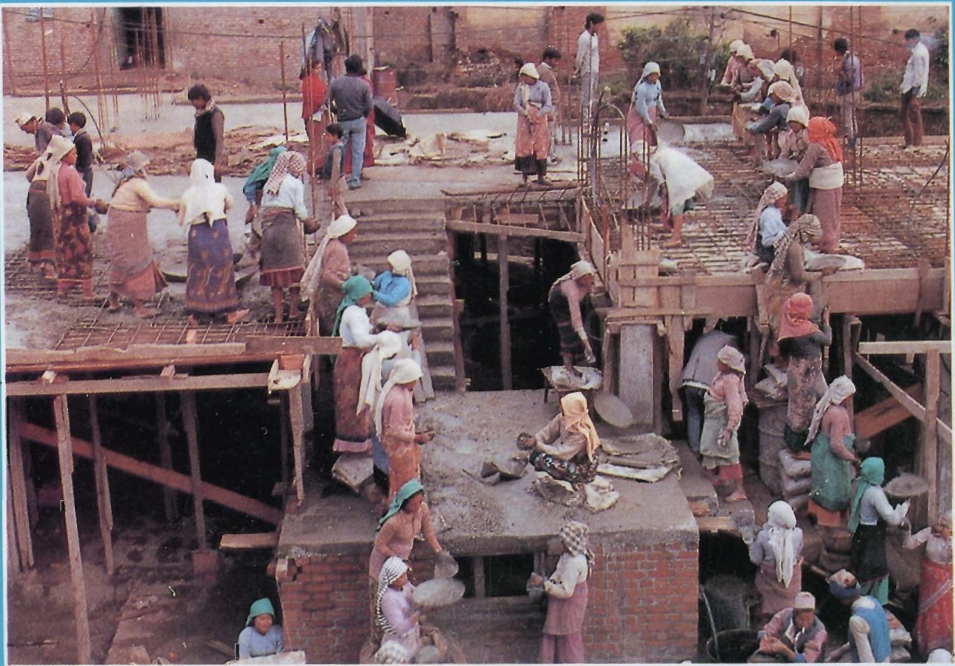




# **PEOPLE AND JOBS IN THE MOUNTAINS**

## **Report of the**

### **International Workshop on Off-Farm Employment Generation in the Hindu Kush-Himalaya Region**



**Organised by ICIMOD in collaboration with the  
Department of Environment, Forests and  
Wildlife, Government of India**

**Dehra Dun  
India  
17-19 May 1986**

### ICIMOD PHASE I Workshop Series

The International Centre for Integrated Mountain Development began professional activities in September 1984, with the first objective of reviewing development and environmental management experience in the Hindu Kush - Himalaya Region. An International Workshop was planned for each of four major fields to review the state of knowledge and practical experience, and also to provide an opportunity for the exchange of professional expertise with regard to integrated mountain development.

ICIMOD completed Phase I activities in June 1986, having held :

- o the International Workshop on Watershed Management in the Kush - Himalaya -- Chengdu, China, 14 to 19 October 1985
- o the International Workshop on Planned Urbanisation and Rural Urban Linkages in the Hindu Kush - Himalaya Region -- Kathmandu, Nepal, 25 to 29 March 1986
- o the International Workshop on District Energy Planning and Management for Integrated Mountain Development -- Kathmandu, Nepal, 3 to 5 May 1986
- o International Workshop on Off - Farm Employment Generation in the Hindu Kush - Himalaya -- Dehra Dun, India, 17 to 19 May 1986

These Workshops were attended by over two hundred experts from the countries of the Region, in addition to concerned professionals and representatives of international agencies. A large number of professional papers and research studies were presented and discussed in detail. With the permission of the authors, copies of papers in full will be supplied on request, with a charge to cover reproduction and postage costs.

In September 1986, ICIMOD published four summary Workshop Reports. Each is intended to represent the conclusions reached at the Workshop and does not necessarily reflect the views of ICIMOD or other participating institutions.

Copies of the reports are available upon request from :

**The Publications Unit**  
**International Centre for Integrated Mountain Development (ICIMOD)**  
**G.P.O. Box 3226**  
**Kathmandu**  
**Nepal**

# **PEOPLE AND JOBS IN THE MOUNTAINS**

---

**Report of the  
International Workshop on  
Off - Farm Employment Generation in the Hindu Kush - Himalaya Region**



Continuing population growth throughout the Hindu Kush-Himalaya mountain region, particularly in the 'middle hills' where the population is primarily concentrated, has placed an increasingly heavy burden on the region's already unacceptable burden -- on traditional agriculture and on their vulnerable mountain habitats. It seems clear that long-term solutions must include adequate emphasis on the systematic generation of employment -- that is the provision of job opportunities in the non-agricultural sectors off the land in urban and industrial areas -- and in particular, linked directly to the support and strengthening of the mountain region.

The issues in this exceptionally complex field of mountain development were reviewed in depth at an International Workshop on this subject organised by ICIMOD and held, at the kind invitation of the Department of Environment, Forests and Wildlife of the Government of India, at the Forest Research Institute of Dehra Dun. This Workshop Report summarises the most useful exchanges of ideas and experiences among participants from most of the countries of the Hindu Kush-Himalaya Region. In light of these discussions and exchanges, ICIMOD is now in the process of formulating a systematic programme of practical research in identified priority areas for implementation on a collaborative basis with participating institutions in India, China, Nepal, Pakistan, and Bangladesh.

I would like to take this opportunity to express our sincere appreciation to the members of the Workshop Organising Committee, especially like to thank the members of the Workshop Organising Committee in India for their valuable contributions and support. I am particularly grateful to the Department of Environment, Forests and Wildlife, Government of India, and Chairman, Dehra Dun, for their kind invitation and support. I am also grateful to the Director, Forest Research Institute, Dehra Dun, for his kind invitation and support. I am also grateful to the Director, Forest Research Institute, Dehra Dun, for his kind invitation and support.

ICIMOD is indebted to Dr. V. V. Vaidyanathan, Director, Forest Research Institute, Dehra Dun, for hosting the Workshop at the historic premises of the Forest Research Institute. I would also like to express our gratitude to the authors, discussants, and participants, who brought their valuable experiences and insights to the Workshop. Many other individuals both at ICIMOD and the Forest Research Institute worked long hours in preparation for the Workshop and we express our sincere appreciation for their efforts. I must particularly thank Dr. Mahesh Banskoti and Dr. Prodip Roy for preparing the Workshop Report.

Colin Roper  
Director



Copyright©1986

International Centre for Integrated Mountain Development

---

All rights reserved

Cover photograph : Off-Farm Employment Generation in the Himalaya

Published by

International Centre for Integrated Mountain Development  
G.P.O. Box 3226, Kathmandu Nepal

In the preparation of this report an attempt has been made to reflect the views and interpretations expressed by the participants at the Workshop. These views and interpretations are not attributable to the International Centre for Integrated Mountain Development (ICIMOD), and do not imply the expression of an opinion concerning the legal status of any country, city, or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

## Foreword

---

Continuing population growth throughout the Hindu Kush-Himalaya mountain region, particularly in the 'middle hills' where the hill communities are primarily concentrated, is clearly exerting a severe burden -- and in some cases an already unacceptable burden -- on traditional hill farming systems and on their vulnerable mountain habitats. It seems clear that any sustainable long-term strategies for the progressive development of mountain regions must include adequate emphasis on the systematic generation of off-farm employment -- that is the provision of job opportunities in the non-agricultural sectors off the land in urban and rural centres of varying scales, preferably linked directly to the support and strengthening of the rural economy.

The issues in this exceptionally complex field of mountain development were reviewed in depth at an International Workshop on this subject organised by ICIMOD and held, at the kind invitation of the Department of Environment, Forests and Wildlife of the Government of India, at the Forest Research Institute of Dehra Dun. This Workshop Report summarises the most useful exchanges of ideas and experience among participants from most of the countries of the Hindu Kush-Himalaya Region. In light of these discussions and exchanges, ICIMOD is now in the process of formulating a systematic programme of practical research in identified priority areas for implementation on a collaborative basis with participating institutions in India, China, Nepal, Pakistan, and Bangladesh.

I would like to take this opportunity to express our sincere appreciation to all individuals and institutions contributing to this Workshop. I would especially like to thank the members of the Workshop Organising Committee in India for their valuable time and assistance : T. N. Seshan, Secretary, Department of Environment, Government of India, ICIMOD Board Member and Chairman, Programme Advisory Committee; Dr. Bhupinder Singh, Additional Secretary, Planning Commission, Government of India; and Dr. R. V. Singh, President, Forest Research Institute and Colleges, Dehra Dun, India.

ICIMOD is indebted to Dr. R. V. Singh and his staff for so graciously hosting the Workshop on the historic premises of the Forest Research Institute. I would also like to express our gratitude to the authors, discussants, and participants, who brought their valuable experiences and insights to the Workshop. Many other individuals both at ICIMOD and the Forest Research Institute worked long hours in preparation for the Workshop and we express our sincere appreciation for their efforts. I must particularly thank Dr. Mahesh Banskota and Dr. Prodipto Roy for preparing the Workshop Report.

Colin Rosser  
Director

# Contents

---

	Page
Foreword	i
INTRODUCTION	1
BACKGROUND TO THE WORKSHOP	3
Population Growth in the Hills	3
Pressures on Land - Based Resources	4
Integrated Mountain Development and Off - Farm Employment Generation	4
Review of Off-Farm Employment Issues	5
THE WORKSHOP	8
Major Off - Farm Activities in the Hills	8
Inter - Sectoral and Spatial Linkages	11
Human Resource Development	14
Policies and Programmes	16
COLLABORATIVE RESEARCH PRIORITIES	18
ANNEXES	
1. Workshop Programme	21
2. Summaries of Background Papers	25
3. Participants	39



## Introduction

---

Slow growth in productive employment constitutes a major challenge for the countries in the Hindu Kush - Himalaya Region. The rapidly increasing population, reduced cultivated area per family, deteriorating hill environments, lack of appropriate technologies, and generally difficult conditions of access and communication are some of the limiting factors to the growth of productive employment, and consequent eradication of poverty. If present trends in population growth continue, the twin problems of unemployment and poverty are likely to deteriorate further, despite recent development programmes being implemented in mountain areas.

The issue of employment generation in the hills is to be perceived in the context of the increasing inability of conventional land - based activities to productively absorb the growing number of job seekers. The need for rapid development of off - land employment opportunities in the Hindu Kush - Himalaya has been underscored by ICIMOD's reviews and workshops conducted in various specialised fields. While work in the Watershed Management Programme has indicated increasing pressures on watersheds from growing populations and changing hill farming conditions, the Rural Energy Programme has highlighted pressures on land in terms of large - scale deforestation and persisting reliance on fuelwood. A third view has emerged from work focused on Rural - Urban Linkages : the forces of urban development will become increasingly significant in the expansion of off -land employment opportunities in mountain regions. While further work is necessary in all of these subjects a common conclusion from the three previous workshops has been that employment generating activities in the hills should be increasingly directed away from dependency on land.

The purpose of the Off - Farm Employment Generation Work Programme over the past year has been to conduct state - of - the - art reviews, and identify major issues for the Region. There have been many off - farm employment activities in the development plans of different governments in the Region. What impact has there been on generating non - agricultural jobs in these hills ? How have programmes differed from country to country ? Based upon these reviews, this Workshop on off - farm employment, inviting experts active in mountain development, was organised to discuss and exchange field experiences.

