

Introduction to the Workshop

The International Workshop on the 'Rehabilitation of Degraded Lands in Mountain Ecosystems of the Hindu Kush-Himalayas' was held in Baoshan City, Yunnan, China from 19 to 22 December, 1994.

ICIMOD's project on 'Rehabilitation of Degraded Lands in Mountain Ecosystems' has been developed to look into the issues of resource degradation in the Hindu Kush-Himalayan Region through participatory action-oriented research. Under this programme, which is funded by the International Development Research Programme (IDRC), Canada, rehabilitation of degraded lands is being carried out at the community level in the ICIMOD member countries of China, India, Nepal, and Pakistan. The project has encouraged a wide range of activities such as water harvesting; building of checkdams; water diversion ditches; and plantation of economically useful indigenous and exotic grass, shrubs, and tree species in hedgerows and in pits. Thus the activities of the project differ from conventional afforestation programmes.

The project has successfully broken the myth that open grazing of domestic animals in the Himalayas cannot be stopped and that plantations cannot be protected without fencing. The project sites do not have any fences but the forest user groups have ensured protection through social fencing and the domestic animals are stall fed. The project has also established soil erosion monitoring plots and has carried out studies on natural regeneration.

Under the project activities on Nepal Site II, for example, rehabilitation of two very degraded forest patches at Bajrapare and Dhaireni, which have been handed over to respective forest user groups, has been carried out since 1993. Forest lands were selected as they represent some of the most degraded sites in the country. The two sites were selected because they differ considerably in size, relative accessibility, and the number and ethnic composition of the households in forest user groups but are located on similar soils and in agro-ecological zones.

The use of contour hedgerows to reduce soil erosion by the project represents the use of the technology on such a scale in community forestry for the first time in Nepal. The project also organises various training programmes and visits for forest user group members to other successful rehabilitation programmes at the community level in Nepal. By working through the forest user groups the project has ensured that decisions on activities are taken by the user groups and are of relevance and importance to them so that the benefits are direct and immediate, e.g., fulfilling their need for fodder.

The project has thus demonstrated that with conducive legislation for community forestry of a country, and by recognising people as a positive source in the rehabilitation of degraded lands, the participation of people in such activities can be improved.

The inaugural session of the workshop was chaired by Mr. Egbert Pelinck, Director General of ICIMOD. In his opening address, Mr. Pelinck emphasised the gravity of the issue of environmental degradation in the Hindu Kush-Himalayan Region. He expressed the hope that this workshop would be able to harness the wealth of experience of the participants from four ICIMOD member countries and the institutions they represented for the well-being of the people and the environment of the Hindu Kush-Himalayas.

Mr. Zhao Yong Ren, representative of the Chinese Academy of Sciences (CAS), and Mr. Steven Tyler, representative of the International Development Research Centre (IDRC), Canada, also spoke on the occasion. Following this, Mr. Zhang Bai-Ying, the Deputy Governor of Baoshan City, welcomed the participants of the workshop to the city, which is known to be a resting place along the famous Southern Silk Route in the Hindu Kush-Himalayas.

Session One

The first half of the first session was chaired by Mr. Steven Tyler of IDRC and the second half was chaired by Mr. Egbert Pelinck of ICIMOD. Professor Pei Shengji, ICIMOD project coordinator, gave a brief report on the eco-regional approach to rehabilitating degraded lands in the Hindu Kush-Himalayan ecosystems. Country reports of the participating ICIMOD member countries were presented specifying the five sites of the project for 'Rehabilitation of Ecologically Degraded Lands'. The five sites were the Baoshan site in China; the Godavari and Kavrepalanchok sites in Nepal; the Almora site in India; and the Mansehra site in Pakistan.

