



Experts from the Institute of Mountain Hazards and Environment Provide Technology for Hazard Prevention along the Karakoram Highway, Pakistan

On 4 January 2010, a landslide occurred in the Hunza Valley in northern Pakistan. The initial disaster buried the village of Attabad, destroying 26 homes and killing 20 people. As the weeks passed, the problems were compounded because the landslide did more than just destroy a village, it blocked the Hunza river creating an 11 km (7 mile) lake, which inundated several villages and submerged 5 km (3 miles) of the Karakoram Highway. The lake's level was rising by the day, and the seepage raised fears that the water might breach the dam and flood the villages downstream.

Commissioned by the China Road and Bridge Corporation (CRBC), experts from the Chengdu Institute

of Mountain Hazards and Environment (IMHE), Chinese Academy of Sciences (CAS), rushed to Pakistan to conduct an emergency risk elimination survey of the barrier lake. The IMHE expert team was composed of five people: Prof CUI Peng, Prof CHENG Zunlan, Prof ZHANG Xiaogang, Prof CHEN Xiaoqing, and Dr ZHUANG Jianqi.

With the help of the CRBC, University of Peshawar, and local police, experts arrived at the dammed lake in Gilgit, Pakistan, and made a detailed investigation and measurement of the landslide, dammed lake, and river hydrology. Based on the first-hand information acquired during the fieldwork, the experts discussed the causes of the dammed lake, the influences on it, and emergency countermeasures; the preliminary report was submitted to the Chinese Embassy in Pakistan and the CRBC.

The expert team returned to Chengdu on 4 April. The team's efficient work, courageous spirit, and rigorous attitude earned them accolades from the Chinese Embassy in Pakistan and the CRBC.

IMHE experts completed the consulting report on the emergency risk assessment of the landslide and dammed

lake on the Karakoram Highway in May 2010. The consulting report provides technological and emergency countermeasures for the CRBC. Meanwhile, IMHE experts will continue to provide technical consultation services for the work to follow.





International Workshop on Koshi River Basin Transboundary Project Held in Nepal

An International Workshop on the Koshi River Basin Transboundary Project was held in Kathmandu, Nepal, on 22 and 23 April 2010. The workshop attracted 40 experts from China and other countries on four themes: glaciers, glacial lakes, water resources, and their risks; biodiversity; land use and land cover change; and the social economy and regional development.

Under the themes on biodiversity, and land use and land cover change, Prof ZHANG Yili from the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS, reviewed China's research progress in the Hindu Kush-Karakoram-Himalayan region (HKKH) on land use, land cover mapping, and biodiversity in the Himalayas. Dr Bishnu Bhandari from the International Centre for Integrated Mountain Development (ICIMOD) highlighted the importance of wetland resources in the Koshi Basin, explaining that their protection is directly related to the sustainable development of local resources. Under the theme on glaciers, glacial lakes, water resources, and their risks,

Dr Ravi Aryal from the Water and Energy Commission Secretariat (WECS) introduced river basin planning and integrated management on water resources in Nepal. Prof CHEN Ningsheng from the Institute of Mountain Hazards and Environment (IMHE), CAS, reported on the impact of climate change and earthquakes on landslides. Dr Luna Bharati from the International Water Management Institute (IWMI) introduced his research on the hydrological features of the Koshi Basin.

Under the theme on social economy and regional development, Prof Narendra Khanal from Tribhuvan University, Nepal, who has conducted years of research on the social economy in the Koshi Basin, made a detailed assessment of the fragility of the Basin's ecology and social economy based on his investigations. Prof FANG Yiping from IMHE summarised his group's experiences in climate change research at the source of the Koshi River and put forward countermeasures for animal husbandry, making suggestions for future research on the social economy of the Basin. The experts recognised each research institute's work in the HKKH, reached a consensus on data sharing in relation to research on the Basin, and proposed a blueprint for future cooperation. A seven-day field expedition to the Koshi River Basin was conducted from 2 to 9 July 2010.

Third Pole Environment Scientists visit Nepal for Environmental Study

From 18 April to 15 May 2010, six scientists from the Institute of Tibetan Plateau Research (ITP) and five scientists from Tribhuvan University, Nepal, jointly conducted field trips in Nepal, at the southern edge of the Third Pole region, as part of the Third Pole Environment (TPE) Programme. During the nearly one-month expedition, scientists succeeded in setting up two meteorological stations in Nepal at Kyanjin Gomba (3900 masl) and Tahara (119 masl) in southeast Nepal. They also trekked along the Yala glacier carrying differential GPS instruments for glacial measurement, including the measurement of elevation at the glacial surface and the terminus. A series of line-poles were fixed on the Yala glacier slope to monitor glacial mass balance. Preliminary sampling of surface snow and at the snow-pit profile was conducted on the glacier to assess the region's suitability for microbial sampling and analysis.

Tree-rings were sampled and paleo-climate and environment reconstruction carried out in the Langtang catchment. River runoff was also monitored with an

equipment configuration suitable for the long-term continuous measurement of river water levels. Three sites were selected in the catchment for the regular and continuous study of stable isotope hydrology: two for fixed-site sampling of precipitation and one for fixed-site sampling of river water.

