



Research

Third China-Nepal Joint Expedition to Langtang Valley

The third China-Nepal joint expedition to Langtang Valley was carried out under the auspices of the Third Pole Environment (TPE) programme from 23 April to 25 May 2012. The aim was to obtain data for comparative studies of climate and environment on the northern and southern slopes of the Himalayas. The expedition team consisted of five Chinese members, headed by Prof. Tian Lide, and three Nepalese members, headed by Prof. Lochan P Devkota.

The joint expedition succeeded in acquiring glacial mass balance data for the Yala Glacier through measurement of the glacial tongue and the absolute height of the glacier surface using differential GPS and ground penetrating radar measurement. The members of the expedition also collected surface snow and snow pit samples from the glacier. The operational status of two automatic weather stations at Kyangjin Gompa (3,900 masl) and Tarahara (119 masl) was also checked to ensure normal function. Precipitation and river water samples were collected at Kyanjin Gompa

and Langtang Valley for the period from April 2011 to April 2012. Meteorological data were downloaded and the rain gauges reconfigured for the coming year. The expedition also harvested some river water and soil samples en route.

Initial Meeting of the 'Research on Resource Environment, Scientific Database Construction, and Decision Support' Project

An initial meeting of the Chinese Academy of Sciences (CAS) key deployment project 'Research on Resource Environment, Scientific Database Construction and Policy Support' was held in Beijing from 5 to 6 June at the Institute of Geographical Sciences and Natural Resources Research (IGSNRR), CAS. More than 40 participants attended the meeting, including all the project members, subject leaders, and postgraduates.

Cheng Shengkui, Vice Director of IGSNRR, gave an address on behalf of the institute undertaking the project. Feng Renguo, Vice Director of the Bureau of Science and Technology for Resource and Environment, CAS, introduced the project. Meeting host Prof. Zhuang Dafang, in charge of the project, gave an introduction and general overview. Prof. Li Ainong from the Institute of Mountain Hazards and Environment, CAS, and Dr Xu Zengrang from IGSNRR reported on the topic of 'Key issues of resources environment and scientific database construction in the area adjacent to Southern China'. Prof. Wang Zongming from the Northeast Institute of Geography and Agroecology, CAS, and Associate Prof. Li Junli from the Xinjiang Institute of Ecology and Geography, CAS, presented reports on 'Key issues of resources environment and scientific database construction in

Third China-Nepal Joint Expedition to Langtang Valley





Meeting of the 'Research on Resource Environment, Scientific Database Construction, and Decision Support'

the area adjacent to Northern China'; Associate Prof. Jiang Dong, Dr Huang Yaohuan, and Prof. Wang Liming reported on the implementation plan of the 'Global basic geographic elements system and database construction'; Associate Prof. Yang Jun and Dr Yuan Wen introduced the implementation plan for the 'Integration and decision support platform for resource environment scientific data'; and Prof. Li Qiangzi and Dr Du Xin presented reports on the 'Potential capacity and risk evaluation of global food production elements'.

Other participants included Prof. Liu Jiuyan, Head of the expert advisory committee; Prof. Chen Jun, from the National Geomatics Center of China and member of the expert advisory committee; Prof. Guo Jianqiang, from the China International Engineering Consulting Corporation; Prof. Huang Jikun; and Prof. Wu Bingfang.

After listening to the reports on the project and specific topics, the expert advisory committee affirmed the importance and necessity of the project as well as the general approach. They also pointed out that there will be many difficulties and challenges in the process of project implementation. The research team must guarantee the science and usability of achievements, focus the research objectives, and refine the research plan. In addition, the experts gave some specific guidance and suggestions for the overall plan of the project and implementation plan of five subjects and topics. Huang Tieqing and Zhai Jinliang, Director and Vice Director of the Department of Land and Remote Sensing of the Bureau of Science and Technology for Resource and Environment, CAS, requested the project team to conscientiously study and summarize the experts' opinions and recommendations; this should enable them to develop an adjustment plan with more pertinence.

The success of this meeting means that the valuable recommendations of leaders and colleague experts has

been absorbed; at the same time, understanding of the research plan for the project and project topics has been deepened and academic exchange and cooperation among the members of project have been promoted. As a result, a good foundation has been laid for successful implementation of the project.

China to Launch an Integrated Expedition to Resource-Scarce Areas on the Tibetan Plateau

An inauguration meeting for the programme 'Integrated Expedition to Resource-Scarce Areas on the Tibetan Plateau' was held on 25 June 2012 at the Institute of Tibetan Plateau Research (ITP). Headed by Prof. Zhu Liping, this programme has three major research topics: investigation of basic catchment hydrology data; land cover and soil quality survey; and survey of vegetation diversity and plant communities. Peng Yiqi, Deputy Director-General of the Ministry of Science and Technology (MOST) Bureau of Basic Research, attended the meeting. He suggested several issues that the programme should pay attention to during implementation, including the orientation and uniqueness of the programme, efficient management, and popularization of science.

The principle investigators for each topic, Zhu Liping, Liu Linshan, and Guo Ke, reported on their plans for carrying out the programme, including detailed research contents, approaches, schedule, and expected outcomes.

