



Research

NSFC-ICIMOD Fund 2016 Awards 12 Projects in the Hindu Kush Himalaya

On 7 November, the National Natural Science Foundation of China (NSFC) and the International Centre for Integrated Mountain Development (ICIMOD) Fund 2016 awarded support to 12 projects to further its scientific and technological work in the Hindu Kush Himalaya (HKH), an area that encompasses mountain landscapes and people from Afghanistan to Myanmar.

The awards mark a new stage of strategic collaboration between NSFC and ICIMOD, who began this project in Chengdu this past April when they met to discuss research needs and resources.

The NSFC and ICIMOD signed a memorandum of understanding in November 2015 on mutual cooperation to promote science and technology for sustainable mountain development. The objective of this joint call is to promote the scientific collaboration between Chinese scientists with ICIMOD scientists or with scientists from the HKH region to carry out basic research on topics relevant to mountain people.

NSFC has made 3 million RMB (USD 441,000) available to the 12 projects, which will initiate later this year or in early 2017.

NSFC will make this call for projects available on an annual basis going forward. They expect the awards will not only produce meaningful data and results for mountain people in the HKH, but also strengthen China and ICIMOD's cooperative potential in the future.

A full list of the projects can be viewed on the NSFC website: <http://www.nsfc.gov.cn/publish/portal0/tab38/info53248.htm>

Research Progress on Water-induced Hazards in the Upstream Koshi River Basin

The Koshi River originates in the Middle Himalayas in southern China, passes through Nepal, and joins the Ganges River in India. The Koshi River is one of the most important transboundary rivers in South Asia, and its basin is prone to a range of natural hazards such as landslides, debris flow, and glacial lake outburst floods (GLOF) that can result in tremendous social and economic loss.

To address these challenges, ICIMOD and the China-based Institute of Mountain Hazards and Environment (IMHE) have begun a collaborative research project on water management and hazard risk reduction, with the goal of generating evidence-based knowledge to help confront these dangers in the context of global climate change. The work also receives support from the Australian government, which funds ICIMOD's Koshi Basin Programme.

To gather relevant information, the team held six project workshops and conducted several research trips to sites (e.g., Bhote Koshi, Zhangmu, and Tatopani) along the Koshi River to study the characteristics and space-time distribution of water-induced hazards.

The team concluded that residents in the basin live at risk of water-related hazards including GLOF, debris flow,

Community training for geohazard prevention





Koshi Field Trip

landslides, floods, drought, soil erosion and sedimentation. All of these potential dangers are exacerbated by population increases in the basin, which also increases the demands on ecosystem services. To this end, the team generated some ideas for mitigating these hazards and for education people about the potential risks they face.

Some of this research has already gone into publication, with the IMHE team publishing several articles in peer-reviewed journals. The team has jointly filed a policy recommendation report that earned praise from both Chinese Academy of Sciences (CAS) and the Department of Land Resources (in the Tibetan Autonomous Region, or TAR).

Future research will widen the scope of this Koshi Basin research, including investigations of post-2015 earthquake hazards in the Koshi Basin, building a hazard forecast system (for floods and landslides), and generating resilience models of sustainable socio-economic development.

HICAP China Provides Policy Recommendations to the Yunnan Government, China

Addressing the intersection of gender and environmental issues remains a priority for the Chinese government. To this end, HICAP’s Chinese partner – the Yunnan Academy of Social Sciences – has released policy recommendations for building women’s capacity to succeed in agriculture in the context of climate change. The recommendations were authored by Professor Zhaoqun of the Academy.

The six recommendations were as follows:

1. consider climate change with socio-economic development planning at the county and township levels ;
2. improve agricultural production facilities and build equitable water management institutions;
3. provide climate change information and technology to improve adaptation measures enacted by local communities, particularly women;

4. use women’s traditional knowledge and practical experience when drafting socio-economic plans and community institutional arrangements;
5. employ a gender perspective at the provincial level when formulating policy to address climate change impacts; and
6. improve community-based water management, and support women’s participation in decision making processes.

These recommendations represent HICAP China’s ongoing commitment to Chinese livelihood and environmental issues. Their other work encompasses broad themes of ecosystem management, water availability, and community-based adaptation. These manuscripts have all been submitted to leading research journals.

HILIFE Project Team Conducts Field Survey in Nujiang Prefecture, Yunnan, China

To better understand biodiversity conservation and sustainable development needs in Yunnan, China, the HILIFE project team conducted field research in the Nujiang prefecture. Over the course of two weeks, the project team had in-depth discussions about sustainable development with government officials at all levels of government. They also visited several local communities and to conduct interviews with locals regarding livelihoods and development issues.

Initial findings of HILIFE’s research indicate a common understanding among government officials and local villagers that eco-tourism holds great potential for economic growth and sustainable development by promoting both biodiversity conservation and livelihoods improvement. However, they also realized that the region is susceptible to natural hazards such as landslides and mudslides. All parties agree that in the context of climate change and globalization, there has been a regrettable loss of local biodiversity and traditional culture. Local eco-tourism development plans should take these risks into consideration. HILIFE’s China project, supported by expertise and experience from ICIMOD, can support local eco-tourism development by bringing together transboundary and international groups to provide support.