The papers presented during Session One included

Eco-regional Approaches to Rehabilitation of Degraded Land in Mountain Ecosystems of the Hindu Kush-Himalayas	- Professor Pei Shengji ICIMOD
Country Report from India	- B.P. Kothyari G.B. Pant Institute of Himalayan Environment and Development
Country Report from Pakistan	- B.H. Shah Pakistan Forest Institute, Pakistan
Country Report from Nepal - Site I	- B.R. Bhatta ICIMOD
Country Report from Nepal - Site II	- S.R. Chalise ICIMOD
Country Report from China	- Xu Jian-chu Kunming Institute of Botany, CAS

Session Two

The second session of the workshop was chaired by Dr. B.A. Wani, Deputy Inspector General of Forests, Pakistan, D. P. Parajuli, Director General of Forests, Nepal, Professor Pei Shengji, ICIMOD, and Dr. Ronald Hill, University of Hongkong, respectively. The session focussed on Technology and Socioeconomic Aspects of Rehabilitation of Degraded Lands in Mountain Ecosystems. The papers presented addressed species, technologies, and systems of management of degraded land, often government owned but considered common property by local inhabitants. Issues, such as understanding degradation processes, soil fertility, soil erosion, use of slopes and watersheds, use of native plant species and indigenous knowledge, water harvesting technology, and alternative approaches for rehabilitating degraded lands were covered.

Papers presented during Session Two were as follow.

Understanding Degradation Processes in the Middle Mountains of Nepal	- Hans Schreier and P.B. Shah
Soil Fertility Issues under Irrigated and Upland Agriculture in the Middle Mountains of Nepal	- P.B. Shah and Hans Schreier
Alternative Approaches to Rehabilitating Degraded Lands in Mountain Ecosystems of Nepal and the Hindu Kush-Himalayas	- D.P. Parajuli
SWEET Package for Regeneration of Degraded Lands in the Indian Himalayas	- B.P. Dhyani
Living Terrace Edge: An Effective Method of Slope Utilisation in the Upper Reaches of the Yangtze River	- Li Xiu-Bin

Land Degradation and Rehabilitation of a Hot and Dry Valley in Yen-Mu of Yunnan	- Yang Zhong
Mapping of Watershed Afforestation by Means of the Global Positioning System (GPS): Land Ownership, Tenancy Systems, Ethnic Composition, and Problems in the Tarbela Watershed Project Area	- B.P. Wani
A Matter of Relativity: Design for the Low-cost Monitoring of Soil Erosion under Differing Land-use Regimes	- Ronald Hill
Use of Native Plant Species and Indigenous Knowledge for the Rehabilitation of Degraded Lands in Mountain Ecosystems	- Tong Shaoquan, Yang Qui-xiu, and Xu Jian-chu
Preliminary Study on the Key Techniques for Restoration and Rehabilitation of Degraded Mountain Ecosystems	Qui Xue-zhong and Tang Jian Wei
A Study of Species' Screening and Techniques for Afforestation in the Hot and Dry Valley of the Jinsha River	- Shi Pei-Li, Diao Yangguang, Wei Taichang, Cheng Keming, and Xi Yourong
Rehabilitation of Degraded Lands in Mountain Ecosystems: A Technical Report of Plantation Establishment in Nepal	- Lu Rongsen
Water Harvesting Technology and Its Impact on Development of the Central Himalayas	- B.P. Kothyari and P.P. Dhyani

Site Visit

The workshop participants visited Damay Village, the Baoshan site of the ICIMOD project on Rehabilitation of Degraded Lands in Mountain Ecosystems, on 21st December. The field visit was aimed at getting first hand experience of the approaches undertaken on the Chinese site.

Session Three

The field visit was followed by group discussions in the third session. Professor Pei Shengji was the chairperson. First priority was given to completing the current phase of the project and consolidating the achievements of the remaining four months. The papers presented during the workshop were discussed. Other topics discussed were programme activities for the next phase of the project and follow-up activities, types of training materials that could be developed by collaborating institutions for the rehabilitation of degraded mountain ecosystems, and a detailed work plan for project implementation in 1995.

Session Four

The fourth session of the workshop was also chaired by Professor Pei Shengji. Based on the discussions, common issues, problems, and opportunities for rehabilitating ecologically degraded lands were identified and consolidated.

Concluding Session

The workshop's concluding session was held on December 22nd. Mr. Zhao Yong Ren of CAS was the chairperson. Dr. B.P. Wani, Mr. D.P. Parajuli, and Professor Pei Shengji gave the concluding remarks. The workshop provided a forum for discussing the common issues and problems regarding resource degradation in mountain ecosystems in the Hindu Kush-Himalayas and finding short and long-term solutions that would contribute to poverty alleviation, environmental protection and regeneration, and equity among beneficiaries of rehabilitation activities.

