the program and understand what should be tracked. The presentation included a discussion of the overlap between NASS and SRR indicators (see NASS presentation for more details).

FIA Data (Paul Patterson)
The FIA started in the 1920's as a regional effort. There are currently four regional collection areas and they still differ in what and how they collect data. The focus has been on forested land, but they are interested in collecting more on rangelands. Some of the data is stored in regional database or in the Forest Service database. The FIA database is accessible by anyone, but not the plot locations. If need specific geographical references the FIA can do it in house or create an MOU with researcher. The presentation included a discussion of the overlap between FIA data and SRR indicators (see FIA presentation for more details).

NRI Data (Ken Spaeth)
This presentation discussed the types of information collected by the NRI and the reports and papers generated by it. NRI designed to collect statistical and scientific data that can be used by researchers. In 2003 they began a new rangeland study, and expanded it to pasturelands in 2005. The specific types of data collected are available in the presentation. The Rangeland NRI Report (based on 2003-06 data) will be released once journal article is accepted—sometime in October. The RCA report should also be done the end of July (also 2003-6 data). Eventually this data source will provide the ability to detect trends over time, but they aren't there yet. Provide a description of SRR data needs and correlation to NRI data (see NRI presentation).

Indicator Selection Methods (Bill Fox Presentation—presented by Cliff Duke)
There are a large number of potential indicators and you can't monitor or measure all of them. People need to have a way to choose the most important indicators for a given question. This presentation provided a review of criteria for good indicators. Presentation reviewed and discussed several potential frameworks.

Indicator Selection Processes and How to Apply (James)
Presentation provided an overview of what indicators can provide and then discussed several efforts (PNW & Terrestrial Indicators) and what selection criteria they used. Found that often whether the data is available and cost effective trumps other concerns. The presentation concluded that there is no silver bullet to identifying the right indicators.

Small Group Work on Indicators
The larger group broke into three smaller groups to think through the selection process with the goal of creating a list of selection criteria.

Group Feedback

Group One: Ted
This group discussed the importance of looking at how selection will vary depending on question and issue. Came up with four primary criteria:

- **Importance**. The indicator needs to tell us what we want to know, be relevant to conditions/processes, and be anticipatory to change.
- **Measurement.** The indicator needs to be measurable, standard/consistent, and be measured in an appropriate way.
- **Understandable.** The indicator needs to communicate to a broad audience
- **Ability to Aggregate.** The indicator needs to be relevant at various scales and promote an integrated sense of sustainability.

Group Two: James
Discussed how you need to make sure indicators provide enough without too much information for decision makers. The group felt that indicators should focus on the quality of decisions and if they help to assess rangeland health. They felt that it is important that there is a whole toolbox of indicators and some will be used more/less. This group also discussed the importance of the economic implications of indicators. Came up with three selection criteria:

- **Importance** (for different audiences)
- **Relevance**
- **Data availability** (what is consistent and high quality).

Group Three: Cliff
This group felt that the criteria should not be mandatory and will change depending on the issue/group. They discussed six criteria:

- Relevance,
- Scale considerations,
- Availability and integrity,
- Clarity,
- Usefulness and ability to implement

This group also discussed how it is important to ensure some consideration of ecological, economic and social indicators. Want to make sure that they have looked across the spectrum to look at groupings.

Other Criteria (added during whole group discussion):

- Affordability: need to be able to pay for it or won't be done.
- Legally defensible: Provides proof and is defensible. Need to have a process to back it up.

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Overview
Started the day with a review of the list of indicator selection criteria from breakout groups (on paper).

List of criteria:
- Informative
- Anticipatory
- Relevant
- Important
- Understandable (clarity/useable)
- Aggregatable (scale)
- Promote integrating
- Value-added
- Toolbox
- Data available (consistent, quality, integrity)
- Affordable
- Ensure consideration of S.E.E.
- Focus on quality of decisions so that decision-makers know "enough"

