

## **Engaging Researchers and Communities to Generate Knowledge and Action in Mountain Societies**

Authors: Weyerhaeuser, Horst, and Nowrojee, Sia

Source: Mountain Research and Development, 34(4) : 410-413

Published By: International Mountain Society

URL: <https://doi.org/10.1659/MRD-JOURNAL-D-14-00095.1>

---

The BioOne Digital Library (<https://bioone.org/>) provides worldwide distribution for more than 580 journals and eBooks from BioOne's community of over 150 nonprofit societies, research institutions, and university presses in the biological, ecological, and environmental sciences. The BioOne Digital Library encompasses the flagship aggregation BioOne Complete (<https://bioone.org/subscribe>), the BioOne Complete Archive (<https://bioone.org/archive>), and the BioOne eBooks program offerings ESA eBook Collection (<https://bioone.org/esa-ebooks>) and CSIRO Publishing BioSelect Collection (<https://bioone.org/csiro-ebooks>).

Your use of this PDF, the BioOne Digital Library, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](http://www.bioone.org/terms-of-use).

Usage of BioOne Digital Library content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne is an innovative nonprofit that sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

# Engaging Researchers and Communities to Generate Knowledge and Action in Mountain Societies



UNIVERSITY  
OF CENTRAL ASIA

MOUNTAIN SOCIETIES RESEARCH INSTITUTE

The University of Central Asia's (UCA's) Mountain Societies Research Institute (MSRI) is an interdisciplinary research institute dedicated to addressing the challenges and opportunities within Central Asian mountain communities and environments. MSRI's goal is to support and enhance the resilience and quality of life of mountain societies through the generation and application of sound research. MSRI has 5 objectives: to generate new knowledge on mountain societies through academic research; to enhance Central Asian capacity to conduct research relevant to mountain societies; to serve as a knowledge hub for scholars, development practitioners, and decision-makers; to inform policy and practice through research; and to contribute to the development of UCA academic programs relevant to mountain societies. MSRI and its partners work to transfer knowledge to policy and practice aimed at improving the quality of life for people of the mountain areas of Central Asia.

## Building capacity and knowledge

The Mountain Societies Research Institute (MSRI) Background Paper Series includes extensive literature reviews and structured assessments of knowledge and gaps in priority areas that inform MSRI's emerging applied research agenda. Topics in the series include pastoralism and general farming systems (Kerven et al 2011), sustainable land management (Shigaeva et al 2013), mountain tourism and sustainability (Shokirov et al 2014), agroforestry, and water and energy. A synopsis of the paper on pastoralism (Kerven et al 2012) was peer reviewed and published in *Mountain Research and Development* in

the special issue *Central Asian Mountain Societies in Transition*, guest edited by MSRI and translated into Russian (MRD 2012), and a peer-reviewed synthesis of the sustainable land management background paper was published a year later (Dear et al 2013). Background papers are produced through a structured and rigorous research and writing process. In addition to creating comprehensive and analytic compilations of information in relevant areas with recommendations for applied research, the series has brought together regional and international researchers, creating a network of researchers and strengthening the capacity of young Central Asian scholars through mentorship and the exchange of ideas.

MSRI's Central Asia and Afghanistan Research Fellowship (CAARF) program is strengthening the capacity of researchers from Afghanistan, Tajikistan, and the Kyrgyz Republic to conduct original research on sustainable development in mountain areas. CAARF provides research grants and strategic mentoring support to a network of Central Asia and Afghan researchers. In 2014, 14 research grants, ranging from US\$ 5000 to US\$ 20,000, were awarded to 7 fellows from the Kyrgyz Republic, 5 from Tajikistan, and 3 from Afghanistan. Six grants were awarded to women. An additional 6 Afghan researchers are being supported with training. Research is being done on biodiversity, labor migration and gender, climate change, the impact of mining on mountain environments, and energy and food security. Current fellowship projects related to agriculture and food security focus on assessing the influence of climate change in high-

altitude conditions on the content of phytohormones and plant growth inhibitors in Tajikistan, conservation of traditional varieties of apple trees in the Issyk Kul foothills of Kyrgyzstan, and biodiversity conservation planning for eco-disaster risk reduction in Afghanistan.

## Engaging communities to apply knowledge

In Kyrgyzstan, socioeconomic disparities between urban and rural areas are considerable, particularly with regard to access to knowledge and information and communication technology. These disparities are exacerbated in remote mountain areas because of their isolated location. MSRI's mobile digital library eBilim is designed to bring information resources to communities in 10 remote villages in the Naryn and Ak-Talaa districts of Naryn *oblast* (province) in Kyrgyzstan. *Bilim* means knowledge in the Kyrgyz language, and *e* indicates electronic media. The eBilim project brings together locally accessible knowledge and current technology. Implemented with the Mountain Societies Development Support Programme Kyrgyz Republic and with financial support from the German development organization Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the library is housed in a refurbished minibus equipped with books, laptops, and a digital database of over 3000 text, audio, and video resources on a variety of subjects.