HILIFE team conducted in-depth field survey in Yunnan China



New Book Celebrates the Wildlife and Traditional Culture of the Kailash Sacred Landscape

A book entitled “The Way to the Sacred Land: Cherishing the Wildlife and Traditional Culture of the Kailash Sacred Landscape” has been formally published in China. The text is cooperative product of the Kailash Sacred Landscape Conservation and Development Initiative (ICIMOD) and the Kunming Institute of Botany, Chinese Academy of Sciences. This book presents important findings about regional wild plants and related traditional knowledge in the Kailash region. We hope that it will help raise awareness among the general public of the unique plant biodiversity and profound traditional culture of this splendid landscape.



Here is an excerpt from the text:

2014 was the year of the horse. In Chinese culture, the horse is linked to success and prosperity. You might look forward to a lucky time – earning more money, getting a house or a car. But if you ask a Tibetan “What will you do in the year of the horse?” they will tell you that they are going on a pilgrimage to Gang Rinpoche, the holy Mt. Kailash. People are thought to have worshipped Mt. Kailash and Lake Manasarovar for more than 800 years. The faithful believe it is the centre of the world, though in these modern times it may seem far away. It is hard to imagine that in the past, hungry pilgrims in worn clothes crossed these rugged mountains and vast bleak deserts in the thin air, and cold winds, under a blazing sun, walking and prostrating themselves along the pilgrimage way. Faith takes root in their hearts, pain fades away, and life blooms.



In the summer of 2014, we made a survey of the wild plants and related traditional knowledge in the Kailash region – in Burang county of Ngari prefecture in the Tibet Autonomous Region of China. The survey was carried out under the ‘Kailash Sacred Landscape Conservation and Development Initiative’. This book presents some of the findings from this work. We hope that it will help raise awareness among the general public of the unique plant biodiversity and profound traditional culture of this splendid landscape.

Ngari prefecture is divided into seven counties and extends over 30 km² at an average elevation of 4,500 metres above sea level. With a total population of only 80,000, it has one of the lowest population densities in the country. The Kailash and Himalayan mountain ranges stretch in parallel from east to west into the heart of Ngari. The prefecture’s highest mountain is in the Himalayan range, Gurla Mandhata which rises to 7,694 m to the south of Lake Manasarovar. The highest peak in the Kailash range is the little known Lengbu Gangri at 7,095, but the most famous peak in the range is Mt. Kailash.

Burang is ‘the place surrounded by snow mountains’. The county borders India and Nepal, and all Indian and Nepali pilgrims must pass through here on their way to Kailash. Burang Town lies in the valley of the Karnali river at the foot of the Mount Gurla Mandhata. Burang Town is milder and wetter than other parts of Ngari. The average elevation is only 3,900 m, and the moist monsoon winds from the Bay of Bengal bring precipitation here. The relatively mild climate has made Burang the granary of Ngari, with barley the main crop. But Burang also suffers from natural disasters, especially landslides during the rainy season. And there is heavy snow in winter and early spring, which have a strong effect on agricultural and pastoral production.

Cooperation and Communication

China-ICIMOD Country Consultation Meeting Held in Beijing

China Country Consultation: Developing the ICIMOD Medium Term Action Plan 2018-2022, hosted by ICIMOD, co-organized by IGSNRR, IMHE and CNICIMD, was held in Beijing on 24 August 2016.

Wang Zhenyu delivered welcome remarks. He emphasized that a long-term partnership has been established between CAS and ICIMOD. He praised the accomplishments of the last five-year achievements and hoped that the two parties could promote further cooperation in the near future.

David Molden and Long Ruijun of ICIMOD made presentations on the ICIMOD strategic framework and future partnership opportunities.

Participants offered their comments on ICIMOD strategic framework, which can be summarized as follows:

- 1) to enlarge international reputation of ICIMOD as well as on mountain science and sustainable development all over the world;
- 2) to encourage interdisciplinary integrated research;
- 3) to take part in China’s Belt and Road Initiatives through research;
- 4) to translate basic research into policy analysis;
- 5) to focus on key research fields such as transboundary water management, eco-environmental protection, and disaster forecast and mitigation;
- 6) to boost HUC in China and to enlarge the Chinese member team; and
- 7) to enhance ICIMOD recruitment efforts in China.

Votes of thanks and closure were delivered by Dr. Arun B Shrestha from ICIMOD and Prof. Cui Peng from CNICIMOD, respectively.



