

UNIVERSITY OF CENTRAL ASIA GRADUATE SCHOOL OF DEVELOPMENT Mountain Societies Research Institute

Mountain Societies Research Institute ANNUAL REPORT 2016



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UNIVERSITY OF CENTRAL ASIA GRADUATE SCHOOL OF DEVELOPMENT Mountain Societies Research Institute

Mountain Societies Research Institute Annual Report 2016

MSRI MISSION

To undertake Research for Development among and with mountain societies in Central Asia and to disseminate strategic information and key findings, with the purpose of contributing to improvements in people's overall quality of life and regional sustainable development.

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A landmark event in 2016 was the opening of the UCA Naryn campus, bringing together 70 students from across Central Asia and faculty from around the world. MSRI's work in Naryn over several years has generated both experience and knowledge about the place, and linkages with local communities. The launch of the university's undergraduate programme is particularly significant – contributing directly to educational opportunities and to employment and regional socioeconomic development in the mountain regions. MSRI is delighted to be contributing to the development and delivery of new teaching programmes, and to integrating research, teaching and learning in partnership with a wide range of faculty and students, development agencies, practitioners, and local community members. It is as part of such a broad family that MSRI is developing its vision for the future and is prioritising a research agenda that will contribute to local development needs and opportunities.

One particularly important framework for integrating research with teaching in the Naryn region is MSRI's Learning Landscape (LL) Initiative. The LL Initiative aims to monitor and analyse long-term ecological and social conditions, trends and interrelationships in collaboration with local communities, with the goal to support development planning and decision-making as well as contribute to practical, local and immediate development needs. Research undertaken with faculty and students also shall allow relevant learnings to be incorporated into UCA's curriculum.

In anticipation of the opening of UCA's second campus in Khorog, Tajikistan, in 2017, which in future will also serve as the MSRI Headquarters, we have stepped up our research activities in the Tajik Pamirs and in neighbouring Afghanistan. Projects there include research on transboundary landscape conservation in the Tajik Pamirs undertaken in collaboration with the International Centre for Integrated Mountain Development (ICIMOD), and a survey on the market potential of medicinal and aromatic plants (MAPs) conducted in cooperation with the Aga Khan Foundation in Tajikistan and Afghanistan.

Transboundary conflicts and migration are equally important themes in MSRI's research agenda. A project on natural resources management and conflicts along the Kyrgyz-Tajik border, supported by the UK Department for International Development (DFID), was brought to a completion in early 2016. This line of inquiry continues now through two further projects, namely Strengthening Stability in Kyrgyzstan and Tajikistan Through Effective Management of Natural Resources and Promoting Cohesion and Conflict Mitigation along the Tajik-Kyrgyz border, funded by the Conflict Stability and Security Fund (CSSF) and the US Institute of Peace (USIP), respectively. Research on migration as livelihood strategy in mountainous regions of Kyrgyzstan and Tajikistan also was carried out this past year in Moscow and in Naryn oblast, focusing on the effects of Kyrgyzstan's accession to Eurasian Economic Union on labour migration, and on the role of return migrants in the development of local economies.

These and other research projects – along with a range of capacity building, community outreach and knowledge dissemination ventures – are among MSRI's distinctive hallmarks in the region. Working with other research institutes and development agencies and with UCA's School of Arts and Sciences, MSRI is proud to be an active participant in regional development, contributing both to the life of the University and to local mountain communities and societies in the mountain regions of Central Asia.

Dr Dietrich Schmidt-Vogt MSRI Director Dr J Marc Foggin MSRI Senior Research Scientist Associate Director



MSRI Vision

The Mountain Societies Research Institute, University of Central Asia, operates at the interface of academia and development. It envisages a future in which communities, government, development practitioners and the private sector collaborate in the generation of multidisciplinary knowledge, and in its application for sustainable development in the mountains of Central Asia and beyond.

Key Objectives

Situated in UCA's Graduate School of Development, the Mountain Societies Research Institute (MSRI) conducts research for development with the goal to improve the well-being of mountain societies in Central Asia. MSRI has five key objectives:

- To generate knowledge on mountain societies through original scientific research
- To serve as a knowledge hub for scholars, development practitioners, and policy-makers
- To enhance regional capacity to conduct sound research relevant for mountain societies
- To inform policy and practice through engagement with key development partners
- To disseminate knowledge amongst the full range of mountain stakeholders

Core Research Themes

MSRI's primary concern is the quality of life and wellbeing of the people and communities residing in the mountains of Central Asia, and the major drivers and factors affecting their livelihoods, economies, and environments.

Core research themes include:

- Natural resources, their governance and management
- Land systems and livelihoods, including food security

- Social dynamics including migration and conflicts over natural resources
- Disaster risk reduction and management
- Biodiversity conservation

MSRI's cross-cutting research includes the following themes:

- Climate change and globalisation
- Regional and intra-community development disparities
- Achieving the Sustainable Development Goals



Geographic Focus

MSRI's geographic scope includes the mountain regions and societies of Central Asia, following the broad definition of Central Asia offered by UNESCO. Core areas include the mountain regions of the three countries where UCA's campuses are located: Tajikistan, Kyrgyzstan, Kazakhstan. Large parts of Western China, Mongolia, Russia, Afghanistan and Northern Pakistan also fall within MSRI's scope of interest. Regions of special interest include the Altay, Tian Shan, Pamir, Hindu Kush and Karakorum mountain ranges; the convergence of the latter three major ranges is also known as the Pamir Knot.



MOUNTAINS OF CENTRAL ASIA



Mountain Development Studies

With a vision of sustainable and equitable development in mountain regions, as described in the UN Sustainable Development Goals (SDG) framework, MSRI conducts *Research-for-Development* to help improve the wellbeing and quality of life of mountain societies in Central Asia. MSRI seeks to advance such a *Sustainable Mountain Development* (SMD) agenda through integrative research, which is both inter- and transdisciplinary in nature, supplemented by education, training, knowl-edge management, and the targeted dissemination of key findings to communities, practitioners, and policy-makers.

Adopting a *systems approach* to development studies, and building on the understanding that regional development is contingent on both the natural and social dimensions of mountain territories, MSRI views much of its subject matter as coupled social-ecological systems. Since development planning generally requires long-term environmental and social trend analyses as well as impact assessments, multiple temporal and spatial scales are considered in MSRI's work. Sound planning equally requires integration of regional and global changes into development models, including economic and climate change scenarios.

MSRI applies a range of *inclusive and participatory approaches* in its research, aiming to promote co-production of knowledge with project partners and other mountain development stakeholders. Such collaboration aids to inform and support key decision-making processes and implementation of new ideas by increasing the sense of local ownership of project purposes and outcomes. Through specific approaches such as *citizen science*, which engages with a wide public in data collection and analysis, it is possible even to target and begin to empower marginalised or vulnerable segments of society, groups often by-passed by conventional development decision-making mechanisms. Inclusiveness also considers gender perspectives, and the simple act of participating in development research and ensuing discussions can readily contribute to learning and raising people's awareness of key topics.

As a research institute of UCA's Graduate School of Development, and embedded within the Aga Khan Development Network, MSRI has a unique *long-term vision and commitment* to the mountain areas of Central Asia, and a *balanced, integrated perspective* of regional development. UCA's campuses in three countries – in Kyrgyzstan, Tajikistan, and Kazakhstan – can serve as anchors for AKDN presence and development interventions in the broader region. In-depth study of the socio-

economic, ecological and policy/administrative dimensions of mountain territories, facilitated by MSRI and other units such as UCA's Institute for Public Policy and Administration (IPPA), already are contributing significantly to development dialogues in multiple sectors and in several countries.