The academic advisory committee headed by Prof. Sun Honglie also suggested some implementation approaches. Prof. Sun indicated the significance of linking between and among the three subjects. An east-west oriented transect was suggested, together with the application of new methods and techniques. The advisory committee also highlighted the importance of preparation, and asked the participants in the programme to bear in mind the basic requirements of this expedition, i.e., acquisition of valuable data in a resource-scarce area. The outcome of the expedition should include at least high-resolution mapping of soil and vegetation and a dataset of hydrological parameters at both catchment and regional scales.

The 'Integrated Expedition to Resource-Scarce Areas on the Tibetan Plateau' is funded by MOST as a Special Key Programme of the National Basic Work for Science and Technology in May 2012. ITP is the main organizer of the expedition, in cooperation with three other CAS institutes: the Institute of Geographical Sciences and Natural Resources Research, the Institute of Botany, and the Chengdu Institute of Mountain Hazards and Environment.



Expedition to the Ngari Region to investigate hydrological status at the source of three rivers

Chinese Scientists Investigate Hydrological Status in River Origins

A preliminary expedition to the Ngari Region was conducted from 1 July 2012 for about 10 days. The expedition group consisted of Profs Yao Tandong, Yang Yongping, Zhang Yinsheng, Su Fengge, and Tian Lide from ITP and a dozen support staff.

The group travelled to the source areas of three major rivers in South Asia: the Peacock River catchment (head of the Ganges River), the Jiemayangzong and Angsedongdong glaciers (head of the Yarlung Zangbo), and Sengge Zangbo and Langqên Zangbo (head of the Indus River).

Automatic weather stations were configured in the river source region, and rain gauges and hydrology observation profiles were established in the upper streams. Glacier mass balance measurements were initiated on the glaciers in the source region, with apparatus set up on the glacier surfaces to obtain meteorological data.

A preliminary survey was conducted of vegetation and biodiversity in the river origin areas. Data acquired from this type of survey is expected to support investigation and monitoring of vegetation succession in the glacial retreating area. Surface water was sampled en route for further study of stable isotopes in the western part of the Tibetan Plateau.

Cooperation

Bai Chunli Interviews a Delegation from the Pakistan Academy of Sciences

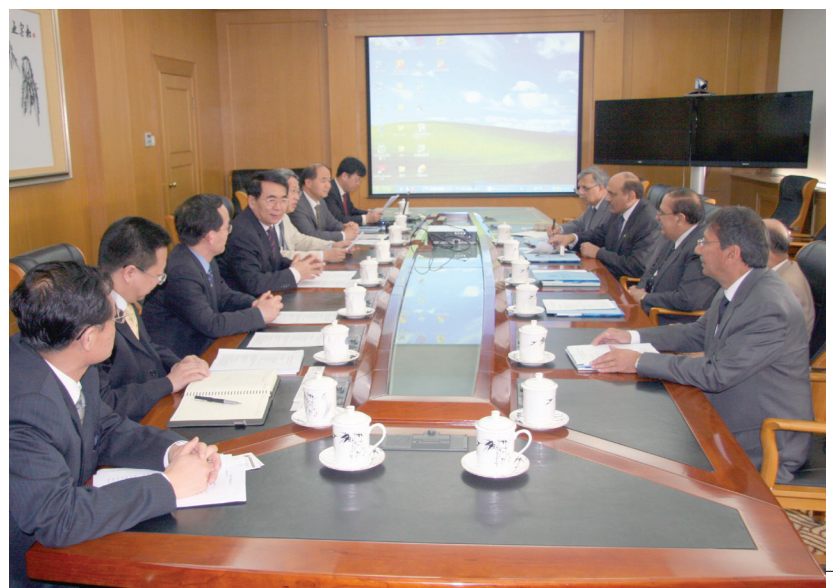
On 10 April 2012, Bai Chunli, President of the Chinese Academy of Sciences (CAS), interviewed a delegation from the Pakistani Academy of Sciences led by its President Atta Ur Rahman.

Bai Chunli warmly welcomed the delegation and gave an introduction on the overall situation, function, and orientation of CAS. He indicated that Pakistan is one of China's important friendly neighbours; bilateral scientific exchange and co-operation play an important role in strengthening the relations between the two countries. CAS and the Pakistan Academy of Science should both actively improve the bilateral exchanges by holding symposia, exchanges of scholars and students, and joint projects, and also play a positive role in international scientific organizations.

Bai Chunli highlighted the scholarship funding programme of CAS and the Third World Academy of Sciences (TWAS), the general status of Pakistan scholars' work and study in CAS with the support of this programme, and the overall situation of overseas students from Pakistan. Bai Chunli also expressed a warm welcome to Rahman and his delegation to attend the 23rd TWAS Academicians Conference, which will be held in September in Tianjin.

Rahman expressed congratulations to Bai Chunli who was elected to be a foreign academician of the Pakistan Academy of Sciences. His introduction focused on the measures taken in scientific technology and higher education especially in attracting foreign talent, as well as the overall development of scientific technology in Pakistan. Rahman

Delegation from the Pakistan Academy of Sciences at CAS



also gave an introduction to the general situation and basic function of the Pakistan Academy of Sciences, and suggested that outstanding research centres in Pakistan and institutions of CAS should strengthen their cooperation among the organizations and support exchanges of scholars, joint doctoral programmes, and cooperation projects in key research fields such as biomedicine, nanotechnology, energy, and information and network technology.

During the interview, the two groups decided that a bilateral symposium on relevant fields would be held in Pakistan in July 2012.

