

Does Community-based Rangeland Ecosystem Management Increase the Resilience of Rural Communities to Climate Change in Mongolia?

An Interdisciplinary Collaborative Research Planning Meeting Summary Report

June 16-20, 2008, Kempinski Khan Palace Hotel, Ulaanbaatar, Mongolia

The planning meeting was organized among Mongolian and US scientists, donor organizations and NGOs, CBNRM practitioners, and government policy-makers to outline a collaborative, interdisciplinary research program with three main objectives:

1. Advance the theory and practice of CBNRM through interdisciplinary, applied research
2. Build the capacity of young Mongolian and US scientists to conduct well-designed applied interdisciplinary research
3. Strengthen linkages between natural resource science and policy in Mongolia.

Specific Meeting Objectives:

1. Develop collaborative relationships between US and Mongolian scientists, Mongolian CBNRM practitioners, and relevant policy-makers.
2. Mutual learning about the state of knowledge and practice related to resilience science, CBNRM, climate change, and key physical, ecological and social science disciplines from international and Mongolian perspectives.
3. Identify and prioritize research needs and opportunities related to CBNRM in Mongolia
4. Develop a conceptual framework for integrated interdisciplinary research to advance knowledge and practice of CBNRM in Mongolia
5. Define research questions, objectives and initial hypotheses
6. Outline sampling design, data collection methods, and analyses

Meeting Participation

Approximately 120 individuals attended the meeting over 5 days, representing Mongolian national government organizations, local government organizations, Mongolian research and educational organizations, national NGOs, local community organizations, international donors and NGOs, and international research and education organizations. For a list of the participating organizations, see Box 1.

Box 1. Meeting Participation

Mongolian National Government Organizations: Ministry of Food and Agriculture, Ministry of Nature and Environment, Land Agency

Mongolian Local Government: Bayan Olgii Aimag, sum Chairman of the Governor's Office

Mongolian Research & Educational Organizations: Mongolian Academy of Science, Mongolian State University, Mongolian Agricultural University, Khovd University, Khovd Agricultural University, Center for Ecosystem Research, Research Institute of Animal Husbandry, Institute of Meteorology and Hydrology, Institute of Geography, Institute of Geo-ecology.

Mongolian National NGOs: Center for Policy Research, Mongolian Society for Range Management, Global Citizen, Mongolian Nature and Environment Coalition

Mongolian Community NGOs and Herder Organizations: representative from herder groups in Undershireet Sum and Lun Sum, Tuv Aimag; Ikh Tamir, Arkhangai Aimag; Jinst Sum, Bayankhongor Aimag; and Khujirt Sum, Uvurkhangai Aimag.

International Donors and NGOs: UNDP (Altai-Sayan Project, Desertification and Sustainable Land Management Project, Climate Change Program Disaster Mitigation Project), SDC (Green Gold Project), World Bank (Environmental Reform), USAID/Mercycorps Gobi Forage Project, Millennium Challenge Account, Millennium Challenge Corporation, FAO (Forestry Program), IDRC, World Vision (Livelihood Diversification Project), Initiative for People Centered Conservation (IPECON), The Asia Foundation, The Nature Conservancy, Worldwide Fund for Nature (WWF), Wildlife Conservation Society (WCS)

International Research and Educational Organizations: Colorado State University, University of Arizona, Inner Mongolia Agricultural University

Meeting Process

The research planning visit was divided into two main phases:

- Pre-meeting field tour (June 10-13) and
- 5-day meeting in Ulaanbaatar (June 16-20).

The UB meeting was in turn divided into daily sessions with specific objectives and outputs. Here we describe each section in turn, the objectives and accomplishments, as well as the level and diversity of participation in each segment of the meeting.

Pre-meeting Field Tour



Mongolian and US researchers had a joint field tour (June 10-13) before the Ulaanbaatar meeting. The tour was organized and sponsored by the Mongolian Society for Range Management, the SDC Green Gold Ecosystem Management project and the “Sustainable Land Management” UNDP project. The tour participants visited:

- Hustai Nuruu National Park
- Undurshireet soum of Tuv aimag
- Bayangol soum of Selenge aimag

On the tour the research team met with herder group members and project staff, and observed and discussed the rivers and rangelands traversed during the tour.