MSRI offers unprecedented opportunity for national and regional scholars and for visiting scholars to participate in Development Studies research from a unique systems-level perspective, in inclusive and participatory ways, and embedded within the long-term commitment of UCA and AKDN to promote *Sustainable Mountain Development* and improving the lives of people and societies in Central Asia.

Sustainable Mountain Development in Central Asia

The Central Asia Mountain Hub (CAMH) – a collaboration between MSRI and Mountain Partnership (MP) – is committed to advancing the global Sustainable Mountain Development agenda at regional, national and local levels across Central Asia. In support of this, CAMH mobilised nearly 50 regional mountain stakeholders in 2016 and facilitated their involvement in policy dialogue, knowledge sharing, and capacity building on sustainable mountain development issues.

These processes have been undertaken in two tiers: (1) at national and sub-national levels; and (2) at global level. Work at national and sub-national levels in 2016 primarily involved consultation processes about the Law on Mountain Territories in Tajikistan; sharing of regional experiences on the integration of mountain concerns into development processes in the Altai Republic, Russia; and coaching and other forms of support provided to policy makers in Kyrgyzstan, aiming to highlight the significance of the 'mountain agenda' in their work. Additionally, a policy dialogue entitled *Evidence based decision making: Policy and practice interaction on integration of mountain concerns into development processes*



was organized in September 2016 by CAMH (including UCA), together with CAMP Kuhiston and the Government of Tajikistan to showcase successful regional development experiences.

At the global level, CAMH advanced the SMD approach through members' participation in major international events such as the Mountain Futures Conference held in Kunming, China (March 2016), and the World Mountain Forum held in Mbale, Uganda (October 2016).

The Sustainable Mountain Development for Global Change (SMD4GC) program has done much to promote and enable Central Asian Governments to serve as equal global players in SMD dialogues. Results include Kyrgyzstan and Tajikistan both willing to position themselves as lead actors for the global mountain agenda, and Kyrgyzstan agreeing to initiate the formation of the "mountain countries group" or "alliance" within the UN system.

Capacity building at local levels also has been advanced well through the SMD4GC program. Activities were aimed at supporting local communities from remote mountain areas, with special attention given to vulnerable groups such as women and youth to help enhance their resilience to a multitude of changes. The SMD4GC program also continued to support the development of climate resilience in mountain villages, with support to the Alliance of Central Asian Mountain Communities (AGOCA), a community based institution that is active in 57 villages of three Central Asian countries. Seed funds were distributed in 2016 for demonstration projects in 5 villages, encompassing a total population of 22,000 people, to showcase the value of sustainable land use and management with the introduction of fruit tree plantations for slope management (Tajikistan), community based disaster risk prevention (Kyrgyzstan) and early warning systems and disaster safe spots (Kazakhstan). Additionally, the first attempts ever for inventorying traditional adaptation practices and tapping into the wealth of locally existing knowledge were made, eliciting over twenty submissions from 8 pilot villages for the Climate Champions contest. All these submissions will be compiled as a *Handbook on Traditional Adaptation Practices in Central Asia* in 2017, providing a contribution from this part of the world to the on-going global effort of taking stock (reviewing) and documenting existing adaptive practices.



The Alliance for Development Initiatives (ADI) in Kyrgyzstan also was supported by SMD4GC in 2016. ADI is a national network of women's self-help groups, bringing together 5,000 households in all seven provinces of Kyrgyzstan with the aim to improve women-headed households' resilience to socioeconomic and environmental shocks and chronic challenges. A grant was given to ADI, along with the Kyrgyz Association of Fruit Growers, to enhance women's self-reliance by increasing their incomes by at least 10% through a set of agreed activities based on a rapid market survey, a value chain analysis, and focused marketing of agricultural products.

As MSRI increasingly aligns its research program with the global Sustainable Mountain Development agenda, working with Mountain Partnership through CAMH, it has become extremely well positioned to engage in cutting-edge development studies. The above examples of Central Asian communities and civil society engaging with current issues and uncertain futures are at the heart of the research thematics and grassroots partnerships that MSRI seeks to support and develop. In so doing, MSRI is building a solid reputation for empirically-informed analyses, leading to academic publications as well as roundtables, policy briefs, and other means of influencing development policy and practice.

Filling in the Blanks: UCA's "Learning Landscapes" Initiative

The Learning Landscapes (LL) initiative guides much of MSRI's transdisciplinary research. This program aims to monitor and research ecological and social conditions and trends, contributing to evidencebased development planning and decision-making for improved ecological conditions and livelihoods.

Depending on the questions asked, different scales of analysis are required. Systematic monitoring and research take place over a broad range of scales – from household to regional levels. Some studies focus



on household and village levels (e.g. water management, soil quality), others require meso-scale analyses to be undertaken (e.g. land cover change, governance processes at district level), and still other studies necessitate regional analyses (e.g. migrations and remittances, markets, development policies, etc.).

Centered around UCA's three campus communities, the LL initiative is both an organizing framework that helps to build synergies across research projects, with a growing body of knowledge accumulating from a broad range of academic disciplines and from multiple perspectives, and a strategic platform through which a diverse array of stakeholders co-generate knowledge and where learning takes place.

In particular, local collaborators are encouraged to embark on participatory research with UCA faculty and students, leading to personal development for all participants as well as allowing relevant findings to be incorporated into the University's curriculum. Development stakeholders including community organisations and decision makers can thus be partners with UCA through MSRI, contributing to research and knowledge dissemination. In 2016, MSRI collaborated with GIZ in the Ecosystem-based Adaptation to Climate Change in the Mountains of Central Asia project, focusing on the At Bashy mountain district in relatively close proximity to UCA's first residential campus in Naryn province. MSRI also continued its Ecosystem Services for Poverty Alleviation (ESPA) project, the first research project that was embedded within the LL framework.

The Learning Landscapes initiative equally serves as a mechanism for UCA and MSRI to join the global mountain research community, including development of Mountain Observatories (see, e.g., Global Network of Mountain Observatories, GNOMO, http://gnomo.ucnrs.org/).





LIVELIHOODS AND NATURAL RESOURCE GOVERNANCE

THE

Novel Approaches to Sustainable Resources Management and Governance

Launched in 2014, MSRI's Ecosystem Services for Poverty Alleviation (ESPA) project has advanced the development of a mountain "Environmental Virtual Observatory" (or Mountain EVO) encompassing several poor, rural villages in Naryn, Kyrgyzstan. Environmental data and information that have been identified by community members and institutions as important in their decision making processes for managing natural resources are now being gathered through this decentralized Mountain EVO. New research approaches and cutting-edge technologies allow partners, including local communities themselves, to enhance their knowledge about mountain ecosystem services and to improve their governance of natural resources.

In 2016, climatic data were collected with four weather stations that were installed along a transect between Naryn town and Eki-Naryn and Oruktam villages further up valley. Smartphones, cameras, automatic 'camera traps' and GPSs have all been used or deployed by community partners, with an aim to monitor pasture conditions, wildlife distributions, under-utilized non-timber forest products, and the regular though unpredictable occurrence of natural hazards in the Tian Shan Mountains.

Several workshops and focus group discussions about 'participatory environmental data collection' were organized in 2016 in Dobolu and Eki-Naryn villages and Naryn town. Local community members including farmers, herders, school teachers, representatives of local self-governance organizations and pasture committees had the opportunity to share their experiences in data collection, both from simple weather stations and through smartphone-based monitoring software (e.g. CyberTracker). The dissemination of initial results back to community partners also was trialled and different forms of data visualization were assessed, including graphics, diagrams, and 2D and 3D illustrative maps.