Also attending the interview were Ze Mier Awan, Pakistan Embassy Counselor, Yao Tandong, Director of the Institute of Tibetan Plateau Research, CAS, Wang Chen, Head of the National Center of Nanoscience and Technology, Huang Xiangyang, Director of the Computer Network Information Center, and leaders from the Bureau of International Co-operation and Graduate University of the Chinese Academy of Sciences.

Thai Scientists Visit IGSNRR

Thai scientists led by Prof. Royol Chitradon, Director of the Hydro and Agro Informatics Institute (HAI), Ministry of Sciences and Technology (MST), Thailand, paid a visit to the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS, on 8 April 2012.

Deputy Director Cheng Shengkui extended a warm welcome to the delegation and introduced IGSNRR's work in the Lancang River basin. Research groups from the project 'Comprehensive Scientific Survey in Lancang River and Big Shangri-la' put forward suggestions for cooperation in research on hydrology and water resources, agricultural heritage systems, land use and land cover change, and remote sensing image data sharing in the Mekong River basin.

After in-depth discussion, the two sides agreed to joint participation in scientific research programmes, data sharing of remote sensing information, exchange between doctoral students, and the holding of international symposia.

The visit took place under the framework of the Memorandum of Understanding signed by the two sides during Royol Chitradon's visit to IGSNRR in March 2011.

Chinese Delegation on Soil and Water Conservation Visits Thailand

A Chinese delegation visited Thailand from 21 to 26 May 2012 on invitation of the Land Development Department (LDD) of the Ministry of Agriculture and Co-operatives of Thailand. The seven-member delegation was headed by Prof. Ning Duihu, Secretary General of the World Association of Soil and Water Conservation (WASWAC) and Deputy Director of the International Research and Training Centre on Sedimentation and Erosion (IRTCEs); members included Dr Deng Wei, Director of the Institute of Mountain Hazards and Environment (IMHE), Qiu Dunlian, Head of the Information and Communication Division of IMHE, and Tan Rongzhi, Secretary for Foreign Affairs of the Key Laboratory of Mountain Hazards and Earth Surface Processes.

The Chinese delegation visited LDD, discussed the preparation and organizational activities for the Second Conference of WASWAC to be organized by LDD in 2013, took part in the LDD 49th anniversary celebrations, and visited the LDD Soil Museum. During the visit, the Chinese delegation had a positive bilateral academic exchange and discussion with institutions of management and education from LDD, the Soil Department of Thailand Agricultural University (Kasetsart University), the Department of Water Resources, Ministry of Natural Resources and Environment, and the Faculty of Agricultural Technology, King Mongkut's Institute of Technology Ladkrabang (KMITL).

Many officials in charge of sections, including LDD, held talks with the delegation. In the discussions with LDD, the Soil Department of Thailand Agricultural University (Kasetsart University), and the Department of Water Resources, Ministry of Natural Resources and Environment, Dr Deng Wei briefed participants on IMHE and its recent five-year plan, and the relief work following the Wenchuan earthquake on 12 May 2008. Qiu Dunlian introduced the sharing mechanism for information resources as well as the literature information

Chinese soil and water experts on a visit to Thailand



service, and contents of the Chinese Academy of Sciences. She also described the manuscript process, notes for authors, and principles of the *Journal of Mountain Science*.

After visiting the King's project of Khao Hin Sorn Royal Development Study Centre in Chaserngsao Province, Kung Krabaen Bay Royal Development Study Centre in Chanthaburi Province, and fruit tree orchards and farm management for agro-ecotourism in Rayong Province, the delegation had a good understanding of the work in progress on soil and water conservation, soil improvement, and ecological environmental construction and protection in Thailand, and had personally experienced the demand for scientific research, technology development, training, and demonstration with distinctive characteristics.

Samran Sombatpanit, former Chairman of WASWAC, and Chinapatena Sukvibool, Vice Chairman of WASWAC and Director of the Division of Soil and Water Conservation of LDD, accompanied the delegation. The excellent arrangements facilitated the many achievements of the visit and laid a strong foundation for promoting exchange and cooperation in science and technology between the countries.

ITP Professors Join CAS President on Visit to Pakistan

A group of CAS delegates led by CAS President Bai Chunli visited Pakistan from 15 to 17 July 2012 and held academic exchanges and discussions with scientific staff in the Pakistan Academy of Sciences (PAS), National University of Science and Technology, Pakistan, and Atta-ur-Rahman School of Applied Biosciences.

ITP Profs Yao Tandong and Zhang Yinsheng were among the visiting group. They were also invited to deliver speeches during the PAS-CAS bi-national conference: Prof. Yao introduced the 'Sino-Pakistan cooperation study under the framework of the TPE programme' and Prof. Zhang reported on 'Observational research of land surface hydrology in the Upper Indus River basin, north Pakistan'.

The bilateral conference also witnessed thorough discussion of potential for cooperative study in nano science and technology, internet security, ecology, and environmental sciences.

In addition to the group visit, Prof. Yao also met with the Chairman of the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Ahmed Bilal. Both sides highly appreciated the joint research achievements of ITP and SUPARCO under the framework of the TPE programme and agreed to further promote the cooperation.