ICIMOD Consultation Meeting

Key Attendees

- Sun Honglie, Chinese Academy of Sciences
- Zheng Du, Chinese Academy of Sciences
- Liu Changming, Chinese Academy of Sciences
- Cui Peng, Chinese Academy of Sciences
- Chen Fahu, Chinese Academy of Sciences
- Liu Yanhua, Pre-minister of Ministry of Science and Technology (MOST) of China
- Liu Jian, UNEP
- Zhu Chunquan, IUCN-China
- Wang Zhenyu, Director of International Organization Division of Chinese Academy of Sciences
- Zhang Yongtao, Director of Asia-Africa International Organization Division of NSFC
- Liao Xiaohan, Vice Director of IGSNRR
- Wang Yanfen, Vice President of Chinese Academy of Sciences University and ICIMOD Independent Board Member
- Zhang Linxiu, ICIMOD Pre-Independent Board Member
- Zhang Yili, IGSNRR
- Liu Shiyin, Northwest Institute of Eco-Environment and Resources, CAS (NIEER)
- Wu Yanhong, IMHE
- Chen Ningsheng, IMHE
- Xu Jun, Sichuan University
- Cui Wei, Vice President of Qinghai Normal University
- David Molden, Director General, ICIMOD

ICIMOD QQR Meetings Held in Kunming and Chengdu

ICIMOD Quinquennial Review (QQR) Meetings were held in Kunming and Chengdu, respectively, from 20-22 July 2016. CNICIMOD invited some key Chinese members to attend the meetings, including: Vice President of Sichuan University Mr. Luo Zhongshu, Prof. Wang Zhuo and Prof. Xu Jun from Sichuan University, Prof. Luo Peng from CIB, Prof. Chen Ningsheng and Fang Yiping from IMHE. Mr. Alan Ferguson, from AECOM of Canada, conducted the evaluation process.

Delegates from ICIMOD initiatives such as HICAP, Kailash and Koshi River Basin made presentations and then fielded questions about their work.

All the participants expressed their opinions on the past five-year performance of ICIMOD and praised its accomplishments. Luo Zhongshu said ICIMOD had a very efficient work style, was well-known for its integrity, and exercised good foresight on its program design and implementation.

In 2015, ICIMOD Board and ISG commissioned an independent review of ICIMOD called the Quinquennial Review (QQR). The purpose of the review is to both provide accountability to the Board, the ICIMOD Support Group (ISG), and other stakeholders and strengthen ICIMOD’s functioning based on the conclusions and recommendations of the review.

QQR Specialist Mr. Alan Ferguson



Staff exchange between CNICIMOD and ICIMOD

Liu Qin, the secretary of CNICIMOD paid a visit to ICIMOD in October to learn more about the parent organization’s programmes and resources. She spent time learning with all the ICIMOD divisions: Knowledge Management and Communications, Strategic Partnerships, and the Directorate.

Qin expressed an appreciation for visiting with the various ICIMOD initiatives such as HICAP, HILIFE, Koshi Basin, Kailash, MENRIS, and HUC.



Liu Qin from CNICIMOD visited ICIMOD

Moreover, the visit focused on building stronger partnerships between ICIMOD and its Chinese collaborators. These issues were discussed in a special meeting on the “ICIMOD-CNICIMOD Partnership Action Plan.”

33rd International Geographical Congress in Beijing

The 33rd International Geographical Congress (IGC) took place in Beijing in August 2016. The event was hosted by the International Geographical Union (IGU), and organized by The Geographical Society of China (GSC) and Institute of Geographic Sciences and Natural Resources Research. Geographers from more than 100 countries were in attendance.

This year's theme was “Shaping Our Harmonious Worlds.” The presentation and panels aimed to provide for honoring geographic achievements, exploring new forms of geo-scientific communication, and boosting the international cooperation and development. Ten keynote lectures were arranged around five topics of Geoscience and Future Earth, Climate Change and Global Understanding, Urbanization and Sustainable Development, Environmental Health and Human Welfare, and Geography and Culture Diversity.

ICIMOD highlights on Transboundary River Management at the 33rd International Geographic Congress

ICIMOD organized two side events at the recent 33rd International Geographical Congress held in Beijing in August 2016. Both events focused on ICIMOD's work in its Koshi Basin Programme (KBP).

The first event highlighted ‘Regional Science Collaboration for Transboundary River Basin Management,’ focusing on the transboundary Koshi Basin in the region. Four technical papers were presented and followed by an expert panel discussion about strengthening regional collaboration on river basin management.

For the second event, KBP Coordinator, Shahriar Wahid, presented regional level research progress of the transboundary Koshi Basin and partnership in Koshi Basin Program. Dr Wahid shared his experience of implementing research with a ‘development perspective’ in the Koshi Basin and encouraged embedding research into development and policy planning processes to create maximum impact of research outcomes.

The presentation was moderated by Arun Shrestha, ICIMOD's Senior Climate Change Specialist and followed by an expert panel discussion on assessing policy making demand for information. The panel included Dr David Molden, Rajiv Sinha (Indian Institute of Technology (IIT)-Kanpur, India), and Rong Nianhe from the Bureau of International Cooperation, National Natural Science Foundation of China. The panelists highlighted the need for further collaboration integrating river management for collective policy inputs in the region, and south-south dialogue and cooperation to foster active collaboration between experts and policy makers.