The Naryn State Nature Reserve and Salkyntor National Park are two institutions that are particularly keen to partner with MSRI – for both nature conservation and livelihood improvement (community development) purposes. Further development of novel information technologies (IT) for improving the two protected areas' respective management operations is anticipated, along with enhanced collaboration with local community members.



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Medicinal and Aromatic Plants in Local and Cross Border Markets in Badakhshan

This exploratory study aims to identify the market demands for medicinal and aromatic plants (MAPs) in the transboundary Badakhshan region of Afghanistan and Tajikistan. It includes the exploration of threats to wild plant resources, which is largely related to over-harvesting of plants by both local and external stakeholders. From a long-term perspective, the results of this study may justify promotion of, and possibly domestication trials for, selected MAP species.

Data were collected in 2016 from local markets in or near border towns along the Afghan-Tajik border, providing initial information about which plants grow where, which districts have greatest potential for further development of specific MAPs, enhanced understanding about roles and motivations of primary stakeholders, and local market prices. Recommendations are now being developed to inform future Aga Khan Foundation (AKF) programs for promotion of MAPs generally, as well as future trial domestication of MAPs. The Department of Agriculture, Irrigation & Livestock in Faizabad (Badakhshan province, Afghanistan) and local *shuras* (community development councils, or CDCs) actively collaborated in this study.

The MAP project is one component in a wider program of research that aims to document and analyze AKF Afghanistan's innovative Multi-Input Area Development (MIAD) approach to regional sustainable development. The MIAD approach has been developed over several years under the long-term MIAD - Global Development Alliance (GDA) project 2012-17, funded by USAID and AKF-USA.



SOCIAL DYNAMICS IN MOUNTAIN SOCIETIES

Reducing Conflict Over Water and Pasture Resources

The social dynamics and disputes surrounding natural resource management in transboundary areas of Batken and Soghd *oblast* (provinces) in Kyrgyzstan and Tajikistan, respectively, were considered in a short (2015-16) project on the roles and functions of natural resource management institutions.

Rural inhabitants in the project area rely on livestock breeding and cultivation for their livelihoods and are often dependent on common pool resources and shared infrastructure. However, following the dissolution of the Soviet Union in the 1990s, mechanisms of cooperation weakened and reforms drastically transformed the institutional models of natural resource management. There is now a need for better understanding and coordination amongst development actors in regard to interventions conducted by governments as well as by national and international development and aid agencies.



Improving Stability and Better Natural Resource Management

According to World Bank estimates, Batken region in southern Kyrgyzstan is a territory characterized by an intensive outflow of people in search of job opportunities. Along with labor migration, Batken also is experiencing an increasing burden on its pasture resources, since remittances most often are invested in livestock. There is, therefore, an active *conflict dynamic* over access to grazing lands and water resources. The presence of Uzbek and Tajik enclaves in the Batken territory only exacerbates tensions over resources, which can escalate into disputes accompanied by violence between citizens of different countries. In 2016, MSRI embarked on two research projects to study the factors affecting tensions associated with access and use of natural resources, and to compare such factors across a range of resource management models and in relation to climate change and patterns of migration.

Qualitative research is on-going in seven border communities of Batken oblast: Beshkent, Kulundu, Maksat, Kok-tash (Batken), Ak-sai, Ak-tatyr, and Samarkandek. More in-depth studies in two districts of Batken also aim to elucidate the main drivers of conflicts in border communities near Tajikistan.



Another project concentrates on two pairs of border communities – Lyakon (Tajikistan) and Kara-Bak (Kyrgyzstan), and Muryak (Tj) and Kok-Tash (Kg), involving decision makers through field seminars with a wide range of stakeholders for the joint development of an action plan to increase social cohesion. The research findings shall be communicated to decision-makers at local, national and regional levels.

Assessment and Analysis of Contemporary Migration Trends

In February 2016, research was conducted in Moscow on the impact of Kyrgyzstan's accession to the Eurasian Economic Union (EAEU) on labour migration, taking into account repercussions of the Russian economic crisis. Research consisted of semi-structured questionnaires and qualitative interviews with Kyrgyz labour migrants, focusing on selected aspects of international migration. Based on this research a manuscript entitled "International Labour Migration in the Context of the Eurasian Economic Union: Issues and Challenges of Kyrgyz Migrants in Russia" was published in the IPPA Working Paper Series.

In April 2016, a book entitled "The Impact of International Migration: Process and Contemporary Trends in Kyrgyzstan" was published by Springer International, based on doctoral research conducted by Lira Sagynbekova at the Center for Development Studies of Free University of Berlin.

In June 2016, new research also was carried out on the nexus between environment, rural livelihoods, and labor migration in Naryn province, Kyrgyzstan. The vulnerability of farming and animal husbandry to environmental changes and market shocks leads people to engage in a range of supplementary livelihood strategies. Internal and international migration have become one of the main coping and adaptation strategies for rural citizens. The results of this survey were presented at the *Annual Life in Kyrgyzstan Conference 2016*, and developed into a paper entitled "Environment, Rural Livelihoods and Labour Migration: A Case Study of Central Kyrgyzstan."

Integrated Land Systems

A survey carried out by ICRAF Central Asia in the context of the *GIZ IKI Walnut project* on how to avoid economic losses during the time when walnut trees are replanted and young trees do not bear fruits revealed that planting annual crops during this period is not a successful strategy. Losses can be avoided by felling old walnut trees and selling their timber. Within the same project, tree data and walnut samples were collected from mother trees (so-called *plus trees*) with the aim of propagating positive features – such as the hardness of the nut shell, which determines how fast walnuts can be processed post-harvest.

In the dry environments of Central Asia, it is helpful to understand water consumption of crops and trees. Tree shelterbelts promoted during Soviet Union time are assumed to reduce water demand of agricultural crop, yet precise figures for the overall agro-ecological system are lacking. Water consumption measurements in agroforestry and non-agroforestry systems show that shelterbelt systems require less water than other systems, mainly due to the effect of Elm, one of the most popular agroforestry trees in the Chui valley.

BIODIVERSITY CONSERVATION

Central Tianshan Environmental Management Planning

Political leaders from 12 countries across Asia came together in October 2013 to endorse the Bishkek Declaration on the conservation of snow leopards and their fragile high mountain habitats. This was a monumental feat in which President Almazbek Atambayev of the Kyrgyz Republic hosted leaders from Afghanistan, Bhutan, China, India, Kazakhstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan and Uzbekistan in the Global Snow Leopard Forum. From that occasion, a comprehensive Global Snow Leopard and Ecosystem Protection (GSLEP) Program was launched to achieve the ambitious goal of addressing high mountain development issues with snow leopard as flagship species. The program's goal is to secure at least 20 snow leopard landscapes with viable snow leopard populations by 2020 (or '20 by 2020' in shorthand). The GSLEP Program's Secretariat is based in Bishkek.

UCA signed a long-term agreement with GSLEP Secretariat, Snow Leopard Trust and Snow Leopard Foundation Kyrgyzstan in 2016 to jointly advance common goals across geographic areas of mutual interest, including but not limited to the three countries where UCA has, or plans to build, its three campuses. The first collaborative project is the development of a comprehensive management plan for the Central Tian Shan Snow Leopard Landscape, a task that was assigned by the State Agency for Environmental Protection and Forestry, Government of Kyrgyz Republic, to the GSLEP Secretariat and its partners. The aim is to develop an innovative, landscape level and participatory management plan for the mountain landscape – balancing conservation needs with local livelihoods and development needs and with other stakeholder mandates – and to present this as an endorsed, actionable plan at the 2nd Snow Leopard Forum which again will be held Bishkek, Kyrgyz Republic, in 2017.