A dynamic platform, eBilim is assessing and responding to the expressed information needs of

**FIGURE 1** The eBilim vehicle in the Oruk Tam high pastures in Naryn Province in 2014, serving the families of transhumant Kyrgyz pastoralists. (Photo by Kubanychbek Moidinov)



remote mountain communities; serving as a tool for quick data generation, monitoring, and survey activities for researchers, development organizations, and other stakeholders; and creating a networking and information platform for mountain communities. During the summer of 2014, eBilim offered its information services on *jailoos*, remote high mountain pastures of the transhumant Kyrgyz pastoralists (Figure 1). The initiative was highly popular among children, teachers, farmers, and local government officers, who showed a keen interest in increasing their knowledge and accessing information to be applied at work as well as at home. Although many eBilim users, both adults and children, are experiencing information and communication

technology for the first time, they exhibit great interest and notable ease in managing modern technology. Looking forward, eBilim is making its electronic database accessible to a broader audience in mountain communities by cooperating with a network of libraries across Kyrgyzstan.

Through its Learning Landscape Initiative, MSRI is conducting research and monitoring on the socio-ecological systems within the regions where the University of Central Asia's (UCA's) campuses are located, in collaboration with local organizations and other stakeholders. The institute will establish demonstration and experimentation sites for UCA faculty to use for research and place-based experiential education and for community members and

organizations to use for their learning purposes. The primary emphasis of research is on generating knowledge and demonstrating how it is (or is not) used in adaptive decision-making processes at household, community, and government administrative levels. Phase I is under way in Naryn, Kyrgyzstan, with the Ecosystem Services for Poverty Alleviation project, in which MSRI is collaborating with local communities to cogenenerate environmental knowledge through monitoring initiatives to inform local decision-making. The initiative will be extended to Khorog, Tajikistan, in phase II. The Learning Landscapes Initiative will not only provide an interactive location and platform for stakeholders in Naryn and Khorog, but also function as a long-term



socioeconomic and ecological monitoring site. There is a lack of long-term data collection platforms to monitor important parameters related to mountain societies, such as agricultural planning and meteorological data. Data from UCA's Learning Landscapes will feed into regional monitoring and will inform the work and advocacy of policy-makers, mountain development practitioners, and the public.

### Research to strengthen farming in mountain areas

Sustainable development requires a holistic approach that considers the complex elements influencing interdependent farm, livestock, household, and family activities. The classification of evolving small-scale farming systems on the basis of resource use (land, capital, and labor) and other variables is necessary in this process. Since independence 25 years ago, the farming sector in Central Asia has evolved. The assets of larger-scale cooperatives of the Soviet era were distributed to individuals or farmer groups. Despite these considerable changes, there is no updated classification scheme available to help address the needs of the majority of subsistence farmers. MSRI is adapting and developing a methodology to classify small- and medium-scale farming systems in mountain regions of Kyrgyzstan, which make up the majority of farming systems in the country and contribute to both subsistence and larger-scale agricultural outputs. The study will describe prevalent systems and resource use and help guide research on environmentally sustainable development pathways that may generate or enhance rural livelihoods under harsh conditions.

MSRI is conducting an assessment of agroforestry systems in smallholder farms and forests in Kyrgyzstan and Central Asia (MSRI 2013). The assessment includes research on agroforestry practices in

local agricultural systems and mixed forests and meetings with stakeholders to assess needs and generate recommendations to improve agroforestry in Central Asia. The project is funded by the United States Forest Service. Partners include the Association of Forest and Land Users, the World Bank, the Rural Development Fund, GIZ, and the Food and Agriculture Organization (in Kyrgyzstan). Based on the findings, MSRI and these partners are currently developing a regional agroforestry program. Moreover, the findings and recommendations will help to develop a new research theme on agroforestry for MSRI, serving a regional demand from local stakeholders and communities to establish agroforestry in support of prevailing mixed subsistence agriculture and pastoral livelihoods.

### Building technical platforms

MSRI is building technical platforms and resources to facilitate the generation, sharing, and application of knowledge. The MSRI Knowledge Management Hub is an interactive source of information on Central Asian mountain societies and an interface for researchers, practitioners, and policy-makers. It includes an extensive library database and advanced search functions with multiple filters to help users locate specific information. Currently there are 2400 publications in 472 categories, uploaded by registered users. MSRI library resources are available for free access under Creative Commons license 3.0. The Knowledge Management Hub has had an influential role in a GIZ-led initiative on the development of regional knowledge hubs, and has been a part of the European Union-funded initiative on regional knowledge sharing, Flermoneca.