33rd International Geography Conference





ICIMOD presents highlights from the Transboundary Landscape agenda at the 33rd IGC



ICIMOD Director General, David Molden

3rd ICMED Held in Beijing

The 3rd International Conference on Mountain Environment and Development (ICMED) was held in Beijing on 23 August 2016. The event was hosted by the Institute of Mountain Hazards and Environment, CAS (IMHE), and co-organized by the Mountain Branch of The Geographical Society of China, the Mountain Branch of China Society of Natural Resources, Digital Mountain Branch of Chinese Committee of International Society for Digital Earth, and the Journal of Mountain Science. Content focused on the theme of “Future Mountain Development” and included five keynote lectures, 20 oral lectures, and eight posters. More than 100 participants from China, Italy, Nepal, UNEP, and ICIMOD attended.

CAS Academician Prof. Cui Peng from IMHE delivered welcome remarks. He emphasized the importance and significance of mountain research for sustainable development. David Molden from ICIMOD listed the opportunities and challenges of mountain development and appealed to those present to establish a transboundary union on mountain sustainable development.

Dr. Liu Jian from UNEP again emphasized the necessity to pay more attention on mountainous areas. On behalf of UN, he talked about the topic of “the Paris Protocol and Sustainable Goals in Mountainous Area” from an international perspective.

3rd International Conference on Mountain Environment and Development



A Hotspot for Earth Key Belt Research—The 2nd Earth Science Forum Held in Jiuzhai Valley

The 2nd Earth Science Forum, co-hosted by Institute of Mountain Hazards and Environment, CAS (IMHE) and Bureau of National Natural Reserves Management for Jiuzhai (BNNRMJ) was held in Jiuzhai Valley during 22-24 October, 2016. Participants included CAS Academicians Wang Chenshan, Jin Zhijun, Zhang Peizhen, Wang Huijun, and Cui Peng, and the Deputy Directors of BNNRMJ, Mr. Xu Ronglin and Ms. Ding Suqin.

Ge Yonggang and Deng Guiping made two presentations titled “Scientific Issues on Earth Surface Processes in Earth Key Belt” and “Key Technologies on Water Resource and Ecological Security Protection in Jiuzhai,” respectively. Together these papers suggested ideas about how to solve the key scientific issues in natural reserve areas. Wang Chenshan from CAS said that Jiuzhai, Huanglong and Wanglang should be managed together for national park application. Wang and Huijun, meanwhile, suggested that observation on meteorology, hydrology, vegetation, ecology and disaster should be integrated for weather simulation and disaster forecasts.

The 2nd Earth Science Forum in Jiuzhai Valley



Cui Peng summarized the central ideas of the event. He emphasized the vital importance for comprehensive research in the earth key belt and the need to facilitate the combination of ecology, hydrology and disaster research. He made a commitment that IMHE would strengthen its cooperation with BNNRMJ in joint research and observation.

TAAAS carried on the enhancement and releasing activity about Tibetan indigenous fish species

Due to the complex and varied water systems of Tibet that run internally and externally, the fish species in this area have developed strong regional characteristics. They are adapted to thrive in low temperatures, which can inhibit physical maturity and reproductive capacities. Therefore, scientists are concerned that disturbances to this fragile habitat could endanger several species of Tibetan fish.

Inspired by this situation, the Tibet Academy of Agricultural and Animal Husbandry Sciences (TAAAS) has developed two important documents: "The Enhancement and Releasing for Aquatic Organisms" and "Action Outline for Conservation and Protection of Aquatic Organisms Resources in China." In these guidelines, they document best practices to enhance and release fish into Tibetan river systems.

In September last year, these guidelines were put into practice as scientists released indigenous fish into the Lhasa River in Qushi county. Under supervision from the government's fishery administration, more than 150,000 fish of several different species and with an average length of 7 cm were introduced into the Lhasa River. It is hoped this activity will play a positive role in protecting the species diversity of Tibetan indigenous fish population and resources.

The Belt & Road Initiative

The First International Science Forum of National Scientific Organizations on the Belt and Road Initiative Held in Beijing

In November 2016, the Chinese Academy of Sciences (CAS) recently hosted the First International Science Forum of National Scientific Organizations on the Belt and Road Initiative. The participants on hand included academics, two Nobel Prize winners, and over 350 scientists from nearly 40 countries,

CAS Vice President Tan Tieniu opened the ceremony with encouragement to explore two important themes for the event:

- 1) Establishing a cooperative mechanism among the national academies and research organizations to support joint research, policy studies, and capacity building; and
- 2) Developing priority areas and proposals for future cooperation.

CAS President Bai Chunli followed with a speech that highlighted the virtues of the Belt and Road Initiatives that allow countries to address complex challenges across a diversity of landscapes and amongst changing populations. However, Chunli reminded the crowd, only by way of scientific cooperation can we cope with these challenges: scientific innovation will be the engine of social and economic development as it was for the 20th century. Therefore, scientists from different countries and regions, with different backgrounds, should be work together to share the common responsibilities and benefits.