Transboundary Landscape Conservation in the Tajik Pamirs

With the formal declaration of Wakhan National Park by the Government of Afghanistan in March 2014, at least 6 protected areas (PAs) are now connected in the spectacular Pamir - Hindu Kush - Karakoram region of Central Asia: the Wakhan National Park (Afghanistan), Zorkul Nature Reserve (Tajikistan), Broghil National Park, Qurumbar National Park, Khunjerab National Park (Pakistan), and Taxkorgan

Wildlife Nature Reserve (China). This connected complex of PAs covers an area over 33,000 km² with more than one million inhabitants, mostly pastoralists and agro-pastoralists.

Situated at the convergence of several major biogeographic realms and consequently with high levels of biodiversity, this unique regional landscape is characterised by rangelands and mountains. These ecosystems provide multiple goods and services, namely, supporting biodiversity, conserving soil and water, providing fodder and food for people, domestic animals and wildlife, and sequestering carbon.

UCA through MSRI has agreed with the International Centre for Integrated Mountain Development (ICIMOD) to organize and carry out the Tajik component, with Tajik partners, of this ambitious fourcountry transboundary landscape conservation project. Considering that effective management of the high altitude rangelands is the key to successful biodiversity conservation and sustainable socio-economic development for people and communities in the target area, the project focuses on the following three areas of enquiry: (1) assessment of the extent and conditions of the rangelands; (2) assessment of the levels of rangeland use, both by livestock and by wildlife; and (3) review of traditional and current resource governance mechanisms, including the legislations and policies that affect rangeland use in the Tajik Pamir.

Two field trips were carried out in the Zorkul Nature Reserve in Summer and Autumn 2016, organized together with Zorkul Nature Reserve and NGO Panthera: a first exploratory and preparatory trip in July 2016, and field sampling of soil and vegetation in September 2016. All of the soil and vegetation samples were collected in Alpine Meadow and Alpine Steppe areas and were analysed in accordance with standard protocols agreed with other project partners working across the four countries.



Engaging with communities

Reaching out to local communities

MSRI's mobile digital library *eBilim* is designed to bring information resources to remote mountain communities of Naryn province, Kyrgyzstan. 'Bilim' means knowledge in the Kyrgyz language, and 'e' indicates electronic media. The overall goal of the project is to improve access to information, knowledge and learning opportunities in remote mountain areas, and to link key institutions and organizations involved in improving access to knowledge across the rural-urban development gap.

The eBilim project, implemented by MSRI with financial support from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, is housed in a refurbished minibus equipped with books, laptops, and a digital database of over 5'000 text, audio, and video resources on a variety of subjects. Since 2014 eBilim has been touring 15 villages in Naryn province for one day a month. Over the lifespan of the project, it has reached out to more than 12,000 users.

Through the development of innovative tools for information and knowledge dissemination, in 2016 the project tested approaches for engaging remote communities in interactive learning experiences. eBilim conducted *'information in action'* tours in cooperation with partner organizations, with the aim to provide practical knowledge through cooperation with specialists in different areas. Core topics during these tours included:

* Educational activities for school children and teachers on "Energy and energy efficiency," in partnership with UNISON Public Foundation, as well as on "Natural disasters and risks," in partnership with MoveGreen Youth Environmental Movement;

- * Farmer field courses on sustainable potato production in mountain areas, conducted with AgroLead Public Foundation for farmers in 15 villages;
- * Information tours to selected *jailoo* (summer) pastures and kindergartens during summer in cooperation with the 'Roza Otunbaeva Initiative', including the engagement of children in hands-on science and astronomy activities.

In addition, based on the eBilim information database, an application for installation on computers in remote villages was developed together with the Kyrgyz Library Information Consortium. This application was installed in 23 libraries, schools and other institutions across Kyrgyzstan and in the Murghab district of Tajikistan, with the aim of contributing to increased access to locally relevant electronic information and learning resources.

The eBilim project came to an end in September 2016. In 2017 and beyond, the experiences gained during the project will be closely linked to the development of MSRI's Learning Landscapes initiative, contributing to community outreach, education, participatory research and scientific communication activities with different partners and MSRI projects.

Leveraging the power of participatory science

Open and collaborative science, including citizen participation in scientific research, is not widely practiced in post-Soviet Central Asia. The Kyrgyz Mountains Environmental Education and Citizen Science (KMEECS) project was initiated in 2015 in cooperation with CAMP Alatoo Public Foundation to form a part of the Open and Collaborative Science in Development Network (OCSDNet).

Combining citizen science at the community level with environmental research and curriculum-linked programming to foster awareness of and interaction with the local environment, the project aimed to generate relevant data on the environment in the mountains of Kyrgyzstan. It also sought to introduce low-cost environmental field courses on water monitoring in local schools in mountain communities of Kyrgyzstan's Naryn province. Based on a citizen science approach, teachers and students also could investigate and document their local water resources. In 2016, a manual for conducting simple water monitoring experiments in local watersheds was developed jointly with teachers and students from 10 mountain village schools. Low-cost toolboxes for water resources investigation were developed, and teachers conducted their first rounds of monitoring with students.

The KMEECS project was funded by the International Development Research Centre (IDRC) in Canada and the Department for International Development (DFID) in UK.

Module on 'nature and people' in GBAO, Tajikistan

Within the framework of the GIZ-supported Ecosystem-based Adaptation project, a one-day module for youth summer camps in Tajikistan, Afghanistan and Russia was developed. The goal of the module was to raise awareness among school children about environmental and socio-economic changes happening in their surroundings and globally, and about the needs and options to respond to these changes. The module also helped students to reflect on the relationship between nature and people, to understand climate change and its local impacts, and to develop their own ideas for action.

The module "Nature and people in a changing world" was introduced to 60 teachers and youth volunteers during a two-day training session in May 2016, and then delivered to 6 youth camps in the summer of 2016. The teaching approaches included an interactive course on environmental changes, particularly climate change, with theory, games and videos, group work, a photo exhibition, and multi-generational interviews. At the end of the program the schoolchildren were able to identify five key messages or rules, which they would follow in their daily life for protecting their environment.

UCA Summer Camp 2016

MSRI researchers introduced UCA Summer Camp participants to the world of *Earth and Environmental Science* through a one-day interactive field trip in Kyrgyzstan's Issyk-Kul region in July 2016. Grade 10 students from UCA's host countries of Tajikistan, Kyrgyzstan and Kazakhstan explored the Grigorievka and Semionovka gorges and participated in five thematic workshops amidst a landscape of cliffs, rolling pastures, coniferous forests, and thorny, semi-arid hills. Through participatory activities conducted outdoors, the 73 participants explored concepts such as climate change, critical mapping, ecosystem services, environmental monitoring, and watershed management. The fieldtrip allowed the students to better understand and visualize interrelations between people and their environment, engaging them in hands-on experiments while hiking in mountain landscapes north of Lake Issyk-Kul.





Developing regional research capacities

Central Asia and Afghanistan Research Fellowship (CAARF)

The Central Asia and Afghanistan Research Fellowship (CAARF) project was established under UCA's Research and Public Policy Initiative (RPPI), a three-year initiative to develop and strengthen research capacity and skills of young researchers and decision makers from Afghanistan, Kyrgyzstan and Tajikistan. The International Research Development Centre (IDRC), Canada, supported the project.