This workshop report presents key issues underlying the need for productive employment generation in the hills. It discusses the issues of rapid population growth, and the consequent increases in labour supply, and the growing pressures on land - based resources in the context of off - farm employment generation and integrated mountain development. The next section focuses on the workshop discussions. This is followed by a brief presentation of the research priorities emerging from the Workshop. The last section of this report provides summaries of the background papers dealing with off - farm issues in countries of the Hindu Kush - Himalaya Region.

## Background to the Workshop

---

The significance of off - farm employment can be understood in the context of the increasing population and labour force and the growing difficulties of conventional land - based activities to generate adequate levels of gainful employment. A major thrust of integrated mountain development should be toward activities that reduce direct dependency on land, are increasingly market oriented, and are economically and environmentally desirable.

### Population Growth in the Hills

After centuries of relatively marginal changes in the size of population, hill areas within the last few decades have experienced dramatic increases in population. Nepal has nearly doubled its population during the past thirty years and is likely to continue to add more than a million people in the hills every decade. The evidence from Indian hill areas also strongly suggests phenomenal growth rates of the hill population in recent decades. In China also people in the hills continue to increase in large numbers.

Significant population increase in the Hindu Kush - Himalaya and the Hengduan Mountains has been possible primarily on account of success in reducing mortality rates. While rates of increase are not uniform, population growth is increasingly identified as a significant variable in the overall socioeconomic and environmental changes occurring in the hills. In the absence of concomitant socioeconomic changes, the implications of rapid population growth are not difficult to imagine. Increasing demands for various necessities exacerbate pressures on limited resources, leading to environmental deterioration. Employment generation becomes increasingly difficult with limited technological and productivity changes. The combined manifestations of rapid population growth clearly indicate worsening economic and environmental conditions.

The most significant aspect of this demographic change is reflected in the increase of labour force. Those who will enter the labour force during the next decade have already been born, and unless efforts are made to provide gainful employment to them, pressures on the environment are likely to increase. With half a million new entrants into the labour force by 1990 in the Nepalese hills alone, rapid expansion of employment opportunities is the only answer to the growing poverty. To the extent that poverty and environmental degradation are interrelated, it is also an important solution to environmental problems.



## **Pressures on Land - based Resources :**

### **Breakdown in Agriculture - Livestock - Forest Systems**

Conventional employment options in hill agricultural systems are unable to cope with the problems. Further large - scale expansion of cultivated lands in the hills is no longer economically or environmentally desirable given the already serious degradation of marginal lands brought under the plough. With decreasing size of holdings and declining productivity of hill agriculture, the capacity of the subsistence agricultural economy to provide food, fuel, fodder, and employment to the growing hill population is increasingly difficult. Any extrapolation regarding food, fuel, fodder supply, and employment generation, provides a disconcerting picture of the future for many hill areas.

The increasing pressures on land - based resources, particularly arable land, forests, and pastures, is a common feature in the otherwise heterogeneous environment of the Hindu Kush - Himalaya. While the types of pressures, their intensity, and sources vary greatly, the inevitable consequence of growing pressures on land resources has been to disrupt the conventional linkages and balance developed by the hill people between land use, land resources, and land - based activities. Difficulty in traditional transfers of nutrients to agriculture from livestock and forests has adversely influenced growth in productivity of agriculture. Similarly, livestock productivity has been seriously affected due to shortages of fodder as bovine and human populations compete for the same land - based resources. Widespread deforestation has significantly worsened the fuelwood availability in the hills.

Due to these significant changes and the fact that a large number of people in the hills continue to depend upon these land - based resources for survival, the sustainability and productivity of land resources is a fundamental issue in hill development. A substantial reduction in the current pressures on land - based resources through development of alternative avenues of employment is the first major step in this respect. While this does not rule out the potential for developing productivity of hill agriculture and land - based resources, it underscores the need for concomitant developments in off - farm sources of income and employment.

### **Integrated Mountain Development and Off - Farm Employment Generation**

The concept of carrying capacity in the hills refers to the growing asymmetry in the interrelations between population, labour supply, stock of accessible natural resources, and prevailing levels of technological capability. Under existing conditions, relatively simple calculations of demand - supply reveal declining availability of key resources and consequent decreasing standards of living. Any further increase in demand within relatively inelastic supply conditions can only result in progressive impoverishment, of both the human and physical environment. It is therefore argued that reducing demand pressures is almost a precondition for any positive influence of development programmes, as supply constraints change slowly.

Arguments for integrated mountain development, on the other hand, are based on questions regarding the static nature of the carrying capacity concept ; it is only one of the possible scenarios. The experience of many areas, including some mountain regions, strongly indicates that with appropriate policies, carrying capacity can be increased, resulting in higher standards of living. The fact that such possibilities have not been realised in large parts of the Hindu Kush - Himalaya is not so much a matter of the intrinsic nature of mountain areas, but has more to do with policy and programme options and their implementation. Integrated mountain development strategies underscore the substantial scope for productivity enhancement. These changes would be brought about by a new series of economic and environmental interrelations for sustained improvements in the hill economy. The basic question then is how incomes can be improved. In this context, issues such as rural - urban linkages, the role of small towns, development of alternative energy sources, and human and natural resource development, acquire growing significance.

Integrated mountain development approaches should not be merely multisectoral programmes. These programmes must be specifically designed to promote spatial, ecological, and economic integration. Spatial integration promotes the development of specialisation and growth in trade and exchange between rural and urban areas and also between highlands and lowlands. Ecological and economic integration encourages the growth of those activities that are not only economically advantageous but also ecologically sound. Development of off - farm activities has an important contribution to make in all of these integration processes, as this can promote specialisation, diversification, and exchange interrelations between households, and between regions. It is through such developments that sustained improvements in productivity can be achieved in the hills, contributing more effectively to high rates of structural transformation of the labour force than has been historically possible.

### **Review of Off - Farm Employment**

In recognition of these important and complex issues regarding off - farm employment generation in the mountains, ICIMOD has organised state - of - the - art reviews in five countries of the Region. Neither the recognition of these problems nor measures to promote off - farm activities are new in this area ; all the governments of the Region have organised many programmes and activities to generate non - agricultural jobs in the hills and reduce pressures on the land. It was expected that a review of these efforts would serve as a starting point for ICIMOD's work in off - farm employment generation. These reviews cover a wide range of issues and areas, clearly indicating that planned and unplanned changes in the development of off - farm activities are already in process <sup>[1]</sup>.

---

1. Further details of the reviews are presented in Annex 1.

Reviews of off - farm employment in Bhutan have shown that the organised non - agricultural sector is very small at present. However, its future growth and development could be affected by growth rates in the skilled labour force of the hill population (Bhadra and Alirol).

The experiences in Ningxia Autonomous Region of China illustrate that planned resettlement helped to improve the living conditions of the hill people (Li Wenpu). Reviews regarding the mountain people of Sichuan Province in China suggest that while both unemployment and illiteracy levels are high, the implementation of the responsibility and contract system after 1978 affecting ownership of produce and retention of profits has rapidly led to a transformation of the labour force from agricultural to non - agricultural activities. (He Naiwei and Zhang Yuhuan). Similarly, a study for Wenchuan County in China has highlighted the critical role played by town - run enterprises for rapid shifts of the labour force to non - agricultural activities. (Lin Qinfa) Studies on the shift of agricultural labour force in the Autonomous Region of Tibet have maintained that despite Tibet's wealth of natural resources (minerals, geothermal energy, etc. ) for generating off - farm work, efforts have been severely constrained by lack of suitable technology, limited capital, and shortages of a skilled labour force ( Lan Jin and Deng Yiming ). The mountain areas of Yunnan Province revealed shifts from cereal crops to cash crops, forestry, animal husbandry, and tertiary sector activities in response to recent changes in policies relating to ownership of produce and marketing ( Zhang Xiaoshan and Deng Yiming ).

A number of reviews on the experiences of Himachal Pradesh, Uttar Pradesh, and Darjeeling in India have highlighted the recent efforts made to enhance the productivity of land - based activities by switching from cereal grains to the higher income - generating activities of sericulture, dairying, and horticulture (T. N. Dhar; Arun Sud; Bhaskar Ghose). It was further noted that the main constraints facing the diversification of employment opportunities are related to inadequate levels of infrastructure and skills.

The exercises on Nepal dealing with various dimensions of off - farm employment indicate a number of interesting issues. While infrastructure development is a significant employment generator, full potential is not being experienced on account of the choices of technology and outflow of resources from project areas (Pradhan). Migration from the hills is playing an increasingly important role in supplementing agricultural incomes in the hills, but many of the traditional outlets for migrants are no longer available ( Sharma ). In some cases, it was found that the share of off - farm incomes has increased with decreasing land holdings, returns from off - farm work are relatively lower than farm work, and women play a major role in off - farm work in the hills (Bhattarai). An examination of the pattern of spatial linkages in Nuwakot District of Nepal suggests a strong lowland or valley bias in the development of off - farm activities (Banskota). Another interesting phenomenon in Nepal has been the increasing significance of agricultural activities in many small hill towns which were initially established to provide off - farm services (Manandhar).





## **The Workshop**

---

The purpose of the Workshop was to identify known and unknown factors concerning rural mountain economies outside areas of cultivation as the basis for defining a research agenda for the next three years. The concern was not, however, with the academic study of the mountain economy for its own sake but rather as the means to (i) facilitate the evaluation of public policy and projects in mountain areas ; and (ii) assist in making public intervention more accurately targeted and economically efficient.

More specifically, the objectives of the Workshop were :

- To review on a comparative basis the off - farm employment experiences and problems in the Hindu - Kush Himalaya
- To identify a set of research priorities and issues in the field of off-farm employment generation

Within the objectives, the Workshop was organised around four themes :

- Major Off - Farm Activities in the Hills
- Inter - Sectoral and Spatial Linkages
- Human Resource Development
- Policies and Programmes

Specific topics were introduced by the speakers, highlighting project and programme experience. The presentations were followed by brief comments by a panel of discussants, and finally, floor discussion.

### **Major Off - Farm Activities in the Hills**

Off - farm activities in the hills have been largely unrecorded and therefore underestimated. Censuses continue to categorise the majority of rural hill households as agricultural, although it is becoming increasingly evident that off - farm employment and income support are as important as

on - farm work. Studies of rural hill areas in Nepal have indicated that agriculture contributes only 23 per cent of the total income of farm households, while off - farm activities provide as much as 57 per cent of the total income.<sup>[1]</sup> Similar findings have been reported for rural areas in other countries.<sup>[2]</sup> Based upon limited insights about off - farm activities, it is possible to group them into two broad categories : the **formal** and the **informal**. The formal off - farm sector is small and includes non - agricultural activities (mainly manufacturing and processing) that are fairly well integrated with the organised sector. The informal sector is much larger and covers practically all the off - land activities in rural hill areas. These are largely unregistered, and usually family operated on a seasonal or part - time basis.

Discussions of the **informal** sector concentrated on two major areas : trade and marketing, and women's activities. Regarding trade and marketing, it was mentioned that there are large trading networks supplying basic goods across this entire mountain chain. Underlying these trading networks are handicraft activities, manufacturing, trail maintenance, portage, trade linkages with towns and market centres, and even concentrations of capital. Trading networks in the hills have therefore been large - scale employers. Trade has created networks of spatial exchange, facilitated the penetration of monetisation of isolated mountain valleys, and provided a basis for credit. Trade obviously has important linkages with the development of agriculture, manufacturing, and tourism, for without active trading support these sectors stagnate easily ; trade is the stimulus for their growth and diversification. The composition of trade also indicates changes in the living conditions of the people and is therefore an important, though relatively simple, indicator to monitor. Despite their encompassing role, the significance of trade networks has not yet caught the attention of either policy makers or professionals. Knowledge about many aspects of this dynamic informal sector is limited, and the important question is how trade can become a basis for integrated policy designed not simply to expand trade, but to stimulate manufacturing and support the development of other sectors such as agriculture, forestry and infrastructure.