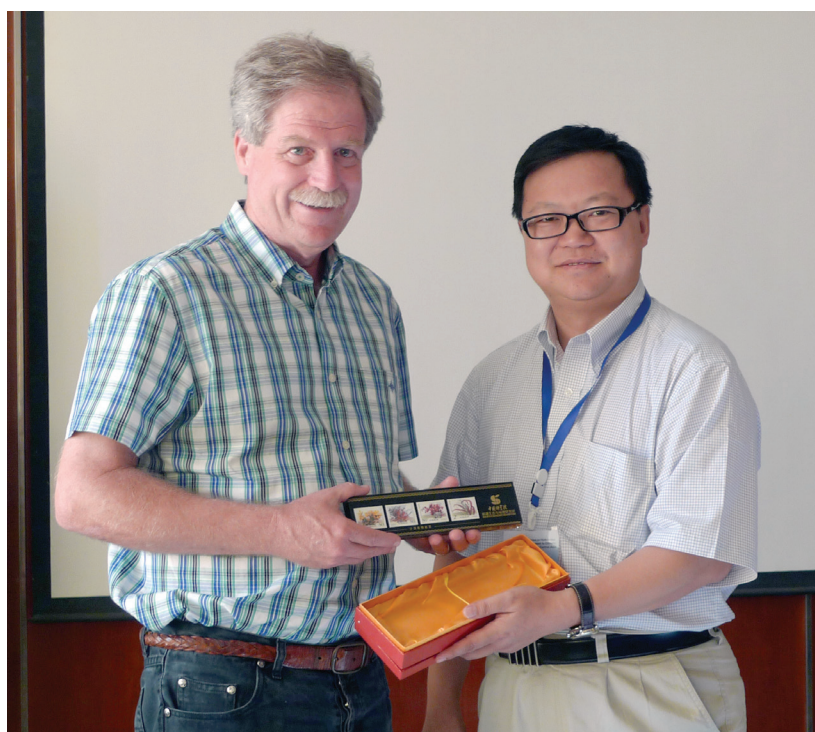
CAS delegation on a visit to Pakistan

Delegation from ICIMOD Visits Xinjiang Institute of Ecology and Geography

On 6 August 2012, Dr David Molden, Director General of ICIMOD, Ashiq Ahmad Khan, Chief Technical Adviser of WWF-Pakistan, and Wu Ning, Programme Manager of Environmental Change and Ecosystem Services, ICIMOD, visited the Xinjiang Institute of Ecology and Geography (XIEG), CAS.

Prof. Chen Xi, Director of XIEG, sincerely welcomed the visiting delegation and Dr Qiao Jianfang gave a brief introduction to XIEG. Professor Chen Xi said XIEG and ICIMOD have had a basis for cooperation for a long time, and he hoped that the two sides could strengthen their cooperation on global climate change and protection of glaciers and water resources in the future.

ICIMOD Director General, Dr David Molden and Professor Chen Xi, Director of XIEG



During the following academic exchange, Prof. Yang Weikang, Luo Yi, and Associate Professor Xu Junrong from XIEG presented reports on 'Biodiversity protection of the border area between China and Pakistan', 'Study of snow and hydrology in Xinjiang', and 'Effects of climate change on water resources in Xinjiang'.

David Molden said that ICIMOD will continue to maintain effective communication with XIEG and will promote cooperation between the two institutions on the eco-environment and biological resources in the Pamir region.

Meetings

Third Pole Hydrometeorological Processes Addressed at General Assembly of European Geosciences Union

A special session on 'Observation and Modelling of Hydrometeorological Processes in High Elevation Areas' was held during the 2012 European Geosciences Union (EGU) General Assembly, hosted in Austria from 22 to 27 April 2012.

Convened by Profs Ma Yaoming and Zhang Fan of ITP, Prof. Bob Su of the University of Twente, the Netherlands, and Dr Peter J van Oevelen of the Global Energy and Water Cycle Experiment project, the session gathered together scientists from many countries including China, Germany, Italy, the Netherlands, Spain, Turkey, and the United States. There were 11 oral presentations and 16 poster presentations for in-depth communication.

The special session focused on recent research achievements in the observation and modelling of hydrometeorological processes in the Tibetan Plateau and surrounding area, widely known as the 'Third Pole'. Jointly sponsored by the EGU and Third Pole Environment (TPE) programme, the session was one of TPE's efforts towards international academic exchange and communication, which are intended to attract more attention to the Third Pole region and to deepen human understanding of environmental changes in the area.

International Symposium on Biodiversity and Cultural Diversity Protection

An international symposium on 'Biodiversity and Cultural Diversity Protection' was held from 27 to 31 May in Kunming and Xishuangbanna, Yunnan Province, hosted by the Yunnan Biological and Cultural Diversity Protection Center of the Yunnan Academy of Forestry. Some 70 scholars, experts, workers, community representatives, and graduate students involved in biodiversity and cultural diversity protection took part in the symposium. Participants came from China, India, Laos, Myanmar, Nepal, and Thailand. Prof. Pei Shengji from the Kunming Institute of Botany was invited by the organizing committee to be president of the symposium.