This joint expedition in Nepal was a follow-up to the first joint research last October. Both were funded by the TPE programme in an effort to understand environmental changes in the region.



Tajikistan Scientists Actively Involved in the Third Pole Environment Programme

As part of the 'Tectonic transformation and environmental changes on the Pamir Plateau' project, one of the international projects within the Third Pole Environment (TPE) programme, scientists from the Institute of Tibetan Plateau Research (ITP), CAS, including Professors YAO Tandong, DING Lin, HE Jiankun, and TIAN Lide, visited the Institute of Geology, Academy of Sciences of the Republic of Tajikistan. They were welcomed by Tajikistan scientists from the Institute of Geology headed by Prof Abdulhak Faisezev, who participated in the first TPE workshop in Beijing and was highly supportive of the TPE programme.

The meeting between Chinese and Tajikistan scientists recalled the joint fieldwork and academic visits between both sides at Dushanbe and Beijing over the past years. Both sides expressed a wish to continue cooperation, starting with the establishment of a monitoring station on the Pamir Plateau, joint field expeditions, and the nurturing of talent.

The discussion also resulted in the formation of the Tajikistan-China Research Center of the Pamir Plateau, and the selection of a suitable site for the monitoring station. The site is to be cleared and provided with an automated weather station, constant GPS monitoring, and an automatic rain gauge for the long-term study of the climate and environment of the Pamir Plateau.

A 40-day joint expedition is planned to follow the meeting. The expedition will encompass a geologic expedition to the Pamir Plateau, an expedition to the Fedchenko glacier, and GPS monitoring of tectonic transformation. Chinese scientists also hope to test some shallow lake cores and collect samples from the basin of Tajikistan for a paleomagnetism study.

Third Pole Environment Seeks Cooperation with Pakistan Space and Upper Atmosphere Research Commission

At the invitation of the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), a delegation of the Institute of Tibetan Plateau Research (ITP), CAS, led by Prof YAO Tandong, the Director of ITP, visited the SUPARCO headquarters in Karachi, Pakistan from 3 to 6 June 2010. During the visit, scientists from both sides made plans to launch a Sino-Pakistan joint expedition to Muztagh Ata-Karakorum in August.

The ITP delegates also discussed cooperative plans for the next five years with SUPARCO scientists, including a joint study on climate and glacial fluctuation in the Third Pole region, and noted exchanges in atmospheric physics and the environment, as well as responses and adaptations to environmental changes. Other research aspects were discussed, including study and modelling of ice and snow hydrology, paleo-climate and paleo-environmental records, and satellite and land surface monitoring.

The two sides agreed that the cooperation in August 2010 would cover the route from the Muztagh Ata in West Kunlun, China, to the Karakorum in northern Pakistan, including an expedition to various glaciers (Batura glacier, Passu glacier, and others), the observation of glacial hydrology, monitoring of glacial mass balance, measurement of quaternary glaciers, sampling of atmospheric-ice/snow, monitoring of ecology, and preparing tree-ring cores, among others. Mutual agreement was also reached regarding the joint development of PhD candidates, hosting of summer schools, and establishment of field stations.

The initiation of the Sino-Pakistan project marks a new beginning for cooperation between China and its neighbouring countries under the TPE framework.

Joint Expedition to Koshi River Basin

Initiated by the CAS Project on Geo-Surface Processes and Regional Adaptation to Climate Change in the Himalaya Region, a seven-day field expedition to the Koshi river basin was conducted from 2 to 9 July



2010. Ten experts from China, Nepal, and ICIMOD participated in the expedition. Experts travelled along the upper Koshi Basin and investigated the use of land resources, water resources, hazards, biodiversity, and regional economic development on the Boqu and Pengqu rivers in Xigaze, Tibet. Experts also visited the Geological Hazards Observation Station located in Zhangmu Town, Nielamu County, and the Qomolangma Station for Atmospheric and Environmental Observation and Research, CAS, located in Tashi Dzong Village, Tingri County.



During the field trip, experts travelled from the subtropical climate zone at an altitude of 1700 m to the cold mountains of the northern Himalayas at 5300 m. The field trip had full support from the Tibet Science and Technology Department.

International Workshop on Koshi River Basin Transboundary Project Held in Sichuan

An International Workshop on the Koshi River Basin Transboundary Project was held in Sichuan Province, China, from 24 to 27 August 2010, by the Chinese Committee on International Centre for Integrated Mountain Development (CNICIMOD) and the project group on 'Geo-Surface Processes and Regional Adaptation to Climate Change in Himalaya Region'. The workshop attracted more than 30 experts from home and abroad. Prof DENG Wei, Director of Chengdu Institute of Mountain Hazards and Environment (IMHE), CAS, and Prof OUYANG Hua, Programme Manager of

Dr Garrett Kilroy, the transboundary project's coordinator from ICIMOD, commented on the research in the Koshi Basin and outlined the United Kingdom sponsored programme on Ecosystems Services and Poverty Alleviation (ESPA).