With reference to trading in the hills, it was noted that until recently this was an important form of employment for the people of the northern Hindu Kush - Himalaya in Pakistan, India, Nepal, Tibet, and Bhutan. Underlying the trading relations was a complex web of social, economic, and financial interactions. Improved accessibility and changing sources of traded goods have changed both the composition of trade and the people in trading activities. There has been a shift in the whole pattern of trade which has adversely affected northern peoples, who now have to seek other forms of employment. With respect to apple production in Himachal Pradesh, India, it is evident

1. Agricultural Project Services Centre (APROSC), *Rapti Household Baseline Survey*, Kathmandu, 1981, p. 105.
2. R. Islam, Non - Farm Employment in Rural Asia : Issues and Evidence, *The Asian Employment Programme* (ILO - ARTEP)



that marketing and its related issues such as who controls the trade, transport arrangements, packaging, collection, credit, extension, and processing have proved to be more critical in determining income and employment generation than the production itself.

Regarding the role of women's activities in the informal sector, it was emphasised that women form the major labour force of the unorganised sector in the hills. Women have a very high participation rate in large parts of the hills, compared with many plains areas. The contribution and role of women's income and employment generating activities have not been adequately understood. Development activities suitable for women require a better understanding of their present role in the hill economies.

Points raised with respect to the informal sector included the fact that it is not realistic to concentrate only on trade without also focusing on production and productivity. In the hills, the constraints appear far more critical for production and productivity, and if these could be removed, trade development should follow.

Other issues discussed were related to the question of accessibility. It was mentioned that improvement in accessibility has been the major stimulus for expansion and development of trade and markets.

Regarding small - scale industrial activities in the hills, Nepal's recent experience with the Cottage and Small Industries Project in a number of hill areas was highlighted. After five years of experience, the project has succeeded in enhancing incomes and employment, with one of the highest repayment rates in the country for bank loans. The critical innovation of this project has been to remove the need for collateral security for bank loans. The assets created by the project developed under the loans are used as collateral. Banks have been motivated to support the development of cottage and small - scale industries in the hills through guarantee of 75 per cent of the credit provided. The project also emphasises the role of the marketing agent who is responsible for not only providing the raw materials but also purchasing the product. The types of activities supported are woollen goods, cotton textiles, metal works, and agro - based and forest industries. Key problems have been the relatively slow delivery of inputs and lack of markets for outputs. There are also problems relating to the choice of technology and the location of small manufacturing units.

Concerning the problems of industrial development in Tibet, it was pointed out that the three major constraints are the strong subsistence orientation of rural economies, the poor infrastructure base, and the lack of improved technology and skilled manpower. The experience of the development of dairy industry in Darjeeling was highlighted as an important example of how to create employment in the hills. This industry has provided direct employment to 15,000 milk producers for most of whom this is a full - time job. The entire programme has been managed through cooperative societies that have succeeded in promoting off - land activities like input

delivery, collection, and marketing. However, rapid expansion of the activity created pressures on forests because of feed supply constraints. Similarly, the tea plantations were also introducing better management and labour relations for increasing productivity. Both of these experiences emphasise the critical role of markets and better organisation of the labour force in making a major transition from subsistence to off - farm production activities. Not enough attention has been given to understanding marketing problems in the hill economy.

Other comments referred to the need for identifying areas and activities where the hills have a comparative advantage. It was argued that while some smaller industries have limited potential in the hills, the advantage is in development of the trading and service sectors.

The point was made that improved access hastens the demise of traditional non - agricultural activities and particularly traditional cottage industries. Many problems exist for the future of cottage industries and the only rational approach would be to regard them as intermediate steps, eventually to be replaced by small - scale enterprises that are competitive, productive, and spatially decentralised, but with strong forward and backward linkages.

The problems of extractive industries in the hills and their environmental impact figured extensively in the discussions. The environmentalist position, that all mining industries in the hills should be stopped, was questioned. The knowledge and technology to deal with environmental pollution are already available and should be more extensively used ; employment in these industries has had favourable effects, and alternative employment opportunities may not be easily developed.

### **Inter - Sectoral and Spatial Linkages**

Inter - sectoral linkages in the context of off - farm employment generation in the hills were examined through discussions of on - farm and off - farm linkages and the interrelations between infrastructure development and growth of production activities. Issues regarding spatial linkages were elaborated through discussions of the role and function of small towns in the hills. In many cases, the expected developmental effects fail to be generated because investment and supporting activities have not adequately promoted the growth of these critical linkages.

Discussion regarding on - farm and off - farm linkages highlighted the problem of structural transformation of the labour force in the hills. The occupational structure and the continuation of rapid growth in labour force clearly indicate that large parts of the mountains in the Region will remain predominantly agricultural and rural, well into the twenty - first century. The process of transforming the economic structure of an agricultural economy is going to be disappointingly slow. The informal sector, which includes the broad category of " rural non - farm activities " must be expanded vigorously

to accomodate many of the new entrants to the rural labour force. Since most of the processing and manufacturing industries in the rural areas are agro - based, increases in agricultural production can greatly support these industries and also support employment promotion through relieving the wage - goods constraints. It is also recognised that a well - designed strategy of development, consistent with agro - ecological systems, can greatly enhance employment in the mountain region. Thus, agricultural growth can support non - farm employment generation through : substantial demand for consumer goods and services ; providing raw material for agro - industries and livestock - based industries ; food - for - work programmes like irrigation canals and rural transportation ; and industrial inputs like fertiliser, pesticides, and implements.

A number of other points referred to the problems associated with changes and intensification of hill farming. Expansion in horticulture and vegetable production has resulted in increased pressure on forestry because of the wood used for packaging and stakes to support plants. Examples of relatively low gains in productivity from further intensification of hill agriculture were highlighted. A good deal remains to be done regarding hill agriculture but the crises in the hills are already provoking important changes. These changes underscore the urgent need for development of off - farm activities, if the hill people currently leaving these mountains are to avoid exchanging one type of misery for another. ARTEP's (Asian Regional Team for Employment Promotion) study of labour absorption in Asian agriculture also indicated limited scope for further labour absorption in grain - based agriculture, and this conclusion may be valid for the hill areas also.

Commenting on the structural transformation of the labour force, it was expressed that factors behind fairly rapid shifts from agricultural to non agricultural activities are not well understood. There are indeed many instances when different factors have brought about rapid shifts. Land reform has played a critical role in some countries. The post - cultural revolution changes and particularly the implementation of the new responsibility system in China has played a central role in the transfer from an agricultural to a non - agricultural labour force. The study of transformation at more disaggregated levels, in order to understand the role of different factors, was noted to be important.

Quite apart from problems of measuring, or even precisely identifying, particular types of linkages, in many instances linkages are determined by the underlying sociopolitical relationships, so that the linkages can only be adequately reviewed in the context of the overall political economy.

The presentation on **infrastructure development** focused on the experience of eight hill districts in Uttar Pradesh, India, with respect to roads and small scale power generation. Both power and transport sectors have continued to receive high priority in the development plans for the hills in Uttar Pradesh. While roads have been seen as lifelines for the hill areas, development of cheap power has been considered critical as an alternative source of energy to

firewood. The focus on power development in the hills has been on propagating small - scale hydroelectric plants, which not only have shorter gestation periods but are also environmentally less damaging than larger projects. Furthermore, the scope for retaining benefits locally is greater. Studies of electrified villages reveal that the use of electricity is restricted to domestic lights and the availability of cheap electricity has not replaced the use of firewood. Only a few manufacturing units are using electricity and there has been no obvious diversification of economic activities.

With regard to the impact of roads, some differences in the composition of economic activities between the linked and non - linked villages have occurred. The linked villages in the hills display fewer traditional activities and a greater number of modern activities as compared with the non - linked villages. No changes are marked in the agriculture of the villages. Comparing the hill situation of linked areas with that of the plains, the linked villages in the plains show increasing shares of their local products in trade and relatively higher prices for their products. No such change is evident in the hills. Roads have increased the mobility of hill people but this has generally served to increase movements for purchase of outside goods and services not related with growth in exports of the hills.

Observations from these two experiences indicate that limitations of infrastructure development in the hill areas are integrally related with the nature and structure of the hill economies. The fact that the production economy of the hills has been unable to develop even after infrastructure developments is probably a very significant factor, indicating the need for moving away from traditional agricultural activities. Despite the limited effects of infrastructure on the hill economy, people continue to accord it highest priority ; reasons for this might be more social than economic.

The discussions raised a number of questions about the interpretation of the impact of infrastructure development. It was argued that it is difficult to explain the increasing demand for roads and power supply in the hills only on the basis of social factors. There must be many important economic factors requiring more careful examination. The issue of the time factor was also raised, and it was indicated that some evaluations may be premature in view of the time required for growth in positive benefits from infrastructure development. The fact that ancillary investments have not followed infrastructure investments could also be responsible for limited production effects on the hill economy. Other points related to the reduction in drudgery due to infrastructure development and the need for understanding labour displacement effects of investments in roads, as well as their total employment effects. The fact that transport development has made a closed economy into an open one has had both positive and negative consequences and it may be of great value to study these changes carefully.

The issues of spatial linkages that characterise the hill and mountain districts of the Region and the function and development of small towns, were further topics of discussion. The oldest small towns tended to be located along



trade routes, or in areas with seats of government. Religious institutions, education, and health services also arose there, and thus provided a cluster of activities and services. In addition, recreation and economic activities of traditional crafts needed by the mountain economy have been developed in these towns.

The history of many small towns in Nepal indicates that they originally started as seats of local government and slowly have become mainly agricultural townships. Recently, with the development of infrastructure, new growth in town development has been evident in certain areas of the hills of Nepal. Migration to these towns is increasing and their service centre role is becoming important for rural areas. The settlement patterns of the Tibetan plateau and the mountain areas of Yunnan were briefly presented. Encouragement has been provided by government loans to start shops or trading posts, thus motivating migration to small towns.

Policies relating to small towns can promote the development of non-farm sectors of employment in a number of ways. First, policies and programmes can develop the provision of agricultural inputs, marketing institutions, and a cluster of basic health and educational services in small towns. Second, these towns may be supported by other activities such as hotels, tea shops, tourist lodges, trade, and recreation.

A brief overview of the Planned Urbanisation Workshop <sup>[1]</sup> and the pending Rural - Urban Linkages Programme in six valley areas was presented. The valley areas of Lhasa, Peshawar, Srinagar, Dun Valley, Kathmandu, and Thimphu were included in the discussions. The Workshop emphasised economic linkages, environmental considerations, and institutional structures.

### **Human Resource Development**

Development should not be seen merely in terms of maximising incomes, or of rapidly transforming the traditional economy. Emphasis must be placed on human resource development (HRD) as an end in itself, as well as a factor contributing to raising living standards. Thus, human resources should be developed through the enhancement of skills to improve access to income and employment opportunities, and also to provide opportunities to develop full manpower potential of the labour force.

It is worth noting that the success of economies such as those of Switzerland and Japan has been founded not on the exploitation of abundant natural resources but rather on the skills and talents of the population; human resources have been developed over an extended period. In Nepal, this process is still at an early stage; despite the achievement of increasing literacy five-fold, the national literacy level is still only 30 per cent.

---

1. Refer to ICIMOD Workshop report, *Towns in the Mountains*, for details.

In recent decades, national governments and other agencies have been active in a number of sectors concerned with the social well - being of the people in the hills, e.g., the provision of formal education, improvements in health care, and the installation of potable water supplies. Complementing these activities have been efforts to enhance appropriate skills, relating to specific development initiatives such as the construction of infrastructure, tourism, and trekking, as well as training in functional literacy and (particularly for women) nutrition and health education.