The symposium reached the following conclusions:

- Biodiversity and cultural diversity are common wealth of humanity and the foundation of sustainable development. While biodiversity is protected, cultural diversity protection must be reinforced. The focus should be on strengthening practical investigation, research, and application of traditional knowledge and traditional technology in community development as a key point of biological and cultural diversity protection. The symposium agreed on a Xishuangbanna Declaration to call on all sectors of society to be concerned about and to support the protection of biological and cultural diversity.
- Asia is a cradle of biological and cultural diversity, but in this period of rapid economic development biological resources are facing tremendous pressure and cultural diversity is being lost. In order to strengthen exchange and cooperation, participants in the symposium jointly sponsored the establishment of an 'Asian Biological and Cultural Diversity Protection Network' for normalizing protection work and creating social pressure to promote protection of both biological and cultural diversity in Asian countries.
- In order to strengthen cooperation and exchange, the participants agreed to hold an annual symposium on biological and cultural diversity protection to be held in different Asian countries by turns. The next symposium will be held in Thailand in November 2013, hosted by the Biodiversity-Based Economy Development Office (BEDO), Thailand.
- The symposium will publish 'Biological and Cultural Diversity Protection Proceedings' to extend its influence and promote academic exchange and improvement.

Prof. Wang Song, Chairman of the Chinese Committee on International Alliance of Biological Science and Advisor of the Asia Promotion Association of Green Culture Exchange, Academician Zhou Changhong from the Taiwan Central Academy, and other well-known experts visited the Dai Nationality Hospital in Xishuangbanna, the stockaded village (a site of the biological and cultural diversity protection project), the Dai Boyan Clinic of Yunnan intangible cultural heritage, the Xishuangbanna Tropical Botanical Garden (XTBG), and the Chinese Academy of Sciences (CAS), among others. The experts increased their understanding of the work of biodiversity and cultural diversity protection in Yunnan Province, which will be helpful in promoting international communication and cooperation.

First International Conference on 'Land Surface Satellite Remote Sensing Algorithm and Products'

The first international conference on 'Land Surface Satellite Remote Sensing Algorithm and Products' was held in Chengdu from 29 to 31 May 2012. The conference was organized by the Institute of Mountain Hazards and Environment (IMHE) together with the Academy of Global Change and Earth System Science, State Key Laboratory of Remote Sensing Science of Beijing Normal University.

Dr Deng Wei, Director of IMHE gave a presentation and made a speech at the opening ceremony. Guests at the opening ceremony and keynote speech presenters included Chinese and foreign experts Prof. Liao Xiaohan, Director of the National Satellite Remote Sensing Centre, Ministry of Science and Technology; Prof. Ranga Myneni from Boston University; Prof. Philip Lewis from London University; Prof. Eric Vermote from Maryland University; and Prof. Jean-Louis Roujean from the French Bureau of Meteorology. The joint conference chairs were Prof. Liang Shunlin, owner of the Chinese Thousand Talents Programme; Prof. Li Ainong, Director of the Digital Mountain and Remote Sensing Applications Center of IMHE; and Prof. Shi Jiancheng, Director of the State Key Laboratory of Remote Sensing Science. Prof. Li Ainong chaired the session on mountain remote sensing.

More than 150 international experts, scholars, and graduate students attended the three-day conference representing various international institutions and regional organizations from Australia, China, Denmark, France, Italy, Japan, the Netherlands, the Republic of Korea, Switzerland, the United Kingdom, and the United States. The discussions and exchange focused on earth surface albedo, surface temperature and transmission rate, leaf area index, biomass,

solar radiation, soil moisture, surface energy balance, and the phenology of the quantitative parameter inversion method and products.

At the closing ceremony, Prof. Liang Shunlin expressed his heartfelt thanks to IMHE for its contribution to the meeting.

The successful meeting in Chengdu was praised by both Chinese and foreign scholars. It promoted communication between IMHE and the research front on remote sensing at home and abroad and increased the awareness of IMHE in related research fields.

Seminar on 'Qinghai-Tibet Plateau Geo-gas Interaction and Atmospheric Circulation Anomaly Relations'

A symposium on 'Qinghai-Tibet Plateau Geo-gas Interaction and Atmospheric Circulation Anomaly Relations' was held in Taiyuan City, Shanxi Province, from 4 to 7 June 2012 as the first research project in a major national scientific study programme on 'Global Change Study on the Qinghai-Tibet Plateau: Climate System Changes and Influence on the East Asian Region and Mechanism'.

Prof. LYU Shihua and Prof. Wang Jiemin from the Cold and Arid Regions Environmental and Engineering Research Institute, CAS (CAREERI) attended the meeting as invited experts. The heads of the project, Profs Ma Yaoming and Hu Zeyong, 30 other experts in charge of sub-projects, and scientists and postgraduates from the Institute of Tibetan Plateau Research (ITP), the Center for Earth Observation and Digital Earth (CEODE), and CAREERI participated in the seminar.

Prof. Ma Yaoming, as chief scientist of the project, presided over the seminar. He reviewed the project's research content and target and emphasized the significance and role of the first project in the programme. Prof. Hu Zeyong, in charge of the project, described the progress in the comprehensive

Seminar on the Qinghai-Tibet Plateau Geo-gas Interaction



observation test and research work. Profs Liu Liangyun and Wang Cheng gave reports on the work on ecological processes in the Qiangtang Plateau and southeast of Tibet, and on airborne remote sensing and encryption ground observation of the east Asian water vapour channel key area surface processes. Prof. Zhang Yinsheng and Associate Prof. Ma Xiaobo reported on the work on East Asian atmospheric circulation anomaly influence and response due to geo-gas interaction processes in the Tibetan Plateau.

Finally, the research group team members held discussions on how to implement the advice and suggestions from experts at the seminar. They emphasized that the research group should strengthen cooperation and carry out studies focusing on major scientific problems to complete the research work.