In 2014, fourteen research grants, ranging from \$5,000 to \$20,000, were awarded to five fellows from Tajikistan, seven from the Kyrgyz Republic and three from Afghanistan. Six grants were awarded to women. An additional six Afghan researchers were supported with training. Research was undertaken *inter alia* on biodiversity, labour migration and gender, climate change, the impact of mining on mountain environments, and energy and food security.

The project concluded in 2016 with a final CAARF Workshop on May 10-13, 2016, in Kyrgyzstan. This event focused on enhancing the participants' following capacities: (i) Principles of writing and publishing academic research, (ii) influencing development decision making, and (iii) building a career in academia and science. Moreover, fellows had the opportunity to learn about selected tools and methods, such as Electronic Data Collection, Geographic Information Systems (GIS) and Social Network Analysis, to enhance their research. Last but not least, each Fellow was given opportunity to present and discuss their own research results and to receive feedback from their research peers, mentors, and instructors.

From all of the CAARF projects, 7 projects were selected for development as policy briefs (CAARF Briefs):

- Revitalization and retention of indigenous knowledge of medicinal plants in Afghanistan
- Leveraging remittances for development and investment in Kyrgyzstan
- Alleviating poverty through social entrepreneurship
- Impact assessment and management of droughts in Afghanistan
- Conserving fruit trees and wild berry biodiversity in Northern Kyrgyzstan
- Assessing earthquake hazards near dams in Kyrgyzstan's Upper Naryn region
- Understanding and alleviating energy poverty in rural communities in Tajikistan

MSRI Resources & Services

A key component of MSRI's activities is the continued development of its capacities and infrastructure for knowledge management and strengthening mountain research in Central Asia. This includes the development of technical platforms and facilities, and enabling access for Central Asian researchers to grants and technical support.

MSRI Knowledge Hub

The MSRI Knowledge Hub is an interactive source of information on Central Asian environments and mountain societies and an interface for researchers, practitioners and policymakers to engage in development dialogue. MSRI's library resources are available for free under the *Creative Commons* license 3.0.

The database and front-end technology of the Hub are in process of being updated and modernized with the goal of improving the accessibility and usability for stakeholders in Central Asia. Furthermore, the Hub is now integrated into the regional K-Link network, which encourages data and information sharing in Central Asia. Project management features are now being added to the system, including a document management system, research project websites, and other information management tools.

In 2016, a total of 2,239 unique users accessed MSRI's Knowledge Hub over 3,000 times, and around 800 documents were uploaded to the Hub.

Geographic Information System

MSRI's Geographic Information System (GIS) and Remote Sensing Laboratory provide support to the Institute's research and information dissemination projects (with field maps, land cover models, etc.) and to the wider academic community at UCA and beyond. Thematically, the GIS/RS Lab's focus is on natural resources monitoring (pasture, soils, water) and using satellite and aerial remote sensing techniques to address development challenges. For example, land cover and land use dynamics are being investigated through multi-temporal and multi-scale analyses, assessing the degree of pasture degradation from 2001-2014 based on MODIS time series satellite data. Such research can enable a mapping and monitoring of resource use and ecological conditions at various scales, and thus help to predict and analyse future scenarios through spatial and temporal modelling.

The GIS/RS Lab also compiles spatial information about Central Asia at various scales and concerning a range of thematic contexts. It now holds a rich collection of valuable datasets covering many topics.

Partnerships & Memberships

University partners include the University of British Columbia and University of Alberta in Canada; Imperial College London, London School of Economics and Political Science, and Birmingham University in the United Kingdom; Wageningen University in the Netherlands; the GFZ German Research Centre for Geoscience, Potsdam, in Germany; and the Centre for Development and Environment (CDE) at University of Bern in Switzerland.

Several strategic projects are undertaken in the framework of high level Memoranda of Understanding – including with the International Centre for Integrated Mountain Development (ICIMOD), the Global Snow Leopard & Ecosystem Protection program (GSLEP), and the International Potato Center (CIP).

UCA maintains institutional membership in the regional Eurasia Pacific Uninet (EPU) and Himalayan University Consortium (HUC), and through MSRI it also is a member of the International Mountain Society (IMS) which publishes the renowned journal *Mountain Research & Development*.

MSRI serves as host for two international and regional bodies, the Central Asia Mountain Hub and the ICRAF Central Asia Office of the World Agroforestry Centre

Central Asia Mountain Hub

The Central Asia Mountain Hub, initiated through the Sustainable Mountain Development for Global Change (SMD4GC) program and supported by the Swiss Development Cooperation (SDC), has been hosted at UCA since 2010, and at MSRI since its establishment in 2011. The Hub coordinates and supports many activities of mountain stakeholders in Central Asia for the advancement of the global Sustainable Mountain Development (SMD) agenda.

ICRAF – World Agroforestry Centre

The Central Asia Office of the World Agroforestry Centre (ICRAF) was launched in 2014. Within ICRAF, the Central Asia Office operates as a country office under the Regional Office for East and Central Asia in Kunming, China.



International Conferences and Events

Throughout 2016, staff and delegates from MSRI and Mountain Partnership participated in a range of international conferences and events.

Roundtable on Security & Conflict Over Natural Resources, February 2016

A roundtable discussion on dynamics of sharing natural resources in border areas of Tajikistan and the Kyrgyz Republic was held in Bishkek. Disputes over shared land, water and other resources are often tied to poverty, environmental degradation and conflict in Central Asia. The research-informed round-table featured sharing and discussion of results of research undertaken in Batken and Soghd *oblasts* as part of the UK Department for International Development (DFID) project *Reducing Conflict Over Water and Pastures in the Kyrgyz Republic and Tajikistan*. Fifty-six attendees from government, academia, international organisations and NGOs in the Kyrgyz Republic and Tajikistan exchanged views, and shared preliminary research findings and recommendations about disputes over irrigation water and pasture use in the neighbouring countries. The roundtable acknowledged an urgent need for improved cooperation amongst agencies and government bodies providing aid and development interventions. The Regional Conflict Advisor for Central Asia from the British Embassy to the Kyrgyz Republic praised this unique platform for promoting partnership between research and policymakers.

Mountain Futures, March 2016

Several researchers from MSRI and its partner institutions participated in the Mountain Futures 2016 conference held in Kunming, China. A special session was organized on 'polycentric governance' of the commons, with a focus on Central Asia. The session was jointly convened by researchers and development practitioners including representatives from social organizations in the Altai Republic, Russian Federation, Kyrgyzstan, Tajikistan, and Kazakhstan. Experiences and challenges related to the region's unique experience of shifting to community based resource management practices were presented and discussed. The special session was attended by 40 participants from different regions of the world, contributing to greater visibility for the Central Asian mountain region.

Future Management of Grazing and Wild Lands in a High Tech World, July 2016

MSRI Associate Director Dr Foggin gave a plenary talk at the *10th International Rangeland Congress* held in Saskatoon, Canada, on 16-22 July 2016. His presentation focused on high altitude rangelands of the world, particularly the yak herding areas in the greater Tibetan Plateau region. The rangeland congress is held every four years. In total, more than 450 presentations from delegates representing 58 countries were made through a series of plenary, oral and poster sessions. Knowledge gained from the event, including published proceedings, provides a glimpse into the current state of affairs and global best practices for protecting and managing the world's extensive grazing and wild lands, for the present and future generations.