During the two-day event, a wide variety of scientific topics were discussed, each one with an aim to present holistic, sustainable development.

Group Photo of The First International Science Forum of National Scientific Organizations on the Belt and Road



The Silk Road Economic Belt and Road Initiative was launched in 2013 by President Xi Jinping, who drew inspiration from his visits to Central and Southeast Asia. Belt & Road involves countries along ancient commercial routes to promote common and shared development worldwide through cooperation and partnerships across a wide range of areas and interests. Since proposed, this initiative has attracted international attention and support from over 100 countries and international organizations.

Beijing Declaration

To address diverse development challenges and to promote the common prosperity of all nations, Chinese President Xi Jinping in 2013 proposed the Silk Road Economic Belt and the 21st Century Maritime Silk Road. This initiative—the Belt and Road (B&R)—is a forward-looking vision for international cooperation and shared development that spans three continents and their contiguous oceans and seas. The initiative has received a broad positive response, with strong support from over 120 countries and a large number of international organizations. Key achievements include the establishment of the Silk Road Fund; the development of fast-train railways; the expansion of trade and business; a deepening of communication on policy, and enhanced exchanges between people and cultures.

The countries in the Belt and Road have diverse culture, history, natural environments, and differing social and economic policies. But they also face a spectrum of shared major challenges from development itself to sustainable development. To address these challenges, science, technology, and innovation (STI) must play a strong central role. National academies, regional scientific, research and technological organizations and scientists along the Belt and Road must deepen cooperation in a sustained and systematic way to address these challenges. They should establish strong scientific basis for shared and sustainable development.

To strengthen mutual understanding, common interests and aspirations, the leaders and representatives of over 20 national and international scientific organizations from the Belt and Road regions, and around 350 Chinese and

international scientists and experts, convened in Beijing on November 7–8, 2016. This was the first International Science Forum of National Scientific Organizations for the Belt and Road Initiative. The Forum was jointly organized by the Chinese Academy of Sciences; the National Academy of Sciences of the Republic of Kazakhstan; the Kyrgyzstan Academy of Sciences; the Tribhuvan University of Nepal; the Pakistan Academy of Sciences; the Polish Academy of Sciences; the Russian Academy of Sciences; the University of Ruhuna, Sri Lanka; the Academy of Sciences of the Republic of Tajikistan; the Uzbekistan Academy of Sciences; the International Centre for Integrated Mountain Development (ICIMOD) and The World Academy of Sciences (TWAS) for the advancement of science in developing countries.

To advance peace and prosperity, delegates and experts held extensive discussions on various topics in the spirit of the Silk Road, embodying the timeless values of peace and cooperation, openness and inclusiveness, mutual learning and mutual benefit, all to advance prosperity and peace.

Based on the consensus reached, the participating organizations wish to make the following statement:

1. Strengthen cooperation in science, technology, and innovation (STI) for the promotion of shared development

Science, technology, and innovation are major drivers for social economic development and should be the priority areas for cooperation in the Belt and Road development. The collective national academies, national and regional research organizations are an important scientific force that can support the development and should play a leading role to bring broad benefits to all nations. National and regional scientific organizations should enhance their efforts to mobilize and unify scientists and experts from different disciplines to cooperate on the major needs and common scientific challenges for the realization of green, quality and sustainable development. Particular attention should be given to the involvement of young scientists as well as adequate representation of women scientists. We will ensure conduct of responsible science and endeavor to provide strong support to science based policy making.

2. Build a platform of co-innovation and a long-term mechanism for STI cooperation

National and regional scientific organizations along the Belt and Road commit to establishing a long-term effective Belt and Road cooperation mechanism that aims to facilitate bridge and organize cooperative research and innovation, strategic advice, policy communication, and capacity building in science and education for common benefits.

We agree to form a working group (secretariat) to support the operation of the mechanism, and to establish an alliance of international scientists of the Belt and Road to support and carry out international cooperation. We also commit to holding the Forum every two years as part of the mechanism.

Panel discussion with the audience



All of these actions mentioned above are to be developed under the principles of equity and equality, willingness and mutual benefit and with adherence to processes promoting joint discussion, collaboration and sharing.

3. Focus on major challenges and organize related international programs

Taking advantage of our multi-disciplinary and regional features, we commit to supporting and organizing research programs in areas of strategic importance to the Belt and Road construction.

The Belt and Road Initiative aiming at shared development harmonizes the fundamental interests of the international community and adds a new positive force to peace and development in the world. National and regional scientific organizations, scientists and experts from different fields need to strengthen cooperation by sharing of information and joining their efforts together in the supply of continuous and strong scientific support to the shared development and common prosperity.

Reducing Risk for the Silk Road Economic Belt in the 21st Century

The Silk Road economic belt has been drawing increased attention for its importance in connecting regions across Asia and for developing rural and urban areas. For this reason, the Chinese Academy of Sciences (CAS) hosted a kick-off and consultation meeting of “Natural Hazard Risk Reduction for the Silk Road Economic Belt and the 21st Century Maritime Silk Road” in Beijing in October 2016.