After two transboundary investigations and three workshops, the experts have obtained preliminary knowledge and statistics on the ecosystems in the Koshi Basin. More collaboration is expected to promote collaborative research in this area.

China, India and Nepal Strengthen Cooperation to Conserve the Kailash Sacred Landscape

The Second Regional Workshop on the Kailash Sacred Landscape Conservation Initiative (KSLCI) was held from 4 to 6 September 2010, in Jiuzhaigou, Sichuan, China. The workshop was organised by ICIMOD, hosted by CNICIMOD and the Chengdu Institute of Mountain Hazards and Environment (IMHE), CAS, and supported by the United Nations Environment Programme (UNEP).

Representatives from China, India, and Nepal discussed the initial steps in developing a regional cooperation framework for the Kailash Sacred Landscape, including a feasibility report, conservation strategy and environmental monitoring plan. Representatives of the lead partners – the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS; GB Pant Institute of Himalayan Environment and Development (GBPIHED), India; and the Central Department of Botany, Tribhuvan University, Nepal – described progress made in the development of a conservation strategy and environmental monitoring plan. ICIMOD presented a regional feasibility assessment that included



Integrated Water and Hazard Management of ICIMOD, delivered speeches at the opening ceremony.

During the workshop, the experts had an in-depth discussion on the relationship between floods and climate change, glacier and glacial lake change, land use and land cover change, biodiversity and climate change, and regional socioeconomic development in the Koshi Basin.



the delineation of the target landscape, a policy review, and a synthesis of the feasibility assessments from each country.

A total of 25 participants representing 14 institutions discussed a draft outline for developing a 'Regional Cooperation Framework (RCF) Agreement'. Mr Surya Prasad Joshi, Joint Secretary of the Ministry of Forests and Soil Conservation of the Government of Nepal mentioned that the Kailash programme should also benefit from the two separate bilateral agreements of the Government of Nepal with its neighbours India and China. Dr Elizabeth Migongo-Bake of UNEP emphasised the importance of embedding an ecosystem approach to optimise landscape services in the programme development. Dr Shi Peili of IGSNRR expressed the need for integrated approaches and technical cooperation between the countries. The Director of GBPIHED, Dr IMS Palni, emphasised the participatory and people-centred approach that is being adopted in the preparation of the regional cooperation framework.

Dr Ekabya Sharma of ICIMOD presented the design and vision of the initiative and briefly explained the programme of work for the start-up phase of 18 months commencing February 2011, and outlined elements for two five-year implementation phases from the middle of 2012. The three countries will finalise their reports on the conservation strategy and environmental monitoring plan after discussions at the workshop.

During the workshop, participants visited the biodiversity and cultural conservation initiatives in the Jiuzhaigou National Park. The Park, located at the edge of the Eastern Tibetan Plateau, is a UNESCO World Heritage Site where ecotourism is strongly linked with conservation.

The Kailash Landscape covers the area linked culturally and geographically to the sacred mountain, which is also known as Kang Rinpoche, Gangrenboqi Feng, and Kailasa Parvata. The Kailash Sacred Landscape Conservation Initiative programme focuses on developing a transboundary regional cooperation framework for conservation and sustainable development. The first regional workshop on the Kailash Sacred Landscape Conservation Initiative was held at Almora, Uttarakhand, India in April 2010. The Third Regional Workshop will be held from 16 to 18 December 2010 in Kathmandu, Nepal.

Evaluation Expert Dr Othmar Schwank Visits Chinese Partners

Dr Othmar Schwank, an Executive Board Member of INFRAS, Switzerland, acting as an evaluation expert for ICIMOD, visited the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chengdu Institute of Mountain Hazards and Environment (IMHE),



and Chengdu Institute of Biology (CIB), CAS. He was in China to investigate ICIMOD's cooperation activities with China and to conduct a mid-term evaluation.

Dr Othmar Schwank visited IGSNRR on 12 April 2010. Prof ZHOU Chenghu, Deputy Director of IGSNRR, delivered a welcoming address and expressed the hope that the two partners could cooperate further in future. Prof ZHANG Linxiu, from IGSNRR, also an Independent Board Member of ICIMOD, suggested that ICIMOD should focus more on different strategic ideas for cooperation in science and technology with different developing countries. She considered that ICIMOD should facilitate and strengthen research on the stability of mountain development in social economies. During the meeting, Dr Schwank discussed cooperation ideas and suggestions with Chinese researchers.

Dr Othmar Schwank visited IMHE and CNICIMOD on 7 April 2010. Prof WEI Fangqiang, Deputy Director of IMHE, said he was glad to see the changes in the development strategy of ICIMOD, such as the focus on three key development areas, strengthening intergovernmental cooperation and exchange; and developing extensive partnerships in regional member countries, all of which play an important role in regional

environment protection and sustainable development. He also expressed the hope that ICIMOD would pay more attention to regional multilateral cooperation in the context of climate change and enhance basic research in order to better coordinate future work. Prof HU Pinghua, Director of CNICIMOD, introduced the work of CNICIMOD. He expressed the hope that ICIMOD will strengthen capacity building and provide more opportunities for young scientists. CNICIMOD also arranged for Dr Othmar Schwank to visit the Chengdu Institute of Biology, CAS, and the Sichuan Grassland Institute.