For more information, please follow the link: http://www.irc2016canada.ca/

Planet at the Crossroads, September 2016

The IUCN World Conservation Congress is held once every four years, bringing together thousands of leaders and decision-makers from government, civil society, indigenous peoples, business, and academia, with the goal of conserving the environment and harnessing the solutions nature has to offer to global challenges. The recent Congress was held on 1-10 September 2016 in Honolulu, USA. Keynote talks, numerous presentations and posters, and extensive networking constitute the basis for advancing the global conservation agenda. MSRI participated in several sessions and workshops, addressing challenges and opportunities that arise from protected area management, ecosystem services for disaster risk reduction, recognition of the rights of local and indigenous peoples, and promoting the voice of mountain stakeholders through mobilization and coordination of efforts.

For more information, please follow the link: http://iucnworldconservationcongress.org , OCTOBER 2016

The Second Annual Life in Kyrgyzstan Conference was organized by UCA's Institute of Public Policy and Administration (IPPA) on 6-7 October 2016. MSRI contributed a session in two parts on the topic of "Agriculture and Mountains". The session featured presentations by MSRI team members on natural resource management challenges in Kyrgyz-Tajik border communities, Kyrgyz farmers' decision-making on pasture use, migration, the Soviet legacy in the operations of pasture governance institutions, and on the effects of agroforestry on farm economies.

World Mountain Forum, October 2016

In addition to participants from MSRI, regional stakeholders from Central Asia including national government representatives from Kyrgyzstan, Tajikistan and Altai Republic of Russia were mobilized in the World Mountain Forum (WMF) 2016 Mbale, Uganda. The Governments of Tajikistan and Kyrgyzstan agreed on and voiced their regional position regarding the role of mountains. Regional stakeholders also served as panelists for critical sessions on Climate Change and Mountains (Elbegzaya Batjargal, Central Asia Mountain Hub) and Mountain Communities and Livelihoods (Chagat Almashev, Foundation for Sustainable Development Altai), and on high level panels on climate change and other themes (Rustam Latifzoda, Chair, Parliament Standing Committee on Agrarian Policy, Land & Water resources, Parliament of Tajikistan, Tajik Republic; and Said Asanov, MSDSP/AKF Kyrgyzstan). It was formally declared that the next World Mountain Forum will be hosted in Central Asia in 2018.

Exploring opportunities in China's 'One Belt, One Road' program, December 2016

MSRI senior staff and research project partners from Gorno Badakhshan (GBAO), Tajikistan, attended a strategic workshop in Lanzhou, China, on 2-8 December 2016. Organized by Lanzhou University and International Centre for Integrated Mountain Development (ICIMOD), and supported by the National Science Foundation of China, the discussion and planning meeting was entitled *Building partnerships for conservation and development in the Hindu Kush - Himalayas (HKH): Exploring complementary opportunities for One Belt One Road and the HKPL Initiative*. On-going research undertaken by MSRI in the Tajik Pamirs and priority areas for potential future collaborations were presented. The meeting was organized in the context of the interdisciplinary *Hindukush Karakoram Pamir Landscape (HKPL) Initiative*, a multi-stakeholder partnership for conservation and sustainable development spanning ecologically important transboundary mountain areas of Afghanistan, China, Pakistan, and Tajikistan. Key objectives included knowledge sharing amongst partners, increased involvement of local Chinese government officials in dialogues about technology transfer and funding mechanisms, as well as HKPL Initiative project updates.

The workshop was then followed by a *Science & Technology Cooperation Forum* in Xining, China, an event marking the launch of the *Silk Road Economic Belt Research Institute* established in 2016 under the government of Qinghai Province, China. This new research institute is hosted by Qinghai Normal University, supported by the International Cooperation Division of Qinghai Science & Technology Department. The MSRI Associate Director introduced Chinese colleagues to UCA, including a range of topics for potential collaboration. Opportunity also was taken to visit leaders at Qinghai University, including the nationally recognized *Sanjiangyuan Ecology and Plateau Agriculture & Pastoralism Key State Laboratory*, as well as senior officials of the recently established (and China's first) national park, the Sanjiangyuan National Park, encompassing the sources of the Yangtze, Yellow and Mekong Rivers.



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Chen, H., Yi., Z. **Schmidt-Vogt, D.**, Ahrends, A., Beckschaefer, P., Kleinn, C., Ranjitkar, S., Xu, J. 2016 Pushing the limits: the pattern and dynamics of rubber monoculture expansion in Xishuangbanna, S China. PLoS ONE 11 (2): e0150062.doi:10.1371/journal.pone.0150062.

Foggin, J.M. 2016. Conservation issues: mountain ecosystems. Reference Module (online) in Earth Systems & Environmental Sciences, ScienceDirect. Elsevier Publishing Company. DOI: 10.1016/B978-0-12-409548-9.09199-5

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Kohler, T., Wehrli, A., **Batjargal, E.**, Kanyamibwa, S., Maselli, D., and Wiesmann, U. 2016. The sci-encepolicy dialogue for climate change adaptation in mountain regions. (Ch. 15) in Salzmann, N., Huggel, C., Nussbaumer, S.U. and Ziervogel, G. (eds): Climate change adaptation strategies – an upstreamdownstream perspective. Switzerland: Springer International Publishing, pp. 271-292 DOI 10.1007/978-3-319-40773-9_15

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Schmidt-Vogt, D., Foggin, M., Hergarten, C. 2016. Strengthening mountain societies in Central Asia in a context of multidimensional change. Mountain Research and Development 36 (3): 380-383.

Shigaeva, J., Hagerman, S., Zerriffi, H., Hergarten, C., Isaeva, A., Mamadalieva, Z., & Foggin, M. 2016. Decentralizing governance of agropastoral systems in Kyrgyzstan: an assessment of recent pasture reforms. Mountain Research and Development 36:1, pp 91-101

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Forthcoming

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Levine, J., **Isaeva, A.,** Eddy, I., **Foggin, M.,** Gergel, S., Hagerman, S., and Zerriffi, H. 2017. A cognitive approach to the post-Soviet Central Asian pasture puzzle: new data from Kyrgyzstan. Regional Environmental Change (online). DOI 10.1007/s10113-017-1122-8

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Günther, J., **Thevs, N**., Gusovius, H.-J., Sigmund, I., Brückner, T., Beckmann, V. and Abdusalh, N. 2017. Carbon and phosphorus footprint of the cotton production in Xinjiang, China, in comparison to an alternative fibre (Apocynum) from Central Asia. Journal of Cleaner Production. DOI 10.1016/j. jclepro.2017.01.153.

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Reviewing by MSRI staff

MSRI staff have served as reviewers for the following academic journals in 2016:

- Archív Orientální | Quarterly Journal of African and Asian Studies
- Bird Conservation International
- Environmental Conservation
- Environmental Reviews
- Journal of Commons
- Journal of Mountain Science
- Land Use Policy
- Mountain Research and Development
- Sustainability

Conference presentations

Azarov, A. Impact of Kyrgyzstan's Accession to the Eurasian Economic Union on the Farm Income of Smallholder Farmers in the Middle and Higher Elevation Mountain Regions. Agricultural Transitions along the Silk Road Conference. 04 April 2016. Almaty, Kazakhstan.

Foggin, J.M. Herder Cooperatives in the Tibetan Plateau region: Kegawa Herders' Cooperative. Mountain Futures Conference. Nurturing seeds for change in the Anthropocene, 1-4 March 2016. Kunming, China. See <u>https://www.slideshare.net/marcfoggin/kegawa-herders-cooperative</u>

Foggin, J.M. Snow Leopard Landscape Conservation: Partnering with local communities in Western China and Central Asia for conservation and development. Mountain Futures Conference. Nurturing seeds for change in the Anthropocene, 1-4 March 2016. Kunming, China. See <u>https://www.slideshare.net/marcfoggin/snow-leopard-landscapes-59031692</u>

Murzakulova, A. Governing the commons in Central Asia: the glass is half empty or half full? Mountain Futures Conference. Nurturing seeds for change in the Anthropocene, 1-4 March 2016. Kunning, China.