Yu Runsheng from the Department of National Development and Reform Commission of China introduced the background of this project, as well as the importance of CAS to this project. Wang Xiao from the Department of International Cooperation praised the project and emphasized the important roles of scientific and technological innovation to improve disaster reduction along this important commercial and environmental corridor.

Prof. Cui Peng of CAS gave an overview of the Silk Road, including the specific implementation plan of sub-projects.

Following these introductions, attendees listened to a series of presentations on the various research projects in disaster risk reduction. Each presentation was followed by a helpful question and answer session.

IMHE Visits Pakistan to Boost Belt & Road Research on Geo-disaster Mitigation

To provide greater scientific support along the Chinese-Pakistan corridor, a seven-member team from the Institute of Mountain Hazards and Environment (IMHE), Chinese Academy of Sciences (CAS), led by Cui Peng, paid a five-day visit to Pakistan to build relationships for future projects on geo-disaster mitigation. They also discussed the possibility of establishing a China-Pakistan Earth Science Centre.

The IMHE team also paid information visits to Pakistan’s National University of Sciences and Technology (NUST), the National Centre of Excellence in Geology (NECG) at the University of Peshawar, Quaid-i-Azam University, and the Comsats Institute of Information Technology.

All reports suggest that scholars from both countries were equally excited about the Silk Road Economic Belt project, and both agreed that maintaining its viability by reducing potential geo-hazards would be key to its long-term success. Establishing a China-Pakistan Earth Science Centre, it was agreed, would be an important first step in this work.

The IMHE team also discussed the possibility of co-organizing an “International Workshop of Natural Hazards Reduction along China-Pakistan Economic Corridor”. Plans are currently underway.

Informational site visits to the China Road and Bridge Corporation as well as the Karot Hydropower Station in Pakistan yielded good returns for framing future science and technology research.

Key Participants

Qin Dahe, China Academy of Sciences (CAS)
Chen Yong, CAS
Zheng Du, CAS
Liu Changming, CAS
Zhai Dongsheng, CAS
Yu Runsheng, Director of Western Department of National Development and Reform Commission of China
Wang Xiao, Director of Asian-African Division, Department of International Cooperation, Ministry of Science and Technology of China
Wang Zhenyu, CAS
Zhou Ju, CAS
Jiang Yiqi, CAS
Rong Nianhe, National Natural Science Foundation of China
Wu Yanhong, IMHE

Key Visits and Personnel

Sun Weidong, Chinese ambassador to Pakistan
Ahsan Iqbal, Director of Ministry of Planning Development and Reform
Mukhtar Ahmad, Chairman of Higher Education Commission
Anwar Nasim, Dean of Pakistani Academy of Sciences
Shaukat Hameed Khan, Chief Coordinator of Standing Committee on Scientific and Technological Cooperation, Organization of Islamic Cooperation
Asghar Nawaz, Director General of National Disaster Administration of Pakistan
Muhammad Ashraf, Director of Science Foundation of Pakistan
Ghulam Rasul, Director General of Pakistan Meteorological Department
Imran Khan, Director General of Geological Survey of Pakistan
Manzoor Hussain, Chairman of Foundation of Economic Cooperation Organization in Pakistan
Muhammad Asif Khan, Vice-Chancellor of Karakoram International University
Zhang Haihua, Secretary of the Embassy of China in Pakistan

Workshop Seeks to Reduce Natural Hazard Risk on the Silk Road Economic Belt and the 21st Century Maritime Silk Road

In order to enhance the comprehensive disaster reducing capacity of countries along The Belt and Road, more than 80 scientists and scholars from fifteen countries and three international organizations participated in “The First International Workshop on Natural Hazard Risk Reduction for the Silk Road Economic Belt and the 21st Century Maritime Silk Road” in Beijing in November 2016. This workshop was sponsored by the Chinese Academy of Sciences’ (CAS) International Partnership Program (IPP).

To open the workshop, Cao Jinghua praised the outstanding contributions of CAS to international cooperation of natural disaster reduction in recent years. He emphasized the necessity to combine efforts with local governments along the Belt and Road (B&R) to improve natural disaster policies and mechanisms, and make full use of the CAS Oversea Joint Centers for Science and Education.

Chen Linhao followed these remarks by pointing out that The Belt and Road Initiative offered an important opportunity to promote economic, social, scientific, and technological cooperation along The Belt and Road countries. Research on disaster prevention and reduction will greatly improve the success of major infrastructure projects.