CAREERI and ICIMOD Sign Cooperation Memo to Push Snow and Glaciers Database and Research in the Hindu Kush-Himalayas

The Cold and Arid Regions Environmental and Engineering Research Institute, CAS (CAREERI), signed a three-year cooperation memorandum with ICIMOD in Lanzhou on 7 June 2010 to conduct cooperative

research on the development of a snow and glaciers database and research in the Hindu Kush-Himalayan (HKH) region over the next three years. According to the memorandum, the two parties will establish a long-term mutual collaboration on the research and development of a regional database on the cryosphere (snow cover, permafrost, and glaciers) and will forge a closer partnership in promoting a regional database on the cryosphere, hydrology, and water resources of the HKH region and Tibetan Plateau.

The main collaborative activities under this memorandum include: 1) the mapping of cryosphere, hydrology, and water resources, and filling the data gap in order to build a regional database of the HKH region including the Tibetan Plateau area; 2) promotion of a common approach and methodology for mapping and monitoring of the cryosphere, hydrology, and water resources conforming to international standardisation; 3) joint field investigations on mutually agreed terms and conditions; 4) the sharing of data on the cryosphere, hydrology, and water resources; 5) the production and publishing of regional status reports on snow, glaciers, and glacial lakes in the HKH region; and 6) strengthening regular communication, exchange of personnel, and student training.



Dr Andreas Schild, Director General of ICIMOD, Visits Kunming Institute of Botany

Dr Andreas Schild, Director General of ICIMOD visited the Kunming Institute of Botany (KIB), CAS, on 13 June 2010. Prof SUN Hang, Deputy Director of KIB met with Dr Andreas Schild and expressed a warm welcome.

During the meeting, both sides reviewed the history of cooperation between ICIMOD and KIB. They also discussed associated development, joint sponsorship of workshops and training courses, and how to promote regional cooperation between KIB and neighbouring countries. After the meeting, Dr Schild visited the Germplasm Bank of Wild Species in Southwest China and the Center for Mountain Ecosystem Studies.



China considers ICIMOD as a valuable platform for increasing scientific exchange and regional cooperation among countries of the 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 pinghuahu@imde.ac.cn



成都山地所为巴基斯坦喀喇昆仑公路堰塞湖治理提供科技支撑

2010年1月4日，巴基斯坦北部罕萨谷阿塔拜德山体发生滑坡。滑坡体堵塞罕萨河形成了一个长约11公里的堰塞湖，淹没了数个村庄和部分喀喇昆仑公路，即中巴友谊公路。随着堰塞湖水位不断地升高，湖水极有可能冲破大坝，形成严重洪灾，危及下游村庄。

受中国路桥有限责任公司的委托，中科院成都山地灾害与环境研究所派出由崔鹏研究员、程尊兰研究员、张小刚副研究员、陈晓清副研究员和庄建琦博士组成的巴基斯坦KKH公路堰塞湖应急排险专家组于3月27日赶赴巴基斯坦北部参加罕萨谷堰塞湖应急排险考察。

专家组在中国路桥、巴基斯坦白沙瓦大学相关人员和当地警察的协助下

顺利到达堰塞湖现场，对滑坡、堰塞湖坝体、河流水文、下游河谷等进行了全面的勘察和测量，获取宝贵的第一手数据，并采集滑坡体土样进行室内分析，为后续评估提供数据支撑。经过几天的紧张工作，专家组根据勘察情况和掌握的相关资料就堰塞湖灾害成因、危险状况、发展趋势、上下游风险、应急处置对策等进行了讨论和分析，将初步分析结果向中国驻巴基斯坦大使馆、中国路桥巴基斯坦办事处进行了汇报。

专家组于4月4日顺利完成野外勘察工作，安全返回成都。考察组的高效率工作、不畏危险的精神和严谨的科学态度得到了中国驻巴基斯坦大使馆和中国路桥巴基斯坦办事处的高度评价。

5月，专家组完成了巴基斯坦喀喇昆仑公路阿塔拜德滑坡堰塞湖危险性

评估与应急处置建议咨询报告，为中国路桥有限责任公司KKH项目部的堰塞湖减灾提供了技术支撑，为巴基斯坦喀喇昆仑公路灾害治理提供了决策咨询。同时，成都山地所专家组还将继续为喀喇昆仑公路堰塞湖后期处理提供技术咨询。