Cliff Duke: Bio-fuels Conference
In 2008, ESA hosted a two-day conference on bio-fuels with a dozen speakers and about 50 people in attendance. Goal of the conference was to discuss the issue and make recommendations for a research agenda. Discussed a wide range of impacts on land use, land dynamics, biodiversity, water, biogeochemistry, and indirect/downstream effects. The conference highlighted the importance of systems thinking (LCA), the need to think through impacts to ecosystem services and the challenge of scale alignment. Conference resulted in a bio-fuels position statement and policy form published in Bioscience and then a series of reports intended for non-scientists. Reports are free on the web or available in hardcopy mailed through ESA. The report concluded that bio-fuels are part of the energy solution but can either hurt or help conservation goals. The tradeoffs and implications of biofuels are complex and it is important that decisions are based on science. General website is www.esa.org/biofuelsreports

Energy Paper
This paper was written in order to look at the tradeoffs between energy types (wind, natural gas, bio-fuels) using the ISEEC model. Decided to focus on bio-fuels to work through the model. Model provided a way to think systematically about the linkages between ecological and social systems. For each linkage, looked at which indicators would be most helpful for measuring that link.

Discussion

- The group was very enthusiastic about this work and felt it was representative of how far the group had come
- There was some discussion about how the ISEEC framework might be helpful for NEPA analysis. Some thought that this would be good for the scoping process of the EIS, but there was also some concern that this would add to the burden of agencies. Would like to pursue the thread in future meetings—besides the BLM/FS people here. Bring in the NEPA folks and learn a little about how scoping is done, EIS, EA. Have a back and forth about applicability of this type of thinking and the potential risks. We shouldn't get hung up on how this will be used/adapted. This process is separate from how this will be used.
- Discussion of a potential Science article (policy format).

Landscape Approach for Managing Public Lands

This presentation discussed BLMs' new landscape approach to land management. This is a radical change for BLM—from authorization to conservation. Goal is to identify areas where ecological processes are functioning still and prioritize them for conservation. These regional assessments need to be relevant to local communities and need to be able to integrate different scales. They hired the Udall Institute to assess the effectiveness of the effort. There is increased pressure about inventory, assessment and monitoring. They spend 150 M a year and can't say anything about the resource. Need to institutionalize data collection process while allowing for some local flexibility. Currently working on indicators and new monitoring protocol for BLM.

Increased focus on climate change in four different arenas:

1. Mitigation. Includes mitigations for use authorizations, carbon sequestration and lowering carbon footprint.
2. Adaptation. Occuring at the regional level and looking at local scale modeling. Created local science center and trying to drive adaptation at a local level, but there are governance issues.
3. NEPA planning. CEQ rolled out a plan but it was rejected because it didn't fully include what they were already doing. Desire to have climate change and GHG incorporated in each NEPA process.
4. Research & Development.

Indicator Revision Process

SRR pursued the first four steps of the criteria selection process at a workshop and came up with a matrix of indicators and information. Currently the list of potential indicators includes more than 217 measurements. The bulk of these measurements are socio-economic. Since then, there have been advances in data collection and new indicators need to be considered. Some of the current indicators are difficult, if not impossible to measure (legal-institutional framework: Criteria 5). Indicator matrix has been revised/cleaned up and linked with available data (if available). In the afternoon, we will break out in small groups and review changes and new revised names to make sure they are correct.

Afternoon Break-out Sessions
The goal of these sessions is to come to resolution about indicators so that we can finalize them. Specific tasks are to: 1) chose between 2-3 different names, 2) add other data sources or strike out if not appropriate, 3) suggest another indicator if there is a data-gap or if there is a better measure.

Socio-Economic Indicator Group
They were able to finish indicators 24-54, but didn't get to the institutional categories. Most of the social indicators were left in because there was only one sociologist. Decided on new wording for some indicators and others were deleted. They added one new indicator. John needs to work with JD to reconcile some of the suggestions regarding indicators. Felt they were as close as they were going to get.

Ecological Indicator Group
This group was able to get through all of the ecological indicators, but got a little stuck on #25. For some of the indicators the group decided to go back to the original wording or amended current wording. They also added some data sets that could support indicators. They added one additional indicator. Some of the indicators need a little more tweaking, but it should be enough so that we can begin to look at issue-based assessment and what data are available. (Corrie took notes on revisions-James has them).

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Issues-Based Sustainability Assessment
In the morning, the group discussed the idea to move to an issues-based sustainability assessment. Participants felt that this was an important and logical next step forward.