Key Attendees

- Virginia Murray, UNESCO
- Eklabya Sharma, Vice-Chairman of ICIMOD
- Abdulla Saparov, Director General of U.U. Uspanov Kazakh Research Institute of Soil Science and Agrochemistry
- Azimkhan Satybaldin, Representative of Institute of Economics in Kazakhstan
- Ghulam Rasul, Director General of Pakistan Meteorological Department
- Tayyeb Akram, Chancellor of Comsats Institute of Information Technology (Wah Campus) in Pakistan
- Senanayake Gamage, Chancellor of University of Ruhuna in Sri Lanka
- Abdusattor Saidov, Chief of Science Secretary of the Academy of Sciences of Tajikistan
- Cao Jinghua, Director General of the Bureau of International Cooperation
- Chen Linhao, Vice Director of International Cooperation Department, Ministry of Science and Technology of China (MOST)

During the workshop, experts and scholars discussed topics related to earthquakes, landslides, floods and drought – all of which could occur along the Belt and Road. Much focus was given to monitoring and forecasting of risk, particularly the means and mechanisms for data collection and data sharing along the Belt and Road.

It is expected that the Belt and Road project will link with international programs (i.e., “Sendai Program”, “Earth Future” and so on) by cooperating with Public Health England, International Council for Science (ICSU), International Social Science Council (ISSC) and Integrated Research on Disaster Risk (IRDR), to promote the implementation of this project and enhance capabilities on international disaster prevention and reduction.

Global Focus

State Council of Information Releases Ecological Security Barrier Construction Evaluation for Tibet

Addressing concerns about sustaining Tibetan ecosystems, the Chinese government has supported research to determine best practices of stabilizing this fragile environment.

The State Council Information Office of China (SCIOC) released its evaluation of this situation in Beijing in October 2016. A roster speakers summarized the report and then provided ideas for action in promoting ecological sustainability in this region.

The evaluation discusses the success of protecting Tibetan landscapes. The speakers expressed consensus that the barrier project had been successful in six meaningful aspects:

- 1) Vegetation was increasing
- 2) Desertification was decreasing
- 3) Grass land was recovering through the Grazing Withdrawal Policy and the incomes of farmers and herdsmen were increasing;
- 4) Use of clean energy has increased
- 5) Natural forest and ecological protections had increased and wildlife numbers had rebounded; and
- 6) Ecological system service functions had been successfully promoted throughout the target area.

Group Photo of The First International Workshop on Natural Hazard Risk Reduction for the Silk Road Economic Belt and the 21st Century Maritime Silk Road





Effect evaluation on Ecological Security Barrier Protection and Construction

[ICIMOD] Understanding ICIMOD’s Strategic Orientation

Every five years, the International Centre for Integrated Mountain Development (ICIMOD) releases a new strategic framework that informs its partners about its goals and plans for the next half-decade. The words below from ICIMOD’s director general, David Molden, who provides some context and explanation for the strategic framework:

In this message, I would like to reflect on ICIMOD’s strategic orientation. In other words, what is our niche? How can we best deliver the impact of our work?

Institutional Positioning

Mountain Focus: First and foremost, ICIMOD is for mountains and people, covering the Hindu Kush Himalaya (HKH). Mountain ecosystems and mountain people are crucial in moving the world towards more sustainable economic growth and meeting the recently-adopted Sustainable Development Goals. This work requires the special focus that ICIMOD provides.

Regional Niche: ICIMOD has a unique niche as a regional organization serving the eight regional member countries (RMCs) of the HKH. There is added value in sharing and generating knowledge across the countries of our region to develop common solutions. Sharing of such knowledge fosters closer cooperation amongst the countries.

Country Ownership: ICIMOD is owned by its eight RMCs with accountability directly to these countries through our Board of Governors. ICIMOD focuses on the common priorities and demands of RMCs through its interventions and activities. The Board approves our Strategic Framework and the Medium Term Action Plan that guide our work.

On the Ground Realities: ICIMOD’s presence on the ground with local communities is critical to understanding the changing situation, to developing relevant solutions, and more importantly, to linking these solutions with policy processes.

Work with Partners: We place a high value on partnership. For this, ICIMOD chooses to work closely with a variety of partners. The advantages of partnerships are the mutual

learning, mutual ownership, and the leveraging of partners’ strengths to engage activities on the ground or at policy level. Working with partners also increases the overall capacity for sustainable mountain development.

Engagement with the Global Agenda: More attention and investment is needed in mountain areas. Thus, ICIMOD must take its messages from the HKH to the global community by engaging in global forums.

Programmatic Approach: Through our regional programmes, we adopt an orientation that supports long-term sustainability. Together with our RMCs and partners we define long-term regional programmes and request support for these programmes, recognizing that solutions and impact take time. This approach is in distinction to the project approach where the activity is for the life of the funding. ICIMOD synergizes different funding streams to optimize benefits of the programmes in an inter-disciplinary way to solve mountain challenges.

Impact and Uptake Orientation: Our key role is to develop and test ideas and innovations, and strive for the uptake of promising solutions. To ensure uptake, we rigorously test solutions, and use these results to influence policy and practice. To achieve this, we use impact pathways and theories of change to understand the specifics of how ICIMOD’s solutions would lead to desired outcomes and design our uptake strategies from the onset of the activity.