An example of a specific initiative in this sector is the programme in China concerned with marketing training in rural areas. This is aimed at assisting the poorer and less - educated farmers to benefit from recent changes in the organisation of the rural economy. But skill development programmes are not always successful. It has been found that the agricultural training provided to many ex-Gurkha servicemen in Nepal was often of little benefit when they returned to their villages.

Despite such efforts at upgrading skills, there remains a marked shortage of technical manpower in the hills. This is particularly evident in urban settlements, where rural migrants are compelled to work in unskilled jobs, while technical manpower for well - paid skilled and semi - skilled jobs is imported from the plains. An anomalous situation has arisen whereby those attending existing training programmes seek office jobs, leaving the demand for technical personnel unsatisfied.

While this is one aspect of the problem, another is that in many instances available skills have not been correctly utilised. Certain sections of the hill people traditionally supplying technical skills which have now been made redundant through socioeconomic processes are not finding alternative employment opportunities. The still larger problem, however, is the rapid growth of a labour force seeking employment outside conventional sectors. Imparting appropriate skills and providing gainful employment to this labour force will undoubtedly be the major challenge in the field of human resource development for the hill economies.

The development of hill areas cannot overlook the prevailing conditions of the economy and the environment. These create the need for special skills and capabilities that have yet to be carefully evaluated. In this context, the predominant involvement of women in low - skilled, low - paid but back - breaking jobs in the hills was identified as a major issue in the formulation of human resource development policies. The need for training programmes for women in a large number of activities, where productivity improvements are possible, have to be more clearly identified. There is also a need to train women for jobs which are not traditional roles defined by gender.



## Policies and Programmes

Overviews on policies and programmes related to off - farm employment were presented for Nepal, India, China, and Bangladesh. Policies of the countries in the Region generally indicate that off - land economic activities would not be able to absorb the majority of new entrants to the labour force, and hence various forms of intensification of agriculture, horticulture, livestock - rearing, afforestation, and soil and water conservation activities, are being advocated.

India for the first time, in its Seventh Plan, has included a chapter on Hill Area Development. The guiding principles are : to secure a basic life support system with judicious utilisation of natural resources ; infrastructure development ; and restoration of the ecology. In China, since 1978, the new responsibility system has resulted in the peasants' motivation to undertake new enterprises, many of which are off - land activities, with vigorous development of the rural economy. Nevertheless, the evidence of both permanent and seasonal migration away from the hills in all countries except Bangladesh signifies the people's verdict that better employment and income generating opportunities are available outside the hills and mountains.

In Nepal, the first six periodic plans focused on infrastructure construction and maintenance. By the end of the Fifth Plan, a policy of using labour - intensive techniques for construction was evolved. The policy for Hill Area Development in India also emphasises infrastructure development, while recognising the ecological dangers of such construction activities. The construction of large dams also may be dangerous and the benefits need to be carefully weighed against costs and the disrupting effects on the hill people. In the new five - year plan for the Chittagong Hill Tracts Board of Bangladesh, road construction connecting all three *Upa - Zilas* (administrative units below the district) and distributing electricity constitutes over 60 per cent of the budget. In the three Chinese mountain areas, the development of communication and transport was advocated. The state is responsible for trunk routes, and the local authorities for the feeder routes, with the help of individuals.

The policy of self - sufficiency in foodgrains in the hill and mountain regions has been criticised. In China, this has led to deforestation and only marginal increases with severe degradation of the ecology of the mountain areas. In Nepal, the policy of foodgrain self - sufficiency in hill and mountain districts has caused marginal land to be brought under the plough, without great increases in food production. India's policy advocates diversity of land use which is most ecologically suitable : horticulture, agriculture, and fisheries in Himachal ; soil conservation, forestry, and pasture in U. P. ; and poultry, sericulture, and tea in Darjeeling. In short, a general concern in current national policies of the Hindu Kush - Himalaya is the restoration of the ecological balance and caution with extending plough cultivation.

Special programmes directed toward poorer sections of the population have resulted in a wide variety of both land - based and off - land economic activities. In the Himalayan States and Union Territories of India, between 1980 and 1985, there was a shift away from the primary sector ( agriculture and animal husbandry ) to the secondary and tertiary sectors. Nepal's experience with the Small Farmers Development Programme, although still heavily involved in animal husbandry investment, reflects a shift toward off - land activities. The Bangladesh Grameen Bank activities now emphasise cottage industries. The potential of these special programmes of primarily small and short - term loans to absorb hill people in non - land based activities should be promoted. If policy about these special programmes is directed toward non - farm employment, rapid changes could be achieved.

The emphasis on skill formation and development of technical manpower discussed under human resource development is related to a variety of policy implications. In China, three of the four policies for mountain regions focus on skill formation : adult technical training in varied trades and businesses ; sending mountain people to more advanced areas to learn ; and organising cooperatives to send surplus labour seasonally or year - round for jobs elsewhere as a means of learning skills and accumulating funds. In Nepal, training programmes for vocational skills primarily meet demands for development programmes, but there are also programmes designed to support income - generating schemes for women. In India, one of the special programmes for self - employment has a training component. The voluntary movements like *Chipko* (meaning " to embrace ") emphasise training local people to be sensitised to ecological dangers. In principle, the countries of the Region have very important programmes of skill formation and have recognised the need for this in the mountain areas.



## Collaborative Research Priorities

---

One of the outcomes of the Workshop was identification of priority research issues in off - farm employment generation. To facilitate contribution by the participants, a tentative agenda of research was presented at the beginning of the Workshop. The premise was put forward that a better understanding of the issues and factors involved in generating off - farm employment necessitated that any action programme be preceded by careful evaluation and research work.

The Workshop succeeded in highlighting many critical areas of importance which require further investigation. The mountain areas have been experiencing significant structural changes. Population growth and distribution are undergoing major changes in the Region. There are indications of growing biotic pressures, resulting from a disequilibrium between demand and availability of natural resources. Because of the relatively strong interlinkages between different activities and the environment, it is important to understand the role of each variable in an overall equation of environmental conservation and development.

The issue of labour demand in mountain economies has not been explored. While at one extreme there is the problem of disaggregation beyond the conventional census categories, at the other extreme is the problem of conceptually and empirically understanding what is essentially a single integrated system so far as rural household activities such as producing, transporting, and marketing are concerned.

The development of towns and urban centres has been relatively limited in mountain areas due to their inaccessibility. This has constrained the potential for specialisation, marketing, and expansion of trading and exchange networks, perpetuating subsistence pocket economies and a highly dispersed system of settlement. Understanding the development of urban functions in hill towns and their effects on rural areas is an important development question. Other issues are related to effective public interventions for promoting mutually beneficial rural - urban linkages necessary for generating income and employment for the rapidly increasing hill population, likely to move into urban areas in increasing numbers in the future. From the viewpoint of the potential of public policy to enhance mountain household incomes, what are the key aspects of the trade, portering, and commercial finance networks of the Region? At what specific points can government intervention assist? Consideration may be given to transport, credit, and pricing policies.

Similarly, with respect to manufacturing, what are the key constraints to development of mountain manufacturing? ( Consideration might be given to : power supplies, skilled labour, transport and markets, etc.). How can the manufacturing industry be used to stimulate small - scale ancillaries, component subcontractors, etc.? What are the priority areas of research and what government policies are most relevant to stimulating industry in the mountains?

Certain areas of the Region have long been major beneficiaries from organised tourism, trekking, and mountaineering, as well as religious pilgrimages. Other areas are just beginning to embark on active policies to encourage tourism, and it is to be expected that in the future, many more will become tourist attractions. How can tourism be expanded, while minimising deleterious effects on rural areas and maximising local multiplier effects (in terms of stimulating local agriculture and horticulture to supply foods, beverages, handicrafts, textiles, and trade promotion)? What government policies are most relevant in achieving these aims? Are there important areas of research in assessing the impact of tourism on off - farm employment ? What environmental and cultural effects do tourism, trekking, mountaineering, and pilgrimages have ? Governments will undoubtedly make major investments to protect, manage, and develop environmental resources in these hills. How can these investments be made so that they do not become environmental projects alone but also important sources of employment and income ?

There are also important questions in the field of human resource development, particularly the scarcity of technical manpower in general and specifically in rural areas. With women comprising half of the active labour force of the hills with an equally significant contribution to off - farm activities, it is urgent to find effective mechanisms for increasing their productivity and reducing their drudgery.

Increasing demand for energy is an inevitable result of development. The hill areas are experiencing major supply bottlenecks in conventional sources of energy like firewood, and at the same time, inaccessibility and costs prohibit large - scale importation of external energy inputs. In the context of employment generation, what are the difficulties posed by energy constraints ?

Many of these issues and questions are interrelated. Prioritising the list of issues has not been easy due to differences in conditions, policies, and programmes in the Region. Thus, in identifying the key areas of focus, emphasis has been on selecting those issues interrelated with many areas and institutions, and the common links in different sectoral programmes that are not ordinarily examined by any one agency. Obviously no list, no matter how comprehensive, can incorporate all problems or reflect all priorities. The list of issues presented below attempts to incorporate some of those most frequently emphasised in the Workshop.

- **Trade and Marketing Strategies**, in the context of hill development, related to every major issue of off - farm activities and particularly

significant for the development of informal sector off - farm activities.

- **Rural - Urban Linkages : Role of Towns**, important for future concentration of development forces which would play a vital role in achieving rural development, and which is a presently neglected area in most programmes for integrated rural development projects.
- **Remote Area Development**, focusing on the role of accessibility improvements and inter - sectoral linkages between infrastructure development and other production activities in relatively inaccessible areas in the mountains.
- **Technical Manpower Development** for upgrading the quality of the labour force, particularly for the technical skills required in urban areas. There are undoubtedly large gaps even in rural areas, but this is a matter of priority in terms of the available opportunities.
- **Energy and Employment** for understanding the relations between energy and employment and the development of more comprehensive energy plans that have positive effects upon employment generation in the hills and also reduce the growing energy - related pressures of development on the forests in these mountains.
- **Environmental Rehabilitation Programmes and their Employment Potentials** as areas of increasing investment in these hills in the future, and planning of these programmes to address the problems of providing large - scale employment for the hill people.
- **Employment Effects of Tourism** as a sector with great potential for development, having important employment effects both in rural and urban areas, about which little is known in terms of how policies can enhance employment.
- **Women and Off - Farm Activities : Enhancements of Productivity** studies focusing on how programmes can be developed that can enhance their productivity, which activities should be selected, what type of supporting services are required, etc. ?
- **Long - Term Perspectives of Mountain Development**, in order to highlight the critical choices and policies necessary for integrated mountain development.

ICIMOD's contribution consists of developing better understanding of these important issues that span different institutions, areas, and regions. Although not directly involved in the formulation and the implementation of policies and programmes, through carefully planned collaborative exercises the Centre can highlight relevant experiences, and promote efforts for regional cooperation.