Rosset, A. Creating maps with OSM in remote mountain villages: Linking environmental education, participatory mapping and citizen science. GIS in Central Asia Conference (GISCA 2016): Green spaces – perspectives and designs, Bishkek, Kyrgyzstan, 30 April 2016.

Schmidt-Vogt, D. Climate Change Impact and Adaptation in Central Asia. Carlton, University, Ottawa. 12 April 2016.

Schmidt-Vogt, D. Integrated Land Use Systems: economic, ecological, political and social dimensions. Freiburg University, Freiburg, Germany. 23 May 2016.

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Foggin, J.M. Research-for-Development (R4D) in the 'Mountains of Central Asia': The Tajikistan Pamirs and surrounding regions. Workshop: Exploring complementary opportunities for China's 'One Belt, One Road' and the HKPL Initiative. Lanzhou University, 2 December 2016. Lanzhou, China.

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Sagynbekova, L. Effects of Labour Migration on Well-Being and Sustainable Rural Livelihoods in Kyrgyzstan. Conference: World Mountain Forum. 17-20 October 2016. Mbale, Uganda.

MSRI Team

Mountain Societies Research Institute



Dr Dietrich Schmidt-Vogt, Director

Dietrich Schmidt-Vogt is a geographer with more than 30 years of research experience in mountainous areas of Asia. Before joining UCA, he held positions as Professor at the Kunming Institute of Botany, Chinese Academy of Sciences, in Kunming, China; Associate Professor at the Asian Institute of Technology, Thailand; and Senior Lecturer at the South Asia Institute of Heidelberg University, Germany. He is also Adjunct Professor at the Faculty of Environment and Natural Resources, Freiburg University, Germany; Distinguished Adjunct Professor at the Asian Institute of Technology (AIT), Thailand; and fellow of the Alexander von Humboldt-Foundation. His research interests include forest-farming interactions, multifunctional landscapes, integrated land use systems, and land use change and livelihoods in mountainous areas.



Dr Marc Foggin, Associate Director

Marc Foggin is a conservation biologist and development practitioner with 20 years of experience working in the high altitude grasslands and mountains of the Tibetan Plateau and Central Asia. He has special interests in landscape level conservation, protected area management, and the human dimensions of conservation, as well as in nomadic pastoralism, development of community-based tourism, and civil society. Marc has served as consultant for UNDP, WWF and other organizations, and is a member of IUCN's World Commission on Protected Areas (WCPA) and an honorary member of the Indigenous and Community Conserved Areas (ICCA) Consortium. Additionally, he is Honorary Research Associate at the Institute of Asian Research, University of British Columbia, Canada.



Christian Hergarten is a physical geographer with a background in spatial analysis and natural resource monitoring, using remote and proximal sensing approaches. Christian's academic interest and work mostly focuses on integrated analysis of ecosystem services and sustainable land management, and extends also to participatory monitoring approaches and the challenges of adaptive and inclusive governance. He has worked in various research contexts and settings – exploring soil and vegetation analysis in Ethiopia, South Sudan and Mozambique, as well as natural resource modeling in Tajikistan and North Korea. He strongly believes in integrated teaching approaches, combining trans-disciplinary research with capacity development and training activities. Christian is also an affiliate research fellow at the Centre for Development and Environment, University of Bern, Switzerland.





Aiganysh Isaeva, Research Fellow

Aiganysh Isaeva holds a MSc in Sociology from the University of Oxford and a BA in Sociology from the American University in Central Asia (AUCA) in Bishkek, Kyrgyz Republic. Prior to joining MSRI, she taught Sociology at AUCA and worked in the NGO and development sectors. At MSRI, Aiganysh has been involved in the ESPA project and supports the development of publications. She is also engaged in the elaboration of the Learning Landscapes framework and is contributing to the development of a background document about the Naryn region.

Asel Murzakulova, Research Fellow

Asel Murzakulova is primarily engaged in security and conflict-related research, with focus on resource management challenges. She is co-founder, with information agency Akipress and Polis Asia Center, of the analytical club "Mongu." Asel obtained her PhD from Kyrgyz Russian Slavic University in 2011. Between 2006 and 2011 she worked at the International Institute of Strategic Studies under the President of Kyrgyzstan, as UNDP national expert and political consultant to the Interparliamentary Assembly of CIS. In 2008, she was visiting scholar at the Davis Center, Harvard University, and in 2013 at the Institute of Slavic, East European and Eurasian Studies at University of California, Berkeley. Her research interests cover many aspects of international politics, with a particular interest in the cross-border issues in CIS, Russian soft power, migration, identity, religion, political institutions. In 2013 she was awarded the International Medal of the Commission of National Education of Poland for her contribution to the development of civic education in the Kyrgyz Republic.

Azamat Azarov, Research Fellow

Azamat Azarov is conducting research on food security in mountain areas, with a focus on small and medium farming system analysis in mountain areas of Kyrgyzstan. Azamat is a PhD candidate at the Kyrgyz National Agrarian University, writing his dissertation on "Classification and Problems of Farming Households in Mountain Regions of Kyrgyzstan" with case studies situated in Chui and Naryn Oblasts. Previously, Azamat taught agrarian marketing at Kyrgyz National Agrarian University. He received his MBA at the University of Applied Sciences Weihenstephan Triesdorf in Germany.

Jyldyz Shigaeva, Research Fellow

Jyldyz Shigaeva led the elaboration of the MSRI background paper on Sustainable Land Management (SLM) focused in Kyrgyzstan and Tajikistan. Her research interests include SLM, livelihoods in rural areas, and sustainable mountain development. Prior to joining UCA, Zhyldyz was a Senior Researcher in the Laboratory of Sustainable Development of Mountain Regions at the Institute of Mountain Physiology of the National Academy of Sciences of the Kyrgyz Republic, and an Associate Professor at the International University of Kyrgyzstan. Zhyldyz also worked with the Pamir-Alai Land Management (PALM) project funded by GEF/UNU. Zhyldyz received her PhD in Ecology from the International University of Kyrgyzstan.

Munavar Zhumanova, Research Fellow

Munavar has fourteen years' experience in agrarian policy issues and agricultural development projects. Her areas of expertise include pasture management, animal husbandry, farming practices, value chain analysis, and support for decision making in agro-pastoral systems. Munavar's academic and professional work addresses environment and resource economics, natural resource management and conservation (pastures and grassland), animal reproduction and nutrition science, ethno-botany and traditional ecological knowledge of agro-pastorals, rural economics, and climate change issues in remote mountainous Kyrgyzstan. She has published several case studies on agrarian societies of Africa and Asia, as well as academic papers and book chapters on climate change, agricultural productivity and poverty in mixed crop-livestock production systems in Kyrgyzstan. She received an MA in International Development and Cooperation from the University of Hiroshima and is currently enrolled in PhD studies in Agriculture and Grassland Sciences at the University of Rostock in Germany.

















Qobiljon Shokirov, Research Fellow

Qobiljon Shokirov has extensive experience in conservation projects, including ecological restoration, habitat restoration for wildlife in mountainous ecosystems, and biodiversity and conservation projects in the Great Basin Area and the Pacific Northwest as a part of USA public and national parks. He was part of a research team in the field of Sustainable Land Use Management in Tajikistan under the National Centre of Competence in Research (NCCR) North-South Research Project. At MSRI, Qobiljon conducts research on mountain tourism and sustainability. Qobiljon graduated from Antioch University with MSc in Resource Management and Conservation and is a former Fulbright Fellow.