“科西河流域跨境项目”国际研讨会在尼泊尔召开

2010年4月22-23日，由国际山地综合发展中心（ICIMOD）主办的“Koshi河流域跨界项目”国际研讨会在尼泊尔首都加德满都举行。

（“Koshi河流域跨界项目”是中科院重点国际合作项目-科西河流域地表环境变化及区域适应研究项目的姊妹项目，由ICIMOD设立）。来自中国科学院地理科学与资源研究所、成都山地灾害与环境研究所、成都生物研究所、寒区旱区环境与工程研究所、生态环境中心和西藏自治区科技厅，尼泊尔国家公园和野生生物保护部、尼泊尔气象与水文局、Tribhuvan University、水和能源委员会秘书处（WECS）、尼泊尔社会与环境变迁研究所（ISET-Nepal）、国际水资源管理研究所（IWMI）、科西河流域办公室，世界自然基金会（WWF）尼泊尔办公室、欧盟驻尼泊尔办事处以及ICIMOD等机构与组织的40余位中外专家参加了会议。开幕式由ICIMOD副主任Mr. Berend de Groot主持，主任Andreas Schild博士致欢迎辞，地理所张镹锂研究员致开幕辞。会议围绕流域冰川-冰川湖-水资源和风险、生物多样

性、土地利用和土地覆被变化、社会经济与区域发展等4个方面进行了研讨。

张镹锂研究员介绍了我国在HKKH（Hindu Kush-Karakoram - Himalaya region）国际合作项目中的研究进展，重点阐述了我国在喜马拉雅北坡在气候、土地利用/覆被制图、生物多样性、数据库建设与共享等方面的研究成果，并就下一步要开展的工作向大会作了报告。与会中外专家对我国在该地区所开展的工作给予了充分的肯定，同时就该地区今后的合作项目交换了意见。ICIMOD的Eklabya Sharma博士对喜马拉雅东部地区跨境景观的保护研究进行了报告。成都生物所江建平研究员就喜马拉雅山两栖类的生物多样性情况向与会专家做了汇报。ICIMOD的Bishnu Bhandari博士、WWF的Neera Shrestha-Pradhan女士和尼泊尔国家公园和野生生物保护部Gopal Upadhyay先生对Koshi河流域的湿地的重要性和资源性进行了介绍，他们指出Koshi河流域的湿地资源是当地资源环境保护的一个重要方面，湿地的保护直接关系到当地资源可持续的发展。

在冰川、冰川湖、水资源和风险研究方面，WECS联合秘书Ravi Aryal

博士就尼泊尔境内的流域规划和水资源综合管理方面向与会专家进行了详细的介绍。中科院寒旱所上官冬辉博士介绍了近年来在HKH地区从事的冰湖研究,尤其是该地区冰湖季节波动和潜在溃坝风险评价。成都山地所陈宁生研究员从气候变化和地震方面对于泥石流趋势的影响方面向大家进行了汇报。IWMI的Luna Bharati博士介绍了基于SWAT模型对Koshi河流域的水文特征研究成果。

在Koshi河流域的社会经济和区域发展方面, ISET-Nepal的Ajaya Dixit先生首先就Koshi河流域地区对全球气候变化的适应方面和与会专家进行了探讨。Tribhuvan University的Narendra Khanal教授在Koshi河地区的社会经济进行了多年的研究, Khanal教授以当地的社会经济的调查数据详实地对该地区的生态和社会经济的脆弱性进行了评估。ICIMOD的Brigitte Hoermann博士也对Sun Koshi河流域地区的人口贫困和环境的脆弱性问题进行了诠释。成都山地所方一平研究员总结了其课题组在河流源头地区这些年来对气候变化研究的经验, 以及这些地区畜牧业采取的适应对策方面进行了报告, 为Koshi河流域上游和源头地区下一步开展社会经济的研究工作提供了有关建议。

与会专家们充分肯定了各个研究机构在HKKH地区的一直以来的工作, 并对各个研究团队今后的研究提出了建议。各方就Koshi河流域上下游自然和社会经济影响研究的数据共享方面达成了一定的共识, 同时还就Koshi河流域研究中相关资料和知识不足方面交换了意见, 确定了当前Koshi河流域研究应该采取的工作模式以及今后合作形式。通过各方的努力磋商, 该研讨会确立了各方长期合作关系, 同时为中科院有关研究所、ICIMOD和尼泊尔相关研究机构与管理部门之间今后开展区域性合作奠定了基础。会后进行了为期六天的科西河支流-圣科西河流域的多学科综合考察。

第三极环境(TPE)国际计划—尼泊尔气候环境科学考察成功实施

南亚地区是“第三极环境”研究的重要区域, 而尼泊尔是该国际计划实施的重要一站。尼泊尔位于喜马拉雅山南坡。地理上, 尼泊尔是“第三极”的南缘, 海拔跨度从南部的几十米到北部的八千米以上。尼泊尔也是印度季风输送过程中的重要通道, 是研究季风对第三极地区气候环境变化的理想的地区。

2009年10月, 在中国科学院青藏高原研究所姚檀栋院士的带领下, 中国科学家联合尼泊尔Tribhuvan大学对Langtang流域进行了初步探查。主要完成了长期气候环境变化监测站的选址工作, 对流域地区冰川工作环境进行了初步考察, 以及调查其它相关的研究方向的可行性。