## **Annex 1.**

### **Workshop Programme**

---



## Annex 1. Workshop Programme

DAY ONE		
<b>Session 1</b>		
<b>WELCOME</b>	Dr. R. V. Singh, President Forest Research Institute & Colleges, Dehra Dun	<b>ON - FARM -- OFF - FARM LINKAGES : POLICY IMPLICATIONS</b>
		<b>Speaker</b> Dr. Ram P. Yadav
<b>OPENING</b>	Mr. T. N. Seshan Secretary Ministry of Environment and Forests	<b>Discussants</b> Dr. R. V. Singh Dr. S. Mukhopadhaya Lin Qinfa
		<b>FLOOR DISCUSSION</b>
<b>ICIMOD WORK PROGRAMME</b>		
	Dr. K. C. Rosser Director, ICIMOD	<b>Session 4</b>
<b>INTRODUCTION TO WORKSHOP AND VOTE OF THANKS</b>	Dr. Prodipto Roy Convenor Off - Farm Employment Programme, ICIMOD	<b>Chairman</b> Dr. P. Wickramasekara
		<b>THE INFORMAL SECTOR IN MOUNTAIN ECONOMICS : TRADING, TRANSPORT, AND MARKETING NETWORKS</b>
		<b>PANEL DISCUSSION</b>
		<b>Significance and Understanding of the Informal Sector in Mountain Economics</b> Dr. Nigel Harris
<b>Sessions 2 and 3</b>		<b>Trans - Himalayan Traders</b> Dr. Hikmat Bista
<b>Chairman</b> Dr. Bhupinder Singh		<b>Apple Marketing in Himachal Pradesh</b> Dr. Arun Sud
<b>TENTATIVE AGENDA FOR COMPARATIVE REGIONAL RESEARCH PRIORITIES : OFF - FARM EMPLOYMENT GENERATION</b>		<b>Women and Off - Farm Activities</b> Dr. Anita Dighe
<b>Speaker</b> Dr. Mahesh Banskota		<b>FLOOR DISCUSSION</b>

DAY TWO		
<b>Session 5</b> Chairman Dr. Zhang Xiaoshan  <b>INFRASTRUCTURE DEVELOPMENT AND EMPLOYMENT GENERATION IN MOUNTAIN ECONOMICS</b>  Speaker Dr. B. K. Joshi  Discussants Dr. Robert Yoder Dr. Tej Mahat Dr. Mahabub Hossain  FLOOR DISCUSSION		Major Conclusions of the Workshop on Urbanisation in the Hindu Kush - Himalaya Saroj Basnyet  FLOOR DISCUSSION
		DAY THREE
<b>Session 6</b> Chairman Dr. M. Hossain  <b>INDUSTRIAL DEVELOPMENT AND EMPLOYMENT GENERATION IN THE HILLS</b>  Speaker Mr. Ram-Raj Shrestha  Discussants Mr. Vinod Bhattarai Ms. Lan Jin Mr. Bhaskar Ghose  FLOOR DISCUSSION		<b>Session 8</b> Chairman Dr. Harvey Demaine  <b>SIGNIFICANCE OF HUMAN RESOURCE DEVELOPMENT IN EMPLOYMENT PROMOTION FOR MOUNTAIN AREAS</b>  Speaker Dr. Prodipto Roy  Discussants Dr. V. G. Bhatia Dr. B. N. Sahay Dr. Y. B. Karki
<b>Session 7</b> Chairman Dr. Nigel Harris  <b>ROLE OF SMALL TOWNS : RURAL - URBAN LINKAGES AND EMPLOYMENT IMPLICATIONS</b>  Small Towns in Nepal Mangal S. Manandhar  Spatial Linkages in the Hills Dr. Prodipto Roy  Rural - Urban Linkages in Yunnan Province Dr. Zhang Xiaoshan		<b>Session 9</b> Chairman Dr. V. G. Bhatia  <b>POLICY EXPERIENCES AND PRIORITIES REGARDING OFF - FARM EMPLOYMENT GENERATION IN HILL AREAS</b>  Discussants L. K. Devkota Dr. M. Hossain Dr. Liu Wenpu Dr. Bhupinder Singh
		<b>Session 10</b> Chairman Dr. Ram P. Yadav  <b>DISCUSSION ON COMPARATIVE REGIONAL RESEARCH PRIORITIES ON OFF - FARM EMPLOYMENT GENERATION</b>  <b>CLOSING OF THE WORKSHOP</b> Closing Comments Dr. R. V. Singh Vote of Thanks Dr. Prodipto Roy

## **Annex 2.**

### **Background Papers**

---

		Page
<b>BANGLADESH</b>		
Mahabub Hossain and Zaid Bakht	Off - Farm Employment in the Hindu Kush - Himalaya Region : A Country Paper for Bangladesh	25
<b>BHUTAN</b>		
Binayak Bhadra and Philippe Alirol	Off - Farm Employment Generation in Bhutan	25
<b>CHINA</b>		
Liu Wenpu	An Investigation of Migration in Mountain Areas of the Liupanshan Region of Ningxia Autonomous Region	26
He Naiwei and Zhang Yuhuan	Surveys on the Adjustment of the Rural Labour Force in the Mountain Areas of Sichuan	26
Lan Jin and Deng Yiming	An Initial Study of the Shift of Agricultural Labour Forces in the Tibetan Autonomous Region	27
Zhang Xiaoshan and Deng Yiming	On the Non - Agricultural Employment of Agricultural Labour Forces in the Mountain Areas of Yunnan Province	27
Lin Qinfa	An Investigation of Several Issues Relating to Mountain Development and Off - Farm Employment in Wenchuan County, Sichuan	27
Liu Wenpu and Zhang Baomin	Rural Economic Development and Shift of Labour Force in the Mountain Areas of Sichuan, Yunnan, and Tibet	28

## INDIA

Arun Sud	Off - Farm Employment Generation in Himachal Pradesh	28
Arun Sud	Marketing Apples in Himachal Pradesh	29
T. N. Dhar	Off - Farm Employment Generation in the Hill Region of Uttar Pradesh	29
B. K. Joshi	Infrastructure and Development in the Uttar Pradesh Hill Areas	30
B. N. Sahay	Employment through Special Rural Development Programmes in the Himalaya States during the Sixth Five - Year Plan (1980 - 85)	30
Tej Vir Singh and Jagdish Kaur	From Himalaya Pilgrimage to Tourism : Sacred Sites and Secular Seers	30
Bhaskar Ghose	Off - Farm Employment in Sikkim and the Darjeeling Hill Areas	31
Prodipto Roy	Human Resource Development	31

## NEPAL

P. Pradhan	Public Works and Employment in Nepal : A Review	32
Pitamber Sharma	Migration and Employment Generation in Nepal	32
R. R. Shrestha	Small - Scale Industries and Employment Generation in Nepal	33
Chandni Joshi	Women in Nepal and Off - Farm Employment	33
Binod Bhattarai	Micro Dimensions of Off - Farm Employment	34
Mahesh Banskota	Spatial Linkages and Off - Farm Employment Generation in the Hills : The Case of Nuwakot District in Nepal	34
M. S. Manandhar	Off - Farm Employment : The Role of Small Towns	35
Ram P. Yadav	On - Farm and Off - Farm Employment Linkages	36



## Annex 2.

### Summaries of Background Papers\*

---

#### OFF - FARM EMPLOYMENT IN THE HINDU KUSH - HIMALAYA REGION : A COUNTRY PAPER FOR BANGLADESH

Mahabub Hossain and Zaid Bakht

The population growth rate of the Hindu Kush - Himalaya Region in Bangladesh ( Chittagong Hill Tracts ) is more than double the national average. Immigration from surrounding districts is the primary cause. Although illiteracy is a constraint, about 51 per cent of the Hill Tracts' residents are economically active, compared to the national 40.5 per cent, mainly due to greater participation of women.

Total cropped acreage has remained constant in the Hills over the last three decades ( 0.26 acre per person ). Population pressure is causing environmental deterioration, forest encroachment and soil erosion. A 2.3 per cent annual rate of agricultural growth has been achieved largely through pineapple and banana cash crops.

About 43 per cent of the labour force is employed in off - farm occupations. The most impressive growth has been in non - crop agricultural activities, services and trade. Potential for expansion of off - farm employment, based on vast forests and their industrial raw materials, is encouraging.

The main constraint to development of off - farm sectors is lack of infrastructural facilities, particularly roads. In 1984, the government launched a Special Five - Year Plan, with priority on infrastructural development.

A significant proportion of tribal people ( 59 per cent of the Hill Tracts' population in 1981 ) regard roads and development with suspicion, thinking these provide employment mainly to outsiders during implementation, and subsequently help non - tribals occupy land and control trade and business. For effective implementation of development programmes, the government will have to win the trust of the local people. The necessary balance of directly productive activities ( with support services such as credit, skill training, investment for development of marketing and irrigation facilities, etc.) and infrastructure development is currently lacking in the development programme of the region.

#### OFF - FARM EMPLOYMENT GENERATION IN BHUTAN

Binayak Bhadra and Philippe Alirol

The economy of Bhutan is highly rural and subsistence agriculture oriented. Small and medium scale industries include primarily sawmills, food - processing plants, distilleries and cement factories. Other sources of off - farm employment are handloom weaving, paper making and traditional painting and sculpture. Traditional crafts have great potential for export and sales to tourists ; however, training and export promotion are needed. Social services and tourism have so far generated limited employment.

---

\* Not all authors have had the opportunity to comment on the summaries presented here . ICIMOD has tried to reflect as accurately as possible the major points raised by the authors.

Constraints to development of the industrial sector include : limited domestic markets, absence of trained manpower (about two - thirds of the industrial labour force is non - Bhutanese), and lack of adequate infrastructure. Most industries are dependent on expensive and unreliable grid electricity from India. By 1990, power from the Chukka Project in west Bhutan will ease this.

Although the government sought self - sustaining industrialisation through restrictions on foreign investment, it was realised that alternatives were needed by the end of the 70s. In the period 1980 - 82, thirty projects were approved by the National Commission for Development of Trade and Industries, for loans from the Bank of Bhutan. Provision of subsidised loans can further promote industrial investment.

Improved availability of labour to industry will depend on upgrading subsistence agriculture and labour productivity, and labour - saving technology for cottage industry development. Industries being promoted are mini - cement, calcium carbide, gypsum, and charcoal plants.

#### AN INVESTIGATION OF MIGRATION IN MOUNTAIN AREAS OF THE LIUPANSHAN REGION OF NINGXIA AUTONOMOUS REGION

Liu Wenpu

A century ago, a Moslem community immigrated to Liupanshan mountain area. Rapid population growth caused unemployment. Resources are inadequate, and the area remains impoverished. The government recently adopted measures to improve living conditions ; the most effective has been organisation of farmers for emigration by support through technology, loans, investment opportunities, and commodities.

Emigration improves standards of living both for those who emigrate and those who remain. Further, emigration reduces the burden on the state of sending relief funds and grain. Beginning in 1983, poor farmers from three mountain villages were resettled in the plains. Over one hundred cadres and technicians were sent for surveys and development planning. Irrigation, cultivation, and building was undertaken.

Effective measures and policies promoting emigration by the Autonomous Government of Ningxia have included : support from the state to promote ultimate self - reliance the principle of voluntary movement, tax and water payment exemptions, free coal fixed allowances for clearing land, long - term settlement planning, and training programmes by technicians. With opportunities such as these, emigrants may secure long - term stability, rapidly improve their living conditions and exploit the resources of a new area with beneficial results.

#### SURVEYS ON THE ADJUSTMENT OF THE RURAL LABOUR FORCE IN THE MOUNTAIN AREAS OF SICHUAN PROVINCE

He Naiwei and Zhang Yuhuan

While the proportion of rural population in the Sichuan Mountains has decreased since the middle of this century, the agricultural labour force has increased by over ten million. Prior to 1978, almost all of the rural labour force was cultivating land. While a shift toward industry, house construction, transportation, commerce, and other services has occurred in recent years, 93 per cent were still in agriculture in 1984.

The rural labour force has an unbalanced distribution because of geographical conditions, distribution of resources, and traditional customs. The majority of the surplus labour force are young and middle - aged. Lack of education remains a constraint for the employment structure.