Elnura Omurbekova, Administration Officer

Elnura Omurbekova supports the work of researchers at MSRI, serving as administrative coordinator and focal point for other UCA departments and external partners. Previously, she worked at the OSCE Academy in Bishkek as a Research and Training Assistant and an Academic Assistant. Elnura received her Graduate Diploma in Law from Kyrgyz Russian Slavic University and her Master of Law from Kyushu University, Japan.

Samat Kalmuratov, Research Assistant

Samat Kalmuratov is supporting the ESPA research team by conducting baseline surveys in remote Naryn villages. He is also contributing in the installation and maintenance of weather stations in remote mountain areas. Samat received his MBA at the University of Applied Sciences, Weihenstephan Triesdorf in Germany.

Evgenii Shibkov, GIS Research Associate

Evgenii Shibkov is currently working as GIS expert, with a strong background in digital cartography. Prior to joining UCA he worked for 6 years as engineer at the Kyrgyz State Service of Geodesy and Cartography. Evgenii has a MSc in Geoinformatics: Managing Energy, Resources and Environment (GEM) from Kyrgyz State University of Construction, Transport and Architecture. He also took part in various international trainings in data modeling, project management, and remote sensing.

Evgeniy Novikov, Software Developer

Evgeniy Novikov is a software developer specialised in PHP and MySQL. He has a Masters in Software Development and Technology from the International University of Kyrgyzstan. At MSRI, Evgeniy's core responsibilities include software development using open source technologies (Linux, Apache, MySQL, PHP), administration of virtual information technology infrastructure, development of knowledge management systems and procedures, development of web portals, and development, optimisation and maintenance of a range of SQL-based databases of various levels of complexity.

Altyn Kapalova, Project Manager

Altyn Kapalova manages MSRI's Central Asia and Afghanistan Research Fellowship (CAARF) which funds and support researchers from the Kyrgyz Republic, Tajikistan and Afghanistan to conduct applied research relevant to the development of the region's mountain communities. Altyn's research interests include informal institutions, gender studies, and rural development. She was awarded the Fellowship of the Central Asia and Caucasus Research and Training Initiative (CARTI), and she interned at the Department of Anthropology at Texas A&M University, USA, in the Spring of 2012.



Aline Rosset, Project Manager

Aline Rosset manages MSRI's eBilim mobile digital library project, funded by GIZ, as well as the Kyrgyz Mountains Environmental Education & Citizen Science (KMEECS) project together with CAMP Alatoo. Her main interests and experience lie in sustainable development of mountain regions, environmental education, natural resources management, geographic information and knowledge management, as well as participatory and interdisciplinary research. Aline has previously worked on the establishment of Joint Forestry Management schemes on degraded riparian forest in the valleys of GBAO, Tajikistan in partnership with the State Forestry Agency. Prior to that, she has worked in Europe, West Africa, and Central and South America. Aline has a MSc in Geography from University of Zurich, where she was also employed as teaching and research assistant for the chair of Human Geography, and as a management assistant at the National Centre of Competence in Research (NCCR) North-South hub in Zurich.

Jangyl Ismailova, Project Officer

Jangyl Ismailova works as a Project Officer for MSRI's eBilim Mobile Digital Library project, supporting in overall project management and implementation. She oversees communications with partner organisations, government officials, and the media, and supports in development and implementation of the Naryn baseline study as well as subsequent surveys and monitoring activities in remote areas. Jangyl holds a BA degree in International and Comparative Politics from the American University of Central Asia and is an alumna of the US Department of State Future Leaders Exchange program (FLEX) and the Global Village for Future Leaders of Business and Industry Program of the Iacocca Institute at Lehigh University.

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Iliyaz Usenov, Outreach Coordinator

Iliyaz Usenov joined UCA in 2009 as Office Coordinator at SPCE in Naryn. He also worked at CFD, UCA, as Material Controller in 2014-2015. In 2015 he took on the role of Outreach Coordinator for MSRI's eBilim Mobile Digital Library. Iliyaz provides residents of remote and isolated villages of At-Bashy, Ak-Talaa and Naryn rayons with information on a wide range of development issues. He works closely with local authorities, school children, community leaders and residents in villages visited by eBilim.



Kubanychbek Moidinov, e-Bilim Driver

As a driver of MSRI's eBilim Mobile Digital Library, Kubanychbek delivers the eBilim team and equipment to its village destinations. He also assists visitors to find library materials requested.

Dr Sujata Manandhar, Research Fellow

Sujata Manandhar helped to develop a climate change adaptation strategy for MSRI. She has extensive experience on climate change and adaptation in the water and agriculture sector in mountainous regions of Nepal and Thailand. Her other interests include natural resource management, biodiversity conservation and community based development. Prior to joining MSRI, Sujata worked as a research fellow at the Center of Research for Environment, Energy and Water in Nepal, and at Tohoku University and also at the International Research Centre for River Basin Environment, University of Yamanashi in Japan. She is a former Japan Society for the Promotion of Science (JSPS) fellow. She holds a PhD in Integrated River Basin Management from the University of Yamanashi, Japan.



Mountain Partnership



Elbegzaya (Zaya) Batjargal, Regional Program Officer, Central Asia Office

Elbegzaya Batjargal oversees Mountain Partnership (MP) activities to support MP members in Central Asia working on sustainable mountain development (SMD), including knowledge sharing, capacity building and forging joint initiatives aimed at integrating regional contributions to global processes on SMD. Previously, Zaya worked as Policy Analyst and Environmental Specialist with the Energy and Environment teams of United Nations Development Programme in Mongolia and in the Maldives. She also headed the Fundraising, Marketing and Communication Unit of the World Wildlife Fund Program Office, Mongolia. Zaya received her MA in International Environmental Policy from the Graduate School of International Policy Studies at the Monterey Institute of International Studies, California, USA.





Alma Uzbekova coordinates communications and public relations activities for the Mountain Partnership Central Asia Office. She has worked with various national nongovernmental organisations in rural development, implementing projects funded by international donors. Alma served as Projects Coordinator with the public foundation 'CAMP Alatoo' (Central Asian Mountain Programme) where she was responsible for communications and public relations. She earned her Master's degree at the Kyrgyz Academy of Management.

ICRAF – World Agroforestry Centre





Dr Niels Thevs, ICRAF Central Asia Programme Coordinator

Niels Thevs started to work for ICRAF at the end of 2014, developing a research program for ICRAF in Central Asia. Before that, he worked as researcher at University of Greifswald, Germany, where he was responsible to develop and carry out research projects in the fields of sustainable land use in riparian oases and drylands of Central Asia. He established partnerships with research institutions from China, Kazakhstan, Uzbekistan, and Turkmenistan. In addition to research, Niels was involved in teaching (GIS, remote sensing, soil science) in the international Masters Course in Landscape Ecology and Nature Conservation at University of Greifswald. He also has developed projects in the field of environmental education with various organizations from China. Niels obtained his PhD in Landscape Ecology at University of Greifswald.

Kumar Aliev, ICRAF Research Assistant

Kumar Aliev is supporting the development of a research strategy for ICRAF's Central Asia Office. He is responsible to support and carry out research projects, including literature reviews, translations and other related tasks on selected topics. Kumar contributes to field studies, household interviews, office organization, and coordinates with UCA departments. Previously, Kumar worked as researcher at the P. A. Ghan Forest Institute under the National Academy of Sciences. He obtained his MSc in forestry at Kyungpook National University, South Korea.

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