Cost
The group discussed potential costs and budget for the project. The group talked about how chapters will be written by authors who are paid an honorarium. For federal employees, this would have to be part of their job description and may be unpaid. Comparison to another effort; Conservation Effects Assessment Project (CEAP), and estimated budget of about $200,000 for all.

Fundraising
The group thought this should be a priority in the coming year. The group felt it was important to pursue agency and foundation funding. There was some discussion about the need to be flexible and opportunistic about funding. For instance, UWYO has competitive internal grants process and could target it for oil and gas/restoration funding if this was one of the issues to be pursued.

Audience
The group discussed that the primary audience would be decision makers or those trying to influence decision makers.

Issue Selection & Potential Ideas
There was some discussion about who would choose the issues to be included. There was a suggestion that it might be important to do a needs-assessment in order to decide on issues. There was also a suggestion to "story board" the issues in order to identify who cares about it and why. Another person suggested using a Delphi process to identify issues. There was discussion about the most important/relevant issues to tackle. Ideas included climate change, energy, open space, biodiversity, recreation, non-traditional income/eco-tourism, cultural heritage/values, rural communities, water, fire, invasives, restoration, and fragmentation. There was the feeling that issues of recreation, heritage, leisure should be fleshed out more. Another suggestion was to look at herbivory as a whole (including livestock, wildlife &wild horse/burro). Rob suggested that the group might want to look into a potential connection with DOI climate change work. This DOI group (led by Kit Muller) might be interested in a presentation of the conceptual model and indicators.

Format
One person suggested that we could see this in three ways: as 1) a cohesive whole: more academic exercise in what do we know about rangelands, 2) the crisis situation: what is at risk, 3) funding for specific issue—might be difficult b/c different groups will want to fund different things. Thought that there might be some tension between academic and outreach goals, but decided that it is important to have both. One person mentioned that the UN committee on forestry has done something similar and it might be good to look at in order to frame project.

Goal of Assessment
There was some discussion about whether the group wants to come to a conclusion on whether rangelands are sustainable. Thought that the assessment would provide the tools and information to make that decision, but not actually come to a conclusion. The Forest Roundtable had the same dilemma in a series of papers they commissioned, but decided to just provide the data and not to address if forests are sustainable, but this was contentious. There was some disagreement in the group as to the level of assessment. Many felt the value is in providing the tool for assessment, not in making the decision of whether rangelands are sustainable.

Impact to Meeting Format
Meeting format for next few years will be working groups rather than large meetings. One person suggested the forest roundtable revision process as a model: they had large facilitated meetings to provide feedback on paper drafts. High intensity/cost—but would bring in wider set of participants and get good feedback.

Connecting at Different Scales
Group discussed whether ISEEC model might be insightful for small communities that are considering development. This might be a good place-based application and way to engage the Western Governors. One thought was to start the introduction with a series of case studies to show assessment on multiple scales (Ranch X, County Y, etc…). Would

love to provide the DOI guidance on climate change. Think there are multiple scales for the way it will be used. Seems like this step is a no-brainer.

Outreach/Education
There was some discussion about innovative ways to deliver the material. Discussion included meetings, symposium, PBS special, monographs as ways to vet the information and get it out before the book is completed and done.

Next Steps

1. **Develop Strategy & Share.** Need to develop the strategy and share it with the group and others that aren't here. This will be done by sending the strategy to two list-serves (active & FYI), making calls to key individuals, and posting on the website. This April is SRR 10th year anniversary (may be a good time to launch).
2. **Connect with partners.** (Potential partners include: WRCC group, ESA Rangeland Group, SRM, SNR, professional societies, other agencies (fish and wildlife, ARS), developers…)
3. **Develop List of Issues.** See discussion section above.
4. **Pull Working Groups Together.** Need to get steering committee together to talk about this and identify who should work on which sections.
5. **Pursue Funding**. Look for funding from agencies and from foundations. Need to package issues in ways that will be fundable. See discussion above.
6. **Reengage People**. There was some discussion about how to engage past SRR members and the general public. Suggestions included online forums and video conferencing, but the group agreed that some face time is important. There was also some discussion about the importance of public pressure and involvement in process and how to engage the general public.

Timeline:
Plan to launch the project in a year and attempt to complete chapters 2 years from launch.