Rural economic reforms are being introduced in Sichuan, mainly through diversified systems of family contracts, to change from a mono - cultural to a multiple rural economy. Adjustment of the productive structure, which has just started, is leading to redistribution of the labour force.

Means by which to accelerate diversification of the rural labour force include : moving to a non - agricultural economic structure ; expansion of rural industry through labour intensive, small - scale enterprises within an integrated production system ; moving to rural commerce, services, and the tertiary sector ; building up country fairs and small towns ; and exporting labour.

## AN INITIAL STUDY OF THE SHIFT OF AGRICULTURAL LABOUR FORCES IN THE TIBETAN AUTONOMOUS REGION

Lan Jin and Deng Yiming

The structure of the labour force has been changing as a result of recent state policies. The rural labour force has been shifting to the non - agricultural, animal husbandry, and handicraft sectors. This occurred first in areas between cities and countryside, and areas bordering Nepal.

The transformation rate of the agricultural labour force is very slow and in only a few sectors. The rural labour force is increasing faster than the number of those changing. However, the main factor hindering the shift of the labour force is the poor quality of rural labourers.

Tibet has a wealth of resources for agriculture, forestry, animal husbandry, and fishery, but lacks the strength to develop them. The key points for development are shifting the surplus agricultural labour force to forestry and animal husbandry, and processing of products.

Given the large capital requirements and technology necessary to make such shifts, and given the unskilled labourers, poor production, and economic weaknesses, the following measures are needed : flexible policies giving preferential treatment to family - run, jointly - run and individually - run factories and enterprises ; state input of capital, technology and qualified personnel ; and major efforts to develop education and enhance the quality of the rural labour force.

## ON THE NON - AGRICULTURAL EMPLOYMENT OF AGRICULTURAL LABOUR FORCES IN THE MOUNTAIN AREAS OF YUNNAN PROVINCE

Zhang Xiaoshan and Deng Yiming

The terrain of Yunnan Province, 90 per cent of which is hilly and mountainous, contributes to the backward economy resulting in surplus labour force 78 per cent higher than the national average. The speed of farmers shifting to non - farm work reflects the slow rural economy.

Three types of shift should take place : cereal crop to cash crop planting ; cereal crop to forestry, animal husbandry, and fishery management ; and agricultural sector to rural industry, commerce, transportation, construction and services. Given the capital, technological and socio - economic constraints facing Yunnan, the first two types have greater potential, especially in light of the wealth of forest, grassland, and water resources.

To speed the shift of rural labourers, constraints should be relaxed and assistance made preferential, help should be given to key specialised households and collectives to develop resources, all areas suited for individual management should be contracted long - term to the peasants, and capital and technology imported. Also, schools should be established, teachers' status raised, and middle and high school students trained for non - agricultural work.

## AN INVESTIGATION OF SEVERAL ISSUES RELATING TO MOUNTAIN DEVELOPMENT AND OFF - FARM EMPLOYMENT IN WENCHUAN COUNTY, SICHUAN PROVINCE

Lin Qinfa

Wenchuan County has been the focus of much mountain economic development work. While grain production is the major agricultural activity, a diversified economy also exists. Electricity is available throughout the county and fifteen industrial and mineral enterprises are in operation. Labour is being gradually transferred from agricultural production to other sectors, both in direct transfer of surplus labour to non - agricultural activities, and inter - county migration of surplus labour.

Favourable conditions encouraging Wenchuan's development have included geographical location along a communication route, rich resources, focus of hydropower generation, industry, and sufficient farm labour force. However, constraints such as financial instability, uneven economic growth, lack of technology, and low educational levels still exist.

In recent years, rural township and town - run enterprises have been developed rapidly in Wenchuan. Over 13 per cent of the total



agricultural labour force, which had been surplus, became employed. Expansion of the mining industry has played a key role. Farmers' living standards have improved considerably.

Achievements have been brought about through : no relaxation in grain production while ensuring development of diversified economy, developing rural township and town - run industries for promotion of mountain commercial production, invigorating tertiary industry, developing scientific technology, and training personnel. From a long - term perspective, development of forestry production in line with local conditions should be practised.

The key to speeding mountain development is the establishment of a rational economic structure for overall development of agriculture, forestry, animal husbandry, secondary occupations, industry, and fishery.

## **RURAL ECONOMIC DEVELOPMENT AND SHIFT OF LABOUR FORCE IN THE MOUNTAIN AREAS OF SICHUAN, YUNNAN, AND TIBET**

Liu Wenpu and Zhang Baomin

Development of Sichuan, Yunnan, and Tibet has been minimal due to irrational requirements regarding grain self - sufficiency, over - emphasis on collective production, and rigid policies preventing local inhabitants from direct forest management. Remedial policy measures have been introduced, including implementation of the family contract responsibility system, linking output with remuneration. Since 1980, funds for economic support in these underdeveloped mountain regions have been used in building highways, reservoirs and water and irrigation facilities. Low incomes plague the area largely because of limited employment opportunities ; incomes from agriculture make up 90 per cent of total earnings.

Given the restraints regarding funds, technology, qualified personnel, and infrastructure, it is recommended that agricultural development be encouraged, which will in turn promote rural industry. Specific considerations for mountain area development include the need for more open and flexible policies, adoption of measures to raise the

quality of the rural labour force, implementation of policies attaching equal importance to agricultural and non - agricultural undertakings, and development of transport and communications facilities. Economic development and shift of agricultural labour force into non - agricultural undertakings are two sides of the same coin.

## **OFF - FARM EMPLOYMENT GENERATION IN HIMACHAL PRADESH**

Arun Sud

Himachal Pradesh is one of the least industrialised states in the Indian Union. Uncertain political conditions in the past led to an inadequate flow of development resources. In recent years, the state administration has taken initiatives to remedy this, including : small industrial estates, an equity participation scheme, an entrepreneurial development scheme, and a nuclear complexes scheme with incentives and concessions. The village and cottage industries sector has also been revitalised.

The State's economy is primarily land based, and it remains one of the least urbanised states of India (8.2 per cent). Lack of raw materials and adequate energy resources, highly underdeveloped infrastructure, paucity of capital and technical skills, illiteracy, poor health, and limited transportation facilities pose severe constraints to development. The absence of secondary and tertiary sectors causes outmigration, primarily of males.

Most people in the State are engaged in agro - based and pastoral occupations. Unless the horticultural potential of the state is exploited to the fullest possible extent, solutions to economic problems will remain elusive. Concerted efforts are being made by the government for development of fruit plantations in the lower and mid - hills. While inadequacy of infrastructure facilities has proved to be a bottleneck, promising results have been achieved. Sericulture, livestock, dairy - farming, and sheep breeding have been shown to have high potential.

The highest concentration of non - agricultural enterprises is in manufacturing and repairing, followed by trade, hotels, and restaurants.



Bicycle and rickshaw repair trade is found to be the highest value added enterprise.

Himachal Pradesh boasts some of India's best tourist locations with a rapidly growing tourism industry. Though nationalisation of forests has been undertaken for environmental protection, dams and mining are executed carelessly. Important ongoing schemes of the Tourism Development Corporation include : skiing courses, hotel management training, and winter facilities construction. The opening of an aerodrome near Simla by the end of 1986 will help achieve the expected major breakthrough in tourism.

## MARKETING APPLES IN HIMACHAL PRADESH

Arun Sud

Himachal Pradesh has become the " fruit bowl of India " due to both dynamic and pragmatic policy, and willing participation of farmers. Full exploitation of horticultural potential is recognised as the key to economic development. In 1982, 89 per cent of total fruit production in the state was apples. After an initial upsurge in the late fifties, stagnation set in. Marketing facilities failed to keep pace with the rapid increase in production of apples. A five - year project was initiated, through the Horticulture Produce Marketing and Processing Corporation, to create a network of packing houses, collection centres, juice concentration plants, road construction, cableways, and technical assistance and training. However, extension remained a missing link.

Other problems identified have been inadequate infrastructure facilities and inaccessibility of scientific inputs to small and marginal farmers. Though integrated development was accepted in principle by Himachal Pradesh policy makers long ago, a hiatus persists. Efforts launched by the state administration to benefit the orchardists need to be streamlined. As a first step towards improving the marketing infrastructure, a comprehensive and critical stocktaking of strengths and weaknesses is necessary. Second, possibilities for cooperatives of small and marginal farmers and marketing

arrangements with vegetables and fruit growers' associations need to be explored. Finally, continuing positive policy support is necessary.

## OFF - FARM EMPLOYMENT GENERATION IN THE HILL REGION OF UTTAR PRADESH

T. N. Dhar

In the Himalaya, cropland is scarce and population growth is high. While under - and unemployment encourage outmigration, shortages of medium and highly skilled labour induce immigration.

Traditional off - farm activities such as cottage industries, portage, and lumbering have declined due to changes of transportation systems, technological substitutions, and environmental constraints.

Land is the major basis of status and identification in the U. P. Himalaya. Agriculture provides sustenance to nearly 70 per cent of workers, but 73 per cent of holdings are small or marginal. Productivity is low, and the possibilities for increase in direct farm employment are limited. The resource depletion rate is high. Land use needs to be re - ordered to suit land capability.

The core strategy for development of the U. P. Himalaya should be a combination of protection, regeneration, and production. Planning priorities should include adopting a dynamic family planning programme and maximising people's participation. Social infrastructure is essential for economic and physical infrastructure to be effective. Vocational and adult education are needed. To enable women to be agents of change for development, they need organisation and improvements are required in fuel, fodder, and water availability.

The possibilities for agriculture - related, off - farm employment are considerable, but maximum employment potential lies in forestry, soil conservation, and pasture development. Horticulture, floriculture, apiculture, and sericulture are other options, along with improvement of animal husbandry practices and related industries.

The main constraints facing industries are the environmental cost considerations. Focus must be

force, planning policy supported by research, skill formation policies, environmental security policies, preferential policies to raise productivity and income, liberal incentives for non - farm areas, an integrated watershed approach, and people's participation policies. As a part of a national strategy of increasing employment, primarily non - farm in rural areas, special programmes have been initiated and planned for the next five years but less restrictive norms for hill areas need to be developed.

## INFRASTRUCTURE AND DEVELOPMENT IN THE U. P. HILL AREAS

B. K. Joshi

Hill areas tend to have enclave economies which contribute to capital formation elsewhere. Hardly any investment or employment opportunities exist outside agriculture. Development of infrastructure only strengthens the economic enclave situation. Infrastructure may provide tangible benefits to some people of hill areas, but not economically productive consequences.

Focusing on road transport and power in the hill areas of Uttar Pradesh, the role of infrastructure development is marginal and in some cases detrimental to the economy, and also environmentally degrading. One case study found the impact of road transport is visible and direct on the consumption economy and indirect on the production economy in hills areas. Another case study showed electricity use in the hills is largely confined to domestic lighting, and scope for productive use of electricity is limited by low levels of development and limited markets : the impact of electrification on the economic structure, income, and employment is minimal. If infrastructure is to play a catalytic role in hill area development, the character of the economy must be altered. Subsistence agriculture must be replaced with surplus producing agriculture through an integrated approach, with high value crops and provision of credits and inputs, along with development of marketing and transport facilities and supply of foodgrains. Once surplus has been generated in agriculture, infrastructure will begin to play a

useful role for development.