2010年4月18日-5月15日, 中国科学院青藏所研究人员一行6人, 在姚檀栋院士的带领下, 联合尼泊尔Tribhuvan大学5名科研人员, 成功实施了尼泊尔野外考察工作, 完成了包括气象、冰川、水文、树轮、微生物、同位素的综合考察活动, 完成了定点野外台站的建设。



此次科学考察成功完成了以下工作：包括建立了定点野外台站，在Kyanjin Gompa (3900m)与尼泊尔东南部的Tarahara (119m)建立了两个气象观测站；开展了Yala冰川物质平衡的观测，在该冰川表面设立了一系列花杆；开展了差分GPS冰川测量工作，包括冰川表面海拔高度测量以及冰川末端位置测量，完成了该冰川动态变化监测的重要一步；完成了Yala冰川表面雪及雪坑剖面微生物样品的采集工作；开展了Langtang流域内树木年轮的样品采集工作；开展了流域水文径流观测以及水位长期连续监测；开始了流域内稳定同位素水文循环研究。建立了2个同位素降水样连续监测点以及一个河水同位素样品连续收集点。

这次尼泊尔综合科学考察的成功实施，野外台站的建立，标志着“第三极环境(TPE)”计划正式进入实质性实施阶段。

第三极环境(TPE)计划“帕米尔高原构造变形与环境变化”项目专家与塔吉克斯坦科学院地质所开展合作研究

2010年5月15日，为完成由中科院国际合作局及资环局联合资助的第三极环境计划“帕米尔高原构造变形与环境变化”项目，中科院青藏高原研究所所长姚檀栋院士、丁林研究员、何建坤研究员、田立德研究员等一行7人赴塔吉克斯坦，开展与塔吉克斯坦科学院地质所的合作研究工作，并举行了会谈。随后，中塔科学家将进行为期40多天的帕米尔高原联合考察，重点进行地质考察、菲琴科冰川考察、地壳变形GPS观测等，同时将建立杜尚别综合观测站。

会谈后，姚檀栋所长与塔吉克斯坦地质所所长Abdulahak Faiszev宣布了塔吉克斯坦-中国帕米尔研究中心的成立，Abdulahak Faiszev所长代表塔吉克斯坦地质所向中国科学家递交了塔吉克



斯坦-中国帕米尔研究中心的钥匙，姚檀栋所长代表青藏所赠送了高性能笔记本等设备。

随后，双方在塔吉克斯坦-中国帕米尔研究中心举行了第一次会议。双方科学家回顾了过去一年多的杜尚别、北京等的合作交流、访问，总结了过去一年的野外考察成果。双方表示将加大合作力度和广度，未来首先在台站观测、野外考察、研究生及年轻科学家培养与交流等方面开展合作。

接着，姚檀栋所长与塔吉克斯坦地质所副所长ILHOMJON一起选定了杜尚别观测站的位置，在塔方工人的协助下，清理了场地，建立了围栏。在未来一段时间内，将陆续架设自动气象站，GPS连续观测台，自动雨量计等仪器，并开展稳定同位素降水样的收集。

在与后续队员汇合后，塔中联合考察队将分成3组，开展为期40天的帕米尔高原地质考察，冰川考察，湖泊浅钻，GPS观测，塔吉克盆地古地磁采样及冰川观测站的选址等各项任务。

第三极环境(TPE)计划专家访问巴基斯坦空间与高层大气研究委员会

2010年6月3-6日，由中科院青藏高原研究所所长姚檀栋院士率领的第三极环境(TPE)计划专家一行5人(包括张寅生研究员、阳坤研究员、梁尔源研究员和徐柏青研究员)应邀对巴基斯坦空间与高层大气研究委员会(SUPARCO,

Pakistan Space & Upper Atmosphere Research Commission) 卡拉奇总部进行了短期访问。访问期间, 双方在第三极环境计划(TPE)框架内详细讨论了未来5年的合作研究内容。

讨论会由SUPARCO委员伊姆兰·伊克巴尔主持, 参加讨论会的巴方人员包括空间与大气科学部负责人巴达尔·



高里博士、空间应用部负责人拉赫迈图拉·吉拉尼及相关科研与项目管理人员。讨论会就冰川观测、气候与冰川变化、大气物理与环境、环境变化的影响与适应、冰雪水文研究与模拟、古气候环境记录、卫星与地面观测及能力建设等8个方面的合作内容进行了详细的讨论, 会议确定了各合作研究内容的双方负责专家及启动的时间节点。会议提出2010年8月初由中巴双方组织科学考察队, 对自中国境内的西昆仑慕士塔格至巴基斯坦北部喀喇昆仑进行联合考察, 重点考察区包括巴托拉冰川、帕苏冰川、霍珀冰川、彼亚福冰川、喜士帕尔冰川等, 考察期间将安装自动气象站、开展冰川水文观测、冰川物质平衡观测、第四纪冰川测量、大气-雪冰化学采样及生态与树木年轮观测与取样研究等。访问期间还就中方帮助巴基斯坦培养相关专业博士研究生、短期培训课程及台站建设等事宜达成一致。