With support from the Swiss Agency for Development and Cooperation (SDC) and the Centre

for Development and Environment at the University of Bern (CDE), MSRI is developing joint research capacity on sustainable water governance and a knowledge management structure for integrated watershed management. The grant supports further building of geographic information system (GIS) capacities at institutions participating in the SCOPES 2009–2012 Institutional Partnership on Geoprocessing for Natural Resource Monitoring in Tajikistan and Kyrgyzstan and will contribute to ongoing studies and projects and support the analysis of water governance within a broad framework. MSRI is also developing UCA's GIS remote-sensing laboratory with support from the German Academic Exchange Service (DAAD) and other donors to address research needs in natural resource monitoring and climate change and adaptation. A long-term output will be the development of a new natural resource monitoring atlas for Kyrgyzstan.

### Research partnerships

MSRI serves as the host for the Mountain Partnership Central Asia Hub and engages in joint activities with the Hub and Mountain Partnership members in Central Asia. MSRI is an institutional member of the International Mountain Society and a member of the Eurasia Pacific Uninet and the Himalayan University Consortium. MSRI benefits from close collaboration with research staff at the Centre for Development and Environment, University of Bern, and has emerging partnerships with the University of Alberta and the University of British Columbia.

MSRI, in collaboration with the World Agroforestry Centre (ICRAF), is establishing an ICRAF regional research office at UCA in Bishkek to link global and regional agroforestry research and enable local researchers to participate in international

research and training and capacity building. MSRI also serves as an advisor to the Learning Group of the Multi-Input Area Development Global Development Alliance in Badakhshan Province, Afghanistan, an alliance between the Aga Khan Foundation and the United States Agency for International Development.

## Looking ahead

MSRI will continue to support and enhance the resilience and quality of life of mountain societies through the generation of knowledge and resources that are rooted in rigorous research and strong partnerships. Future research will focus on climate change and adaptation, water, energy, and water governance. MSRI's reach will be expanded to include research sites in Khorog, Tajikistan, and northern

Afghanistan, and the institute will engage with researchers, practitioners, and communities to ensure the relevance and application of emerging knowledge.

## REFERENCES

- Dear C, Shigaeva J, Wolfgramm B.** 2013. Assessing the state of sustainable land management research in Kyrgyzstan and Tajikistan. *Mountain Research and Development* 33(4):443–452. <http://dx.doi.org/10.1659/MRD-JOURNAL-D-13-00050.1>.
- Kerven C, Steimann B, Ashley L, Dear C, Rahim I.** 2011. *Pastoralism and Farming in Central Asia's Mountains: A Research Review*. MSRI Background Paper 1. Bishkek, Kyrgyzstan: University of Central Asia. <http://msri.ucentralasia.org/events.asp?Nid=215>; accessed on 31 August 2014.
- Kerven C, Steimann B, Dear C, Ashley L.** 2012. Researching the future of pastoralism in Central Asia's mountains: Examining development orthodoxies. *Mountain Research and Development* 32(3):368–377. <http://dx.doi.org/10.1659/MRD-JOURNAL-D-12-00035.1>.
- MRD [Mountain Research and Development].** 2012. *Central Asian Mountain Societies in Transition. Special Issue. Mountain Research and Development* 32(3). <http://www.bioone.org/toc/mred/32/3>. *Mountain Research and Development*

32(3RU) (in Russian). <http://www.bioone.org/toc/mred/32/3RU>; accessed on 1 September 2014.

**MSRI [Mountain Societies Research Institute].** 2013. *MSRI Programmes, Activities and Outputs, 2013*. Bishkek, Kyrgyzstan: University of Central Asia. <http://msri.ucentralasia.org/events.asp?Nid=738>; accessed on 31 August 2014.

**Shigaeva J, Wolfgramm B, Dear C.** 2013. *Sustainable Land Management in Kyrgyzstan and Tajikistan: A Research Review*. MSRI Background Paper 2. Bishkek, Kyrgyzstan: University of Central Asia. <http://msri.ucentralasia.org/events.asp?Nid=589>; accessed on 31 August 2014.

**Shokirov Q, Abdykadyrova A, Dear C, Nowrojee S.** 2013. *Mountain Tourism and Sustainability in Kyrgyzstan and Tajikistan: A Research Review*. MSRI Background Paper 3. Bishkek, Kyrgyzstan: University of Central Asia. <http://msri.ucentralasia.org/events.asp?Nid=730>; accessed on 31 August 2014.

## AUTHOR

**Horst Weyerhaeuser\*, Sia Nowrojee**

\* Corresponding author:

[horst.weyerhaeuser@ucentralasia.org](mailto:horst.weyerhaeuser@ucentralasia.org)  
Mountain Societies Research Institute,  
University of Central Asia, 138 Toktogul Street,  
Bishkek, 720001, Kyrgyz Republic  
Website: [www.ucentralasia.org/](http://www.ucentralasia.org/)

Open access article: please credit the authors and the full source.