## EMPLOYMENT THROUGH SPECIAL RURAL DEVELOPMENT PROGRAMMES IN THE HIMALAYA STATES DURING THE SIXTH FIVE - YEAR PLAN ( 1980 - 85 )

B. N. Sahay

In 1980, over half of the rural population was still below the poverty line in India. Thus, the major objectives of the Sixth Five Year - Plan included strengthening the socio - economic infrastructure of development in the rural areas, alleviating rural poverty, and reducing regional disparities. Types of special rural employment programmes included both self - employment and wage employment. Integrated Rural Development Programmes and Training of Rural Youth for Self - Employment were included in the former, and the Rural Landless Employment Guarantee Programme was under the latter.

In the Himalaya States and Union Territories, greater priority needed to be placed on creation of infrastructure upon which the process of socio - economic transformation takes places. Areas for improvement included : a sound administrative structure and personnel policy, monitoring and evaluation systems, identification and involvement of various rural institutions, and a good communication strategy for education of the rural people regarding the programmes. Positive steps have been initiated in the Seventh Plan.

## FROM HIMALAYA PILGRIMAGE TO TOURISM - SACRED SITES AND SECULAR SEERS

Tej Vir Singh and Jagdish Kaur

Himalaya pilgrimages have traditionally been a form of holistic tourism, enriching host and guest communities, promoting the regional economy, and respecting the environment. Garhwal, with the sources of the Ganga and Yamuna, has particularly been attractive in the late 19th century : over half of the revenue of British Garhwal came from

respecting the environment. Garhwal, with the sources of the Ganga and Yamuna, has particularly been attractive in the late 19th century : over half of the revenue of British Garhwal came from seasonal pilgrimages.

After independence, the area suffered from the struggle toward modernisation. Ad hoc planning of roads, impulsive resource use and inadequate infrastructure had negative impacts. Planners in Garhwal face both a challenge and opportunity in promoting new tourism and preserving the timeless pilgrimage tradition. Only research - based planned development can produce positive results. Urgent steps to be taken include : appointment of a multi - disciplinary task force on tourism for the Garhwal Region, a definite tourism policy for Himalaya tourism development, zoning of the potential recreation areas, and segregation of pilgrim zones.

#### OFF - FARM EMPLOYMENT IN SIKKIM AND THE DARJEELING HILL AREAS

Bhaskar Ghose

Sikkim has experienced more rapid urban population growth than the Darjeeling Hill Areas, reflecting economic activity in off - farm enterprises. In the Darjeeling Hill Areas there is surplus agricultural labour, in Sikkim the problem is one of keeping the workers on the farm. The development of off - farm employment is a result of state development implementation in Sikkim.

The Darjeeling Hill Areas have greater population pressure than Sikkim, but a lower percentage of agricultural workers, mainly because almost 30 per cent are employed in tea gardens. Additional employment is not promising in the tea gardens. Land not presently cultivated is under the Forest Department. The establishment of tea gardens in Sikkim would be possible depending on land leases by the state. From an environmental perspective, areas under cultivation must be limited and forest cover expanded. While animal husbandry is important and has considerable growth potential in Sikkim and Darjeeling, provision of fodder involving removal of vegetative cover must be restricted.

Sikkim's industrial activities are just beginning, but small centres have existed traditionally in Darjeeling. These are declining due to lack of transgenerational transfer of skills, absence of ready markets, and high cost of production. Rapid growth is occurring among contemporary small industries such as noodle making, watch repairing, and wool knitting, though these do not appear to be attracting the rural unemployed. Tourism is one of the most promising sectors for employment generation. While Darjeeling can hardly sustain existing traffic, Sikkim and other centres deserve promotion.

In the Darjeeling Hill Areas, the need for off - farm employment generation is urgent. Small rural industries to ease pressure on land, such as poultry farming, milk production, and high - value, low - volume crops like sericulture, need to be developed.

The major obstacle to the development of many new areas of employment is the lack of roads and marketing facilities. An effective organisation to market produce will transform the economic character of rural regions. A catalytic agent in employment generation will be the Integrated Rural Development Programmes and other beneficiary - oriented programmes now being undertaken during the Seventh Plan period.

#### HUMAN RESOURCE DEVELOPMENT

Prodipto Roy

The concept of human resource development used here is summarised as " calibrated skill enhancement for maximising income and employment of the hill and mountain people ". Introduction of formal education, health care and potable drinking water systems has conventionally signified human resource development in the Hindu Kush - Himalaya over the past fifty years.

During the last decade, national governments and international agencies have emphasised human resource development. The particular areas of focus have been literacy, nutrition and health education for women, infrastructure construction, regeneration of fuelwood and other renewable energy sources, hill farming, forestry and livestock

rearing, tourism, trekking, and religious pilgrimages. Traditional skills are being traded for new skills in all countries of the Region. Skill upgrading needs to be carefully tailored to meet employment market needs, and specifically linked to sectoral development programmes. While national priorities and methods differ with area and ethnicity, regional cooperation may lead to a collaborative methodology for research and training programmes.

## PUBLIC WORKS AND EMPLOYMENT IN NEPAL: A REVIEW

Prachanda Pradhan

In Nepal, infrastructure investments have become the most important production sector after agriculture, and the largest contributor to wage employment. In view of the growing labour force, poor performance of the Nepalese economy, and environmental degradation, rapid employment expansion is called for. Focus on employment generation in the nation's five - year plans has not been translated into effective programmes. Planning of investment alone is insufficient ; coordinated and integrated efforts from other sectors are needed if employment maximising objectives are to be achieved.

Public works in Nepal receive 30 - 40 per cent of development expenditures in the form of investments in roads, irrigation, power projects, and other construction activities. Some of these projects have benefitted the rural areas and particularly the poorer groups through the creation of employment opportunities. Apart from these government - initiated infrastructure development projects, local public works activities could be an important source of employment if the necessary support is provided.

Presently, there is a great outflow of resources from the public works project areas and the country because of decisions favouring certain types of technology and management practices. Wherever projects have depended heavily on imports and large - scale contracting practices, payments to local factors of production have been minimal and outflow of resources has been high. Not all of this

can be avoided, but there is adequate scope for implementing decisions that favour increasing payments to local factors of production, particularly labour. It is also important to emphasise the need for increasing economic diversification.

Employment generation through public works cannot be an end in itself, though public works are critical stop gap measures. Employment generation should serve as a basis for economic and social welfare programmes, using infrastructure investments for both short and long - term goals.

## MIGRATION AND EMPLOYMENT GENERATION IN NEPAL

Pitamber Sharma

Rapid increases in population, gradual decrease in the scope and magnitude of emigration, and deterioration of the hill - mountain environment as a result of population pressure, have in the last three decades exacerbated migratory flow from the highlands to the lowlands. Subsistence and gainful employment have remained at the heart of the migration issue, upon which the entire question of hill - mountain development is based.

All indications are that highland to lowland migration will continue for the foreseeable future, with seasonal and semi - permanent migration being replaced by permanent migration. Emigration is likely to decrease. An increasing proportion of rural migrants will make market centres, small towns, and urban centres their destination, particularly in the southern plains. Urban investment policies will therefore play a crucial role in orienting migration, and off - farm employment generation programmes have promising prospects in these areas.

Off - farm employment prospects in the hill - mountain region have to be identified by linkages. The resource base at present does not look favourable. Increasing growth of secondary and tertiary services in the south enhances prospects there, with skilled immigrants having advantages over the native population. Off - farm employment in the hill - mountain region, to be self - sustaining,



has to provide the basis for economic interaction between the hills / mountains and southern region.

Creation of off - farm employment to stabilise migration must be seen in terms of access to, control over, and ability to manipulate, resources. Furthermore, migration and off - farm employment must be understood in terms of ecological stability, and socio - cultural context.

## SMALL - SCALE INDUSTRIES AND EMPLOYMENT GENERATION IN NEPAL

R. R. Shrestha

Off - farm activities, particularly manufacturing, form the second most important source of employment and income in Nepal. A number of studies suggest that efficient substitution of labour for capital is possible in a broad spectrum of manufacturing activities. Small - scale enterprises are generally more labour intensive and generate more direct and indirect jobs per unit of capital invested, as reflected in a lower fixed investment - job ratio. Their development is also a viable export promotion strategy.

National development plans have accorded high priority to the development of cottage and small industries (CSIs). The Industrial Enterprises Act of 1982 offered a number of incentives to this sector. The CSI Project designed to develop and promote cottage and small - scale industries has provided gainful employment, supplemented rural earnings, and enhanced loan and recovery position. The Intensive Banking Programme is gaining momentum and has played a crucial role in developing CSIs.

Credit for CSIs needs to be effectively coordinated with technical assistance, and the design for delivery systems should vary to meet the diversity of the CSIs'. Organisational alternatives for technical and marketing components are the start to effective assistance for CSIs. Lending criteria needs streamlining in matters of security, working capital finance, and procedures need to be simplified. The feasibility of rural industrial estates needs exploring and entrepreneurial development programmes to be vigorously launched for developing CSIs in the country.

## WOMEN IN NEPAL AND OFF - FARM EMPLOYMENT

Chandni Joshi

Women are major contributors and producers in the Nepalese rural subsistence economy : no development efforts can be meaningful without their participation. Average contribution to household income is 50 per cent by women, 44 per cent by men, and 6 per cent by children. Women also play a substantial role in innovative and daily decision making.

Women of Nepal, particularly the landless and marginal farmers, have conventional experience and future potential for employment in food processing, soap making, silk production, sericulture, jute weaving, herb / ginger / vegetable drying, paper and pickle making, raw wool processing, forestry / nursery cultivation, portering, construction, inn management, bamboo and cane work, and other cottage industries.

Off - farm roles of women can be classified as urban or rural. The predominant urban work is domestic help, performed mostly by rural women. During the last decade, other urban opportunities have been provided by the tourism sector, garment factories, and police force. Loan activities have linked women with banking institutions and women development officers have been sought.

Women's roles in rural areas have been affected by migration of men to urban centres for employment. Women left behind often function as household heads, assuming tasks previously done by men. Data is lacking regarding female migration.

The main factors prohibiting women from seeking off - farm employment are household drudgery and child care responsibilities. Areas for improvement are : time and labour saving devices, basic service education, appropriate technology, availability of credit, management skill training, stable markets, appropriate employment policies, flexible employment schemes, equal pay, recognition of supportive customary laws, diversified programming focused on women, and recognition of women's economic contribution.

Since 1975, institutions generating off - farm employment for women have increased in both governmental and non - governmental sectors. The

new trend of women's programmes aims to help women become self-reliant. A distinct focus on the problems of women was first made in the national Sixth Plan. A "National Plan of Action for Women's Development" was produced by the Women's Service Coordination Committee, highlighting the creation of atmospheres and infrastructures conducive to employment of women. The Seventh National Plan includes policies placing emphasis on education, child care, training and facilities for women.

An integrated and active participatory approach is required to promote national development, women's individual and collective self-reliance, and equity in power relations at local, national, and international levels. Recommendations include : more emphasis on clarity of aims and objectives, a regular review of the current status of women, social welfare measures relating to child bearing and child rearing, provision of creches and the allocation of specific responsibilities to appropriate national institutions, preparation of concrete action plans which should include both short- and long-term strategies in the area of labour opportunities, incentives, training, and women's representation at the management level.

## MICRO DIMENSIONS OF OFF - FARM EMPLOYMENT

Binod Bhattarai

Nepalese agriculture, characterised by limited land, increasing population growth, scarce capital resources, slow technological changes, and declining production, presents a bleak picture for the expanding labour force. Rapid expansion of the off-farm sector in rural areas is called for.

While data regarding dependency of rural farm households on off-farm employment is scarce, two main factors influence participation : income earning opportunities and availability of production assets. Agriculture seasonality, oscillation in wage rates, foodgrain prices, schooling level, age, proximity to off-farm work site, and number of dependents, are all considerations. For a land holding household member, size of farm and labour

days are further influencing factors. In a study conducted by the author, the highly significant variables were off-farm wage rate, farm income, distance from work site, and number of working adults in the household. Substitution elasticity suggests women have more domestic or household and farm alternatives than men.