Opening Address by Mr. Egbert Pelinck, Director General, ICIMOD

Mr. Deputy Governor, Prefecture – Mr. Wang
Mr. Deputy Governor, City – Mr. Zhang
Mr. Zhao Yong Ren – Bureau of International Cooperation, CAS
Prof. Tong Shaoquan, KIB of CIS
Mr. Tyler, IDRC
Participants
Colleagues
Ladies and Gentlemen

It is a pleasure to be back in Yunnan Province and meet again with several staff of the KIB, who made my first trip to Yunnan earlier this year both successful and pleasant. One of the results of that visit is this workshop for which the KIB is the host organisation on behalf of the CAS. It is also a pleasure to meet old friends from Pakistan, India, Nepal, and Canada and have the opportunity to get to know other experts in the field of rehabilitation of degraded lands.

The degradation of the environment in the Hindu Kush-Himalayas is not a recent phenomenon. Here in Baoshan, an important resting place along the traditional souther Silk Route, we know that lands were eroded already many centuries ago. also elsewhere in the HKH we know from oral and written history that there have always been pockets of degraded lands in the HKH. What is new is the scale and speed of land degradation over the last 20 -30 years. One of the strategies to cope with declining fertility or productivity in the past has been to move to other sites within traditional village boundaries or to migrate to other uninhabited parts of the HKH. However, although population densities in the mountains have not reached the levels of the plains, the people: land ratio is now exceeding the natural carrying capacity of the land in many parts of the HKH. This carrying capacity of the land is to a large extent determined by the ration of cultivated land to the lands that support and maintain the fertility of the agricultural lands. These "support lands" consist mainly of forest and pasture, and it is these lands that have deteriorated fasted over the last 30-40 years due to increasing population pressure and overgrazing.

Within this overall context of environmental degradation ICIMOD was established in 1983 with the dual mandate of environmental management and poverty alleviation. From the very beginning, ICIMOD has tried to address the problems of the HKH in an integrated way. It tries to do so by identifying and promoting linkage between

- disciplines, e.g., between agriculturists and foresters, agriculturists and economists, natural resources managers and social scientists
- policies and technologies
- research and development
- countries

The present workshop reflects very well several of the linkages and activities ICIMOD is promoting. I am glad that we have been able to bring together representatives of 4 of ICIMOD's member countries with their wealth of experience, not only from the sites for which they are responsible, but also from the institutions they represent.

We are in a unique position to harness that knowledge and apply it for the wellbeing of the people and environment of the HKH. We can do so in different ways over the next 4 days.

Firstly, we will listen to each other and discuss critical issues affecting rehabilitation of degraded lands at 5 sites in the HKH. This will hopefully be not only a discussion on species and technologies for rehabilitation, important as they are, but also address the important issue of systems of management of degraded lands, often owned by governments but considered common property resources by the people living nearby. Based on these discussions we will identify common issues, problems and opportunities for rehabilitating ecologically degraded lands.

Secondly, we will visit the Chinese field site here in Baoshan and get first hand experience with the approaches undertaken here. I expect this to be a visit of mutual benefit to our Chinese colleagues and the visitors from abroad.

Thirdly, we will look at the future of the project that brings us together "Rehabilitation of ecologically degraded lands." What to do to complete the present phase and consolidate what is achieved in the remaining period of 4 months is the first priority. But also to identify the need for and scope for follow up activities.

May I recommend that you look both in the short term and in the long term for solutions that contribute to poverty alleviation, environmental sustainability and equity among beneficiaries from rehabilitation work. With only men participating in this workshop the Chairmen of the Sessions should ensure that in each session the issue of gender balanced development is being raised.

Ladies and Gentlemen, ICIMOD is grateful to the Chinese Academy of Sciences, and in particular the Kunming Institute of Botany for hosting this workshop. I am also very grateful to the Deputy Governor of Baoshan Prefecture and the Deputy Governor of Baoshan municipality for their keen interest in co-hosting the workshop and all the facilities and hospitality provided.

I am particularly pleased that a representative of the Canadian International Development Research Centre participates in the workshop. We are grateful for IDRC's support to ICIMOD which has made it possible to implement this project and bring you all together.

I hope that the results of this workshop will also be useful for other IDRC to continue its support to ICIMOD in the fields we are discussing this week.

To conclude, I wish you all a successful meeting, a pleasant stay and friendship among colleagues, committed to the cause of rehabilitating ecologically degraded lands.

Thank you