Integrated approaches: Most mountain challenges have interlinked socio-ecological dimensions, and are complex by nature. This requires integrated approaches across disciplines and scales, from science to policy, and across borders. ICIMOD, therefore, has a clear focus on fostering partnerships to enhance transboundary cooperation to tackle common mountain challenges.

Gender Transformative Change and Inclusive Development:

We recognize that achieving our mission requires us to build inclusive solutions that are equitable between gender on various levels in society. We also recognize the need to understand and respect the deep-rooted cultures and practices of the region as a starting point for change. We recognize that the best starting point is ICIMOD itself and the way we work.

Policy Engagement: With our country ownership and regional positioning, ICIMOD is an ideal platform to engage with policy and policymakers. This requires an understanding of needs and constraints, and developing responsive solutions. We seek close engagement with policymakers and leaders from local to national and regional levels.

Strong Science: Our policy and practice solutions are based on strong evidence from the field. Recently ICIMOD has boosted its science output with the purpose of strengthening the science-policy-practice interface to put research into use. ICIMOD works towards filling scientific knowledge gaps in the mountain-specific contexts.

Strong Communication and Outreach: ICIMOD works with numerous stakeholders with different communication needs. To obtain the outreach, and to influence policy and uptake, and to bring about the necessary change on the ground, it

is essential that we use a variety of means to communicate strategically. ICIMOD recognizes that communication is critical for disseminating the results of our work to a wider audience, including those beyond the region.

Robust Financial Systems: As a backbone to our work, we have developed and are improving our state-of-the-art financial system to support efficient programmes and to obtain the best value for money.

Mountains and the 2030 Agenda – COP22

Conference of the Parties (COP) is the supreme decision-making body of the United Nation's Convention on Climate Change. It meets annually to provide feedback and research to guide future work in climate change mitigation.

At COP 22 in Morocco in November 2016, a special session for discussing mountain frameworks brought together interested researchers and practitioners to assess the well-being of mountain communities and ecosystems globally in the context of climate change. What follows is a summary of the remarks presented at the special session on mountain communities.

Moderator **Simon Rietbergen**, Senior Forestry Officer, Food and Agriculture Organization of the United Nations (FAO)

Rietbergen opened the side event by stressing how the impacts of climate change on mountain environments affect everyone because of the essential ecosystem goods and services that mountains provide to upland mountain communities and lowland cities. He explained that food security in mountain areas has decreased over the last decade, with one in three mountain people currently vulnerable to food insecurity.

Andrew Taber, Executive Director, The Mountain Institute

Taber underlined how mountains have an important economic role in tourism, mining and forestry, provide 60-80 percent of global freshwater and host a quarter of global terrestrial biodiversity. He noted mountains are recognized in 48 Intended Nationally Determined Contributions (INDCs) and three targets under two Sustainable Development Goals (SDGs). Stressing that even though 40 percent of people vulnerable to food insecurity live in mountains, he recommended specifically assessing the role of mountains across all the SDGs.

Tilman Hertz, International Climate Initiative,

Hertz underscored the importance of ecosystem-based adaptation (EbA). He said EbA is a no-regrets measure that delivers many benefits, and is mentioned in 100 NDCs. He described EbA approaches in Chile to reduce avalanches, and in Nepal to reduce erosion rates near roads. He noted that eco-safe roads become cost effective in 12 years due to reduced maintenance costs.

Faya Ahmed, Guinea,

Ahmed noted climate change impacts in Guinea's mountains, including disruptions in rainfall patterns and the spread of diseases such as malaria. Ahmed stressed that those impacts are worsened by certain practices, such as unsustainable farming and forestry, and by the lack of local health services. He called for the urgent reduction of mountain peoples' poverty in order to strengthen their resilience to climate change by teaching mountain farmers sustainable cultivation techniques and certifying their mountain products.

Eric Chavez Betancourt, President, Asociacion Oikos (OIKOS)

Betancourt presented the case of vicuñas in Peru for ecosystem conservation, poverty reduction, development, adaptation, and mitigation. He highlighted how vicuñas had been brought back from the brink of extinction and again provide an opportunity for lifting one million people in Peru out of poverty. Additionally, he noted that protecting vicuñas natural habitats -- grasslands and wetlands -- provide key ecosystem services, such as water provision and carbon fixation. He called for Reduced Emissions from Avoided Degradation (READ) to be considered alongside REDD+.

Charles Nyandiga, Small Grants Programme of the United Nations Development Programme and the Global Environment Facility (UNDP/GEF)

Nyandiga closed the session by describing the central role of local communities in mountain conservation and adaptation strategies. He described examples of traditional crop usage to reverse agriculture degradation, agroforestry practices to reduce flooding and landslides, water management strategies to reduce water scarcity and ecosystem degradation, and ridge-to-reef strategies in Small Island Developing States (SIDS). He stressed that adopting improved energy cooking systems can significantly reduce pressure on mountain ecosystems.

China considers ICIMOD as a valuable platform for increasing scientific exchange and regional cooperation among countries of the Hindu Kush Himalayas.

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