International Symposium on 'Invasive Plants and Global Change'

An international symposium on 'Invasive Plants and Global Change' was held from 13 to 17 June 2012 in Urumqi, organized by the Xinjiang Institute of Ecology and Geography, CAS (XIEG); University of Nevada, Reno (UNR); CAS Key Laboratory of Biogeography and Bioresources in Arid Lands; Xinjiang Agricultural University (XAU); and Xinjiang Society of Botany (XSB).

With in-depth global change research, the biology and synthetic management of invasive plants have attracted widespread attention. Large numbers of studies focus on the effects of biological and non-biological factors on promoting the migration and invasion of exotic plants, such as weather and climate change and land use patterns.

The international symposium aimed to evaluate the influence of global climate change on the mechanisms of plant invasion, and provide effective measures to manage

invasive plants in the context of global climate change. The symposium focused especially on fragile and sensitive arid ecosystems.

The symposium attracted nearly 100 delegates from six countries, including Australia, China, Kazakhstan, Russia, Tajikistan, Turkmenistan, the United States, and Uzbekistan. Discussions were held on the mechanisms and processes of plant invasion and its relationship with global climate change based on the topics of mechanisms for plant invasion in arid land, effects of global climate change on plant invasion, and management of plant invasion. Presentations included oral sessions, keynote addresses, and a poster session. The symposium established a solid foundation for the implementation of an international cooperation research project on invasive plants.

After the symposium, the delegates conducted field investigations in the Kalamaili Mountains Ungulate Natural Reserve and Nanshan Xiejiagou on the vegetation distribution and habitat characteristics of deserts and mountains in Xinjiang.

The symposium was funded by the National Natural Science Foundation of China (NSFC), United States National Science Foundation (NSF), and United Nations Development Programme (UNDP). Zou Liyao, Deputy Director General of the NSFC Bureau of International Cooperation; Emily Y Ashworth, Director of the China Office, NSF; Professor Chen Xi, Director of XIEG; Professor Robert Nowak, UNR; and Professor Ma Keping, Deputy Director of XSB, attended the symposium and gave welcome addresses.

International Symposium on Grassland Ecological Products and Service Compensation Mechanism

An international symposium on 'Grassland Ecological Products and Service Compensation Mechanism' was held from 18 to 20 June 2012 in Ya'an City, Sichuan Province, hosted by ICIMOD and Chengdu Institute of Biology (CIB), CAS, and organized by Sichuan Agricultural University and the Sichuan Grassland Society. Guests included Song Hongyuan, Director of the Rural Economy Research Center of the Ministry of Agriculture of China, and Zhu Qing, Vice President of Sichuan Agricultural University.

At the opening ceremony, Wu Ning, Programme Manager of Environmental Change and Ecosystem Services, ICIMOD, pointed out that as the water tower of Asia the Himalayan region has a special function as a provider of ecosystem services. Furthermore, the environmental situation and economic level of this area has a very important impact

International Symposium on Grassland Ecological Products and Service Compensation Mechanism



on the sustainable development of the region. ICIMOD is focusing on cooperation and research among the eight countries of the Himalayas on compensation mechanisms for ecosystem services, which will enhance the position of the Himalayan region in the international community.

Zhao Xinquan, Director of CIB, gave an introduction to the research area and fieldwork stations and reviewed the achievements of the cooperation between CIB and ICIMOD in the fields of mountain ecology, environmental protection, and development. He looked forward to continued cooperation in the future. Prof. Luo Peng and Dr Sun Geng from the CIB Center for Ecological Studies presented special reports.

The symposium aimed to facilitate exchange, to summarize experience in compensation for environmental services of grasslands in China, and to provide support for further research on related subjects at ICIMOD. More than 40 experts and scholars from Afghanistan, Bhutan, China, India, Nepal, Pakistan, the United Kingdom, and the United States attended the symposium.

Regional Studies Association Global Conference 2012

The Institute of Geographic Sciences and Natural Resources Research, CAS (IGSNRR), in collaboration with the Regional Studies Association (RSA), held the 'Regional Studies Association Global Conference 2012' from 24 to 26 June 2012 at the China National Convention Center, Beijing. The theme of the conference was 'Sustaining Regional Futures'. This was the first RSA global conference ever held outside Europe. Prof. Liu Yi, Director General of IGSNRR, and Prof. Andrew Beer, Academician of the Academy of Social Sciences, United Kingdom, co-chaired the organizing committee of the conference and Prof. Liu Weidong served as the secretary of the committee. The conference was co-sponsored by the CAS Bureau of International Cooperation, IGSNRR, the CAS Key Laboratory of Regional Sustainable Development Modeling, and the Center for Urban Development and Land Policies of the Peking University-Lincoln Institute.

More than 200 scholars participated in the conference from 37 countries, including Australia, Canada, China, France, Germany, Mexico, Poland, the United Kingdom, and the United States. Seven noted international scholars were invited to give plenary speeches: Dr Elkin Velasquez, Coordinator of Safer Cities Programme/Urban Development Branch, UN-Habitat, Prof. Graham Meadows, former Director General of Regional Policy, European Commission,



Regional Studies Association Global Conference 2012 in Beijing

Prof. Mick Dunford, University of Sussex, Prof. Jessie Poon, University at Buffalo-SUNY, Prof. Keni Yamamoto, Kyushu University, George CS Lin, University of Hong Kong, and Prof. Liu Weidong, IGSNRR, CAS.