此次中巴合作的启动标志第三极环境计划框架内中国与青藏高原周边国家的合作研究的全面展开。

中外专家联合进行科西河流域跨境考察

根据既定计划, 中科院国际合作重点项目《气候变化影响下喜马拉雅地区山地地表过程与区域适应对策前期研究》于2010年7月2日至9日与国际山地综合发展中心(ICIMOD)联合在喜马拉雅山南北坡中国境内的波曲和朋曲河流域组织了野外考察。

此次野外考察组包括4位中方专家、6名尼泊尔和ICIMOD专家, 他们沿尼泊尔科西河上游进行, 对位于西藏日喀则地区的波曲河和朋曲河流域土地资源利用、水资源和灾害、生物多样性和区域经济发展进行了初步考察, 并考察了设在聂拉木县樟木镇的地质灾害监测站和位于定日县扎西宗乡(北纬28.21



度, 东经86.56度, 海拔高度4276 米)的中国科学院珠峰大气与环境综合观测研究站。

在考察中, 中外专家从喜马拉雅南坡海拔1700米的亚热带气候区直至北坡5300米的高寒山区, 克服了高山缺氧, 道路崎岖, 气候剧烈变化等诸多困难, 圆满的完成了考察任务, 外方专家

对中方的组织工作表示了极大的赞赏和感谢。

本次考察活动得到了西藏科技厅的大力支持与协助, 并派人全程参与, 与各相关管理部门做了重要的协调工作。

喜马拉雅地区“科西河流域跨境项目”国际研讨会在四川召开

2010年8月24-27日由国际山地综合发展中心(ICIMOD)中国委员会和《气候变化影响下喜马拉雅山区山地地表过程与区域适应对策前期研究》项目主办的“科西河流域跨境项目”国际研讨会在四川省峨眉山市举行。来自中国科学院国际合作局、成都山地所、地理科学与资源研究所、成都生物研究所、寒区旱区环境与工程研究所、ICIMOD、尼泊尔环境科学技术部科西河流域办公室、尼泊尔水和能源委员会秘书处(WECS)以及Tribhuvan University等机构与组织的30余位中外专家参加了会议。项目负责人、成都山地所所长邓伟研究员致欢迎辞, 并对项目的执行情况进行了简要的总结。ICIMOD的水、灾害与环境部门主任欧阳华研究员致辞, 项目负责人、地理与资源所张懿铨研究员主持了开幕式。会议围绕流域水灾害以及与气候变化的关系、冰川-冰湖变化、土地利用和土地覆被变化、生物多样性以及与气候变化的关系、社会经济与区域发展等5个方面进行了深入研讨。

ICIMOD 的科西河流域项目协调员Garrett Kilroy博士评价了近来在科西河地区所开展的适应研究工作, 同时他概要的介绍了英国资助的“生态系统服务与扶贫效益(ESPA)”计划和联合立项的总体设计, 与会成员分4组详细地研讨了该计划的建议案的设计框架、科学问题、研究内容、目标、队伍、机制, 及立项目程安排等问题。

该项目得到中国科学院国际合作局的大力支持和指导, ICIMOD专门立项给予了积极的配合, 并得到尼泊尔相关机构的热烈响应, 通过两次跨境的流域考察和三次研讨会, 对科西河流域的水文气象、生物多样性、自然保护区、社会经济发展、冰川和冰湖以及灾害的情况有了初步的认识, 积累了初步的基础数据, 为下一步的深入研究打下了基础。通过多方的合作研究已形成了相对稳定的合作机制和研究团队, 希望进一步加强合作, 扩大研究团队、深入研究领域, 提出下一步的研究计划建议, 多方争取资源, 推动喜马拉雅地区的跨境多边合作的开展。

第二届冈仁波齐地区跨境景观保护项目研讨会在四川召开

2010年9月4-6日, 由国际山地综合发展中心(ICIMOD)主办, 联合国环境开发署(UNEP)资助的第二届冈仁波齐地区跨境景观保护和可持续发展项目研讨会在四川省九寨沟召开。来自中科院地理科学与资源研究所、成都山地灾害与环境研究所、中国藏学研究中心、北京工业大学、ICIMOD、UNEP以及印度和尼泊尔的25位中外专家参加了会议。国际山地中心中委会秘书处和成都山地所承办此次会议。

研讨会旨在通过中国、印度和尼泊尔的地区合作伙伴之间的探讨, 明确下一步工作, 并制定出该项目的区域合作框架(Regional Cooperation Framework, RCF)。



中、印、尼三国项目负责人首先介绍了该项目在启动阶段的执行情况，分别汇报了针对冈仁波齐地区所制定的综合保护对策和环境监测计划。尼泊尔林业和土壤保持部副部长Mr. Surya Prasad Joshi提出，冈仁波齐项目的顺利开展应得益于尼泊尔分别与中国和印度签署的双边合作协议。UNEP环境政策执行部门主任Dr Elizabeth Migongo-Bake强调了在项目发展过程中，建立生态系统保护策略和景观保护战略的重要性。中科院地理所石培礼教授提出了各国之间进行有效技术合作的必要性。印度G. B. Pant 喜马拉雅环境发展研究所(GBPIHED)主任Dr. LMS Palni强调了参与性和以人为本的做法在目前区域合作框架建设中的作用。ICIMOD环境变化和生态服务部主任Dr. Eklabya Sharma概要的介绍了该项目的总体设计，各阶段目标任务等。随后，中外专家共同研讨