Meeting Day 1: June 16 State of the Science (>90 participants)

US and Mongolian scientists made formal presentations on the state of scientific knowledge on the key themes and major disciplines presented:

- Resilience thinking
- Climate change
- Community-based natural resource management
- Rangeland hydrology and ecology
- Pastoral organizations and institutions
- Interdisciplinary research and policy- and community-relevant research



Meeting Day 2: June 17 State of the Practice (50 participants)

Accomplishments on this day included:

- Improved mutual understanding of and agreement on key terminology and its translation between Mongolian and English,
- Developed a list of research needs and opportunities for CBNRM in Mongolia, and prioritized 15 research questions (Box 2).
- Developed a list 15 working principles for collaboration, where the main repeating themes were the needs for (Box 3):
 - good communication and coordination
 - direct involvement of herders and herding communities in the research
 - clear mechanisms to provide research results back to communities and policy-makers and to translate research into policy recommendations and actions.

Box 2. List of top 15 research priorities (more than 6 votes each), grouped into thematic categories

Community Based Natural Resource Management

1. What are the long-term ecological and social outcomes of CBNRM? (13)
2. Develop models of CBNRM that support rangeland conservation and improvement (traditional and cultural practices, social, ecological and economic) (8).
3. Assessment of CBNRM- What are indicators and how do we create a win-win situation? (8)
4. What is the state of cooperation among herder groups? In the past herders worked on their own. What incentives are there for them to work together and to participate in the group? (11)

Policy Questions

5. What are the social, economic and ecological advantages/disadvantages of future options for pasture and water access (property rights policy)? (9)
6. Conduct research on ways to pilot rangeland possession models in every region and evaluate potential impacts (17)

Process Questions

7. How do we ensure funding flows to local communities? (6)

Climate Change

8. How can herders adapt to climate change? (12)
9. Ways of adapting pasture use and animal husbandry to climate change? (18) How is climate change, grazing, agriculture, mining, etc... affecting our water sources? (5)

Rangeland Research Questions

10. How have land use and land cover changed over the past 20 years, and how will they change in the future? Do land use and land cover change differ between areas with and without CBNRM organizations? Do they change as a result of the formation of CBNRM organizations? (6)
11. Establishment of integrated assessment of pastureland and natural resources , and formal information exchange system (11)
12. Water resource assessment, water conservation, and irrigation technologies (10)
13. Conduct research on the dynamics of livestock population, pasture vegetation, carrying capacity, and water resources in the past 20 years (GIS) (15)?

Herder Livelihoods and Knowledge

14. Herder-centered research (train herders in rangeland climate, vegetation assessment and changes in mindset) (19)
15. Conduct research on potential technologies or ways to improve, rehabilitate, and protect pastureland that strengthen herders livelihoods (7)

Meeting Day 3: June 18 Research Design Workshop (30 participants)

The most important output from this day were hypotheses developed by participants in small groups. Although we did not have time to develop hypotheses for all of the priority questions, the hypotheses that were developed covered some of the most important aspects of the research.



Box 3. Working Principles for Research Collaboration

1. Include all necessary expertise on the research team
2. Communication and coordination among projects
3. Find and focus on the intersection of scientific interests, practical needs and policy
4. Build capacity of young researchers
5. Translate existing key scientific works into Mongolian (and vice versa)
6. Improve the quality of science
7. Research should be informed by needs
8. Mutual interest and respect. Need a structure for multi-lateral cooperation. Build on existing structures
9. Incorporate training for herders
10. Work with associations of young scientists
11. Increase channels of communication
12. Meet with herders, live their life and learn from their life practice
13. Support needed technology (for herders)
14. Return data to communities and make sure data are reflected in policy
15. Find effective ways to distribute research findings to policy-makers (e.g. scientific magazine in Mongolian with interdisciplinary research findings.)

Meeting Day 4: June 19 Research Design Workshop (23 participants)

The outputs of the day were the following:

- Developed an integrated multi-scale sampling design agreed upon by all participants.
- Identified and discussed existing data sources, focusing particularly on spatial data sets.
- Discussed issues of scale and scaling.
- Identified many potential sources of existing data, but the quality of data and ease of access remained unclear.
- Identified needs and potential activities related to the education/capacity-building and policy-linkage objectives of the research program.



Meeting Day 5: June 20 Presentation of Draft Outline and Feedback (38 participants)

- The outline of the proposed research was presented to the audience by the Mongolian research team participants
- Helpful comments and suggestions were received to improve the outline
- Obtained a list of organizations that are committed to participate and/or to provide financial or in-kind resources to support the research program
- Agreed on next steps

Meeting Products

- Proceedings (<http://welcome.warnercnr.colostate.edu/mor2-home.html>)
- Working Principles for Research Collaboration
- Database of CBNRM Projects and Organizations in Mongolia
- Draft Research Program Outline
- Commitments of Future Participation and Potential Financial Support for the Research Program

Meeting Sponsors:

- Colorado State University
- The World Bank
- Swiss Agency for Development and Cooperation—Green Gold Ecosystem Management Program
- Mongolian Society for Range Management
- UNDP Sustainable Land Management Project