A number of honorary guests joined the opening ceremony including Prof. Lu Dadao, Academician of CAS; Liu Sushe, Deputy Director General of the Department of Regional Economy, National Development and Reform Commission; Prof. Feng Renguo, Deputy Director General of the Bureau of Resources and Environmental Sciences of CAS; Prof. Zhou Chenghu, Deputy Director General of IGSNRR; Prof. Leng Shuying, Director of the Geography Division, National Natural Science Foundation of China; Prof. David Bailey, Chair of RSA; and Sally Hardy, Chief Executive of RSA.

The gateway themes of the conference included environmental sustainability; migration and labour markets; social justice and civil society; rural challenges; territorial politics and policy; city-regions and urban transformations; spatial econometrics; borders, border regions, and periphery; industries, entrepreneurship, and regional competitiveness; innovation and knowledge economies; creativity, identities, and branding; tourism and regional development; spatial planning and practice; banking, finance, and financialization; and housing and regions. Conference participants visited IGSNRR and enjoyed a reception hosted by IGSNRR on the evening of 25 June. After the visit, many participants expressed a strong interest in future collaboration with IGSNRR.

The Regional Studies Association, headquartered in Seaford, United Kingdom, is a learned society concerned with the analysis of regional and sub-national development issues. It organizes frequent events and conferences and publishes a number of journals, including *Regional Studies* and *Spatial Economic Analysis*.

Workshop on 'Mountains – An Important Territory of Diverse Resources and Service Functions'

The 2012 workshop of the Mountain Branch of the Geographical Society of China (GSC) and the Mountain Branch of the China Society of Natural Resources (CSNR) was held in Manzhouli on 9 July 2012. It was attended by more than 50 experts and scholars from GSC, Chengdu Institute of Mountain Hazards and Environment (IMHE), the Northeast Institute of Geography and Agroecology (NEIGAE), the Institute of Subtropical Agriculture (ISA), Nanjing Institute of Geography and Limnology (NIGLAS), the Institute of Remote Sensing Applications (IRSA), the Institute of Genetics and Developmental Biology (IGDB), the Institute of Soil and Water Conservation (ISWC), the Chengdu branch of the Chinese Academy of Sciences, Beijing Forestry University, Yunnan University, South China Normal University, Guangzhou Institute of Geography, Henan University, Qinghai Normal University, Sichuan University, Leshan Normal College, Sichuan Education Institute, and Southwest University of Science and Technology. The workshop was convened and presided over by the Vice Chairman of GSC, Dr Cui Peng; the Secretary General of GSC, Zhang Guoyou; Dr Deng Wei, Chair; and Zhang Shuwen, Vice Chair.

At the opening ceremony, Dr Deng Wei expressed his welcome and thanks to all representatives, organizers, and co-organizers; Zhang Guoyou read out a letter of congratulations to the workshop from Academician Zhengdu, science adviser of the Mountain Branch; and Dr Cui Peng explained and emphasized the importance of the meeting.

The theme of the workshop was 'Mountains – An Important Territory of Diverse Resources and Service Functions'. A full academic exchange and discussion was carried out on a range of topics including security of mountain resources and environment, dynamics of rivers in mountains under

climate change, mountain disasters under extreme weather conditions, soil ecology in karst regions, quaternary glaciers and environment in the Qinghai-Tibet Plateau, regional land use/land cover change (LUCC), mountain settlements, livelihood strategies of farmers, and remote sensing technology and applications.

The workshop was organized jointly by the Mountain Branch of the Geographical Society of China and the Mountain Resources Professional Committee of the China Society of Natural Resources assisted by IMHE, NEIGAE, the Chinese Committee on International Centre for Integrated Mountain Development (CNICIMOD), International River Centre of Yunnan University, and others.

2012 Symposium on 'Chinese Rural Land Remediation and Coordinated Development of Urban-Rural Areas'

A symposium on 'Chinese rural land remediation and coordinated development of urban-rural areas' was held from 16 to 20 July 2012 in Guiyang. The symposium was hosted by the Land Source Research Association of China Society of Natural Resources (CSNR) and the Agriculture Geography and Rural Development Association of the Geographical Society of China, was organized by the South China Karst Institute of Guizhou Normal University and the Geographical Society of Guizhou Province, and was co-organized by the Geography and Environmental Science Institute of Guizhou Normal University, Guizhou Organic Farming Association, Geographical Sciences and Natural Resources Research, CAS, and Key Laboratory of Degraded and Unused Land Remediation of the Ministry of Land and Resources of China. More than 150 participants from over 20 provinces attended the symposium and presented 105 papers.

Prof. She Zhixiang from the Nanjing Institute of Geography and Limnology, CAS, and former Vice President of the Geographical Society of China, and Prof. Cai Yunlong, former Vice President of the Geographical Society of China, were invited to be present at the conference. The opening ceremony was hosted by Prof. Xiong Kangning, Director of South China Karst Institute of Guizhou Normal University. Prof. Liu Zhaojun, Vice Director of Guizhou Normal University, gave a welcome speech, and Prof. Liu Yansui from Geographical Sciences and Natural Resources Research, CAS, gave an opening address. Prof. Cai Yunlong and Du Peishu, Director of the Association Division of Guizhou Association for Science and Technology, as invited special

Workshop on Mountains at Manzhouli





2012 Symposium on 'Chinese Rural Land Remediation and Coordinated Development of Urban-Rural Area'

guests, congratulated the organizers on the success of the conference and delivered important speeches. On behalf of the conference organizing committee, Prof. Dan Wenhong, Vice Director of the Agriculture and Rural Development Association, read out congratulatory letters from more than 10 academic groups, universities, and research institutes, including the China Society of Natural Resources, China Agricultural University, Beijing Normal University, Geographical Sciences and Natural Resources Research, CAS, Zhongshan University, and Guangzhou University.