(Uttarakhand)成功召开了第一届项目研讨会。第三届项目研讨会将于今年12月在尼泊尔首都加德满都召开。

会议期间，参会专家前往九寨沟国家公园考察了生物多样性和文化遗产保护状况。

国际山地中心评估专家Othmar Schwank访问中国合作伙伴单位

2010年4月，国际山地综合发展中心(ICIMOD)评估专家、瑞士INFRAS执行委员Othmar Schwank博士到中国相关研究所开展调研，对ICIMOD在中国的活动进行中期评估。

Schwank博士于4月7日访问了中科院北京地理科学与资源研究所。地理所周成虎所长对Schwank博士的到访表示热烈的欢迎，同时对ICIMOD与地理所未来的科技合作表示了由衷的希望。吕昌河研究员、石培礼研究员、诸云强博士和刘林山博士分别介绍了各自课题组同ICIMOD项目合作的开展情况，并就合作成果和未来方向提出了建议。作为ICIMOD独立领事，张林秀研究员向Schwank博士介绍了自己对ICIMOD发展战略规划的认识和感受，提出ICIMOD应当重视区别对待其与不同发展中国家科技合作的战略构想，以及提升其山地综合可持续发展中社会经济方面的研究水平等。Schwank博士随后同参会人员就未来合作构想和建议进行了热烈的讨论。最后，Schwank博士对地理所的热



了区域合作框架草案的内容、目标、队伍、机制，及立项日程安排等问题。

冈仁波齐地区跨境景观保护和可持续发展项目在UNEP的资助下，于2009年7月启动，分为四期。第一期将历时18个月。2010年4月在印度阿尔莫拉(Almora)乌塔拉卡汉德



情接待表达了真诚的谢意，也期冀地理所同ICIMOD能建立更加广泛的科技合作关系。

随后，Schwank博士于4月12日访问了中科院成都山地所和国际山地中心中国委员会（CNICIMOD）。韦方强副所长出席了座谈会并代表邓伟所长对Schwank博士的来访表示欢迎，并表示很高兴地看到ICIMOD在发展战略方面的改变，着力于3个重点发展领域，并且更加注重加强政府间合作与交流，更为广泛地在成员国中发展合作伙伴，为地区的环境保护和可持续发展起到了桥梁和平台的作用。希望ICIMOD更加关注气候变化情况下的区域多边合作，加强基础性研究，在区域多边合作中起到协调和保障的作用。CNICIMOD办公室主任胡平华介绍了中委会成立以来的工作进展，并希望ICIMOD能在能力建设方面为成员国的青年科技工作者提供更多的机会。

在CNICIMOD的安排下，Schwank博士在四川还访问了中科院成都生物所和四川省草原科学研究院。

中科院寒旱所与国际山地综合发展中心签署合作备忘录

2010年6月7日，中科院寒区旱区环境与工程研究所与国际山地综合发展中心（ICIMOD）就共同合作以有效推进区域冰冻圈和水文水资源数据库建设及其相关的研究工作在兰州签署了一项为期3

年的合作谅解备忘录。签字仪式由中科院寒旱所冰冻圈科学国家重点实验室常务副主任任贾文研究员主持，寒旱所副所长丁永建代表中方在备忘录上签字。

据悉，双方将长期携手开展喜马拉雅山区域冰冻圈（包括雪盖、冻土和冰川）和水文水资源的监测与制图、数据库建设与共享、人员交流与学生培养等方面的深入合作。双方将定期进行交流和沟通，密切有效地进行合作。

国际山地综合发展中心主任 Andreas Schild访问中科院昆明植物所

2010年6月13日，国际山地综合发展中心（ICIMOD）主任Andreas Schild访问了中国科学院昆明植物研究所。昆明植物所书记、副所长孙航研究员会见了Schild主任，并对其此次到访表示热烈欢迎。

会晤期间，双方回顾了ICIMOD与昆明植物所的合作历史，并就未来双方进行研究生的联合培养、共同举办研讨会或培训班、促成昆明植物所与周边国家开展区域性项目合作等话题进行了讨论。

会面结束后，Schild主任参观了中国西南野生生物种质资源库以及由昆明植物所与世界混农林业中心（ICRAF）共建的山地生态系统研究中心。

国际山地综合发展中心中国委员会致力于加强与南亚国家的科技交流，促进成员机构的科技发展。

国际山地综合发展中心中国委员会秘书处
地址：四川省成都市人民南路四段九号
电话：86-28-85237507
传真：86-28-85222258
邮编：610041
电子邮箱：pinghuahu@imde.ac.cn