The Land Source Research Association, one of the earliest Associations of CSNR, was founded in 1986. In order to facilitate the participation of representatives in academic exchanges in the field of land resources and rural areas research, and stagger the timing with respect to conferences hosted by other associations of the Geographical Society of China, the Land Source Research Association has decided to change the timing of the biennial symposium to be held now in odd years. During the closing ceremony, Prof. Zuomacuo, Director of the Public Administration College, put forward an offer on behalf of the Qinghai University of Nationalities to host the 'National Land Source Symposium 2013', explaining the relevant aspects of Qinghai geographical features, subject characteristics, and advantages in hosting the conference. The application was approved by the Land Source Research Association after thorough discussion.

2012 International Debris Flow Workshop held in Chengdu

The '2012 International Debris Flow Workshop', the second in the series, was successfully held from 11 to 16 August in Chengdu by the Institute of Mountain Hazards and Environment (IMHE), CAS and the Key Laboratory of Mountain



International Debris Flow Workshop in Chengdu

Hazards and Earth Surface Process, CAS. More than 100 scholars from about 20 academic institutions in six countries attended the workshop. Five keynote speeches and 30 reports were presented and a post-workshop event was organized for four days to investigate debris flow control systems.

Dr Chinapatana Sukvibool from the Thailand Land Development Department, Ning Duihu from the Ministry of Water Resources, China, and Prof. Deng Wei from IMHE, gave welcome speeches on behalf of WASWAC, the World Association for Sedimentation and Erosion Research (WASER), and IMHE. Prof. Lee Chack-fan from the University of Hong Kong, Prof. Takahisa Mizuyama from Kyoto University, and Prof. Wang Zhaoyin from Tsinghua University gave keynote presentations on debris flow control measures. Prof. Liu Ko-fei from Taiwan University and Prof. Cui Peng from IMHE gave keynote presentations on debris flow numerical simulation and formation mechanisms.

During the workshop, 30 reports in fields related to debris flow, including case studies, mitigation systems, fluid movement, formation mechanisms, and risk evaluation, were presented by scientists from China, Italy, Japan, Korea, Thailand, and the United States. Research experiences and results were shared and exchanged during the workshop and new friendships were built.

A special report on the establishment of the Asian Network on Debris Flow (ANDF) was presented by Prof. Lee Chack-fan during the workshop. The Asian Network on Debris Flow was proposed during the 2010 International Debris Flow Workshop and applauded by all participants. After two years' preparation, the network has been greatly developed and was formally set up during the workshop.

In his closing speech, Prof. Wei Fangqiang, Vice Director of IMHE, commended the preparatory work for both the

workshop and ANDF. Meanwhile, a framework for international cooperation in the field of debris flow was expected.

A post-workshop field trip was organized to investigate the debris flow control system in Qingping Town, Jiuzhaigou, and along the 213 National Highway.

Focus

How are Glaciers Receding in the Third Pole Region?

Glaciers on the Tibetan Plateau and its surrounding regions represent the water towers of Asia, and contain the largest ice mass outside the Arctic and Antarctic regions. These glaciers closely affect livelihoods in the region and could be affected by global climate change. The release of the latest IPCC report indicates that glacier status in the Himalayas is now a hot topic. Glacier variation in the region has become a focus of research, attracting studies using various approaches, while increasing the controversies.

With the aim of more comprehensive scientific research and gaining a 'big picture' of glacial melting, Yao Tandong and his group integrated their in situ measurements of 13

glaciers with other glacier inventory data, topographic maps, and satellite images from LANDSAT-MSS/TM/ETM+, ASTER, and LISS.

The assessment of glacial melting over the past 30 years based on these integrated studies has been published in *Nature Climate Change* with the online version accessible since 15 July 2012 at www.nature.com/nclimate/index.html. The study finds "systematic differences in glacier status from region to region, with the most intensive shrinkage in the Himalayas (excluding the Karakoram) characterized by the greatest reduction in glacial length and area and the most negative mass balance. The shrinkage generally decreases from the Himalayas to the continental interior and is the least in the eastern Pamir, characterized by the least glacial retreat, area reduction, and positive mass balance."

To find possible causes, the group thoroughly surveyed the climate status throughout the Tibetan Plateau and surroundings, and attributed the systematic differences to the domination of the two major atmospheric circulation systems, i.e., the westerlies and the summer monsoon. Under global warming, the intensifying westerlies contribute to increasing precipitation in the Pamir region, while elsewhere in the Himalayas there is a weakening summer monsoon.

A news feature by Jane Qiu was also dedicated to the study. For further reading, please visit the website at: www.nature.com/news/tibetan-glaciers-shrinking-rapidly-1.11010#/ref-link-1

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

Secretariat of the Chinese Committee on ICIMOD
Institute of Mountain Hazards and Environment,
Chinese Academy of Sciences (CAS)
No. 9, Section 4, Renminnanlu Road 610041,
Chengdu, Sichuan
Tel 86-28-85237507 **Fax** 85222258
Email cnicimod@imde.ac.cn