An important feature of Nepal's rural economy is the low return to the landholder from the off-farm sector compared to the farm sector. Studies indicate that greater inequality in farm incomes exist in the hills than the Terai and that the off-farm incomes are much more equitably distributed in the hills. Though off-farm income is distributed more equally than farm income, returns are relatively lower ; this may only indicate the low levels of productivity and rudimentary skill levels currently employed. Increasing specialisation may affect this issue.

Generally speaking, the rich work less and the poor work more : total days worked by households and wives decrease as farm size increases. While underemployment is evident, the high difference in off-farm employment between landholders and landless does not support the hypothesis of consistent surplus labour. Market prices seem to be a determining factor in time allocation for off-farm employment. Reorganisation in the farm sector will also induce reallocation of hours worked in the off-farm sectors.

## SPATIAL LINKAGES AND OFF - FARM EMPLOYMENT GENERATION IN THE HILLS : THE CASE OF NUWAKOT DISTRICT IN NEPAL

Mahesh Banskota

Focusing on spatial linkages, which include demographic, economic, social, and political linkages, can enhance understanding of off-farm employment generation particularly in the area of rural-urban interactions. Studies of Nuwakot district in the middle hills reflect the powerful "push" factors at work, namely deteriorating hill economy and environment. Despite implementation of a hydroelectric scheme, road construction project, and integrated rural development programme in the area, less than half of total job

seekers, which constitute roughly half of the total labour force, succeed in finding employment. With increasing linkages to urban area ( in education, health, inputs, and jobs ) and decreasing opportunities for agricultural resettlement, rural to urban movements are likely to increase substantially.

Institutions and provision of services are currently highly concentrated in selected lowlying areas with practically nothing in the upper altitudes and smaller settlements. Service centres have become key distribution points for agricultural loans, inputs, and extension, indicating they can now be developed as marketing centres. While use of service centres marks an important beginning for a system of decentralised services and balanced spatial development, they must be developed cautiously, with policies that strengthen the forces for homogenisation of functions between rural and urban areas. In Nuwakot, this means promotion of newer markets with better access, and development of these markets as centres for seasonal and non - agricultural employment. To mobilise local investment resources, it is necessary for those controlling land to invest in development of industrial activities. This requires changes in fiscal and other policies.

The need for more remunerative employment is clear. Employment thrust should be in intensification of agricultural operations using improved seeds and multiple cropping of lowlying areas ; infrastructure development, particularly roads and irrigation schemes to support agricultural development ; development of agricultural processing activities ; and support to light consumer goods industries.

The overall implications for off - farm employment generation are that current spatial development forces are likely to concentrate on the location of off - farm activities along the accessible river valley belts. The extent to which other off - farm activities can develop will be determined by the pace of sustained improvements in agricultural productivity. Off - farm activities will have to be generated in those areas supporting the development of lowland agriculture simply because this will be the major source of demand for non - agricultural goods and services. The demand structure of the land - owning households

controlling lowland agriculture and accessible pockets becomes a major guide - post for the promotion of off - farm activities. The spatial structure and endowments have reinforced this position. Other alternatives are unlikely to be able to counter this strong lowland determinism in spatial development of hill areas and for a long time to come, poorer people in upper altitudes will either have to move to these lowland valley areas or migrate to more distant centres.

#### OFF - FARM EMPLOYMENT : THE ROLE OF SMALL TOWNS

Mangal S. Manandhar

A closely linked hierarchy of urban centres is essential for economic development. In Nepal, where towns are few and far between, the problems of depopulation of the hills and deterioration of mountain ecosystems should be addressed through planned intervention for urbanisation and off - farm employment creation. The Decentralisation Act (1982 - 83) is a step in this direction.

Nepal's towns were initially non - agricultural, but have become increasingly less so. Most hill towns are declining centres of administration, exhibiting few of the positive rural - urban links required for a healthy economy. With the gradual integration of the hills into the Indian market, towns have developed at the break - of - bulk points in southern Nepal.

Strategy for small town development should stress indigenous development, strengthening of rural - urban links, and giving equal attention to social and industrial infrastructure, in order to stem migratory flow, invigorate hill economies, and generate urban advantages without the problems of larger towns.

Town development policies and projects to date have lacked sound criteria. Spatial perspectives and horizontal / vertical linkages have been largely ignored in Integrated Rural Development Projects and the service centres outlined in the Decentralisation Act. Not only is there no national spatial framework for urbanisation and job creation, but the incentives essential for rapid development of small town are lacking. In addition

to a definition of " small town ", identification of centres, their hierarchy, resource bases and potential incentives for promoting small towns need to be carried out.

## ON - FARM AND OFF - FARM EMPLOYMENT LINKAGES

Ram P. Yadav

The economic and occupational structure and the continuation of rapid growth in population and labour force clearly indicate that the countries of the Hindu Kush - Himalaya Region, and mountain regions in particular, will remain predominantly agricultural and rural into the twenty - first century. The labour classes can participate actively in development only through employment - oriented growth : the primary emphasis of development should be to raise the opportunity cost of labourers. Appropriate patterns of development must simultaneously generate (1) self - sustaining cumulative economic growth, (2) expanding productive employment opportunities, and (3) slowed growth of the population and labour force.

Undoubtedly, the long - run comparative advantage of the mountain region lies in highly labour - intensive activities such as the export of processed fruits, vegetables, and dairy products. However, implementation would require massive investment in transport, processing, and marketing networks. Agricultural development can substantially contribute in off - farm employment generation. Foodgrain production can relieve wage goods constraints to employment growth, and agricultural growth can lead to substantial indirect growth in non - farm incomes and employment through increased demand for consumer goods services. Furthermore, agriculture utilises industrial outputs, has strong production linkages with rural non - farm activities, and provides raw materials for agro - forestry and livestock - based industries.



## Annex 3.

### Participants

---

#### Bangladesh

Dr. Mahabub Hossain  
International Food Policy  
Research Institute  
1776 Massachusetts, Ave. N.W.  
Washington, D.C. 20036, U.S.A.

Dr. V. G. Bhatia  
Advisor  
Planning Commission  
New Delhi 110001

#### China

Institute of Rural Development  
Chinese Academy of Social Sciences  
Beijing

Dr. Liu Wenpu, Deputy Director  
Prof. He Naiwei, Head of Forestry  
Ms. Lan Jin, Assistant Research Fellow  
Prof. Zhang Baomin, Head, Scientific Research  
Mr. Zhang Xiaoshan, Assistant Research Fellow

Dr. B. N. Sahay  
Joint Advisor  
Planning Commission  
New Delhi - 110001

Mr. Bhaskar Ghose  
Commissioner  
Jalpaiguri Division  
Jalpaiguri, West Bengal

Prof. Swapna Mukhopadhyay  
Institute of Economic Growth  
Delhi University  
Delhi 110006

#### India

Mr. T. N. Seshan  
ICIMOD Board Member, and Secretary  
Ministry of Environment and Forests  
New Delhi, 110011

Prof. B. K. Joshi  
Giri Institute of Development Studies  
B-42 Nirala Nagar  
Lucknow - 226607

Dr. R. V. Singh  
President  
Forest Research Institute and Colleges  
9 - New Forest, Dehra Dun 248006

Dr. T. N. Dhar  
Chairman  
Society for Himalayan Environmental  
Rehabilitation and People's Action  
27 B / 5, Lajpatrai Marg  
Lucknow 226001

Dr. Bhupinder Singh  
Additional Secretary  
Planning Commission, New Delhi - 110001

Dr. P. N. Gupta  
Retd. Chief Conservator of Forests  
146 - Vasant Vihar II  
Dehra Dun

Mr. G. Subba Rao  
Joint Secretary  
Ministry of Environment and Forests  
New Delhi 110011

Dr. Anita Dighe ,  
Joint Director  
Council for Social Development  
53 - Lodi Estate, New Delhi - 110003

Dr. Arun Sud  
Senior Research Officer  
Council for Advancement  
of Rural Technology  
Guru Nanak Foundation Bldg  
New Delhi 110067

## Nepal

Mr. Vinod Bhattarai  
Agricultural Development Bank  
Ramshah Path, Kathmandu

Mr. Lav Kumar Devkota  
Planning Commission  
His Majesty's Government of Nepal  
Singha Durbar, Kathmandu

Dr. Y. B. Karki  
Consultant  
National Commission on Population  
Singha Durbar, Kathmandu

Dr. Mangal S. Manandhar  
Professor  
Department of Geography,  
Tribhuvan University  
Kirtipur, Kathmandu

Mr. Ram Raj Shrestha  
Project Manager  
Nepal Rastra Bank  
CSI Project Office  
Maharajganj, Kathmandu

## International

Dr. Harvey Demaine  
Asian Institute of Technology  
P.O. Box 1754  
Bangkok, Thailand

Dr. Nigel Harris  
Development Planning Unit  
University of London  
9 - 11 Endsleigh Gardens  
WCIH OED, U.K.

Miss Mying Malong  
Asian Institute of Technology  
P.O. Box 1754  
Bangkok, Thailand

Dr. Piyasiri Wickamasekara  
ILO / ARTEP  
YMCA Cultural Centre - cum - Library  
Jai Singh Road  
New Delhi - 110001, India

Dr. Robert Yoder  
IIMI, Water and Energy Commission  
P.O. Box 3875  
Kathmandu, Nepal

**ICIMOD : P.O.Box 3226, Kathmandu, Nepal**

Dr. Colin Rosser, Director

Dr. Ram Prakash Yadav, Deputy Director

Dr. Prodipto Roy

Dr. Mahesh Banskota

Dr. Hikmat Bista

Mr. Lin Qinfa

Dr. T. B. S. Mahat

Mr. Saroj Basnyet

Mr. D. C. Das

Mrs. Zhang Li

Mr. Surendra Shrestha

Ms. Lisa Rush

## ICIMOD BOARD OF GOVERNORS

### Chairman (Nepal)

Hon. Dr. Ratna S.J.B. Rana

Vice-Chancellor

Royal Nepal Academy of Science and Technology

### Vice-Chairman (Pakistan)

Mr. Hasan Nawab

Member, Federal Land Commission

Government of Pakistan

### Bhutan

Mr. Lakpa Tsering

Director, Science and Technology

Royal Government of Bhutan

### China

Dr. Li Wenhua

Director, Commission for Integrated Survey of  
Natural Resources, Chinese Academy of Sciences

People's Republic of China

### India

(Chairman, Programme Advisory Committee)

Mr. T. N. Seshan

Secretary to the Government of India

Ministry of Environment, Forests and Wildlife

### Nepal

Dr. N. N. Singh

Secretary, Ministry of Education and Culture

His Majesty's Government of Nepal

### Prof. Dor Bahadur Bista

Centre for Nepal and Asian Studies

Tribhuvan University

### Federal Republic of Germany

Dr. Klaus Lampe

Head, Department of Agriculture Development

German Agency for Technical Cooperation

### Switzerland

Dr. Rudolf Hoegger

Vice-Director

Directorate of Cooperation and Humanitarian Aid

### UNESCO

Dr. Gisbert Glaser

Division of Ecological Sciences

Director (ex - officio)

Dr. Colin Rosser

## Founding of ICIMOD

The fundamental motivation for the founding of this first International Centre in the field of mountain area development was widespread recognition of the alarming environmental degradation of mountain habitats, and consequent increasing impoverishment of mountain communities. A coordinated and systematic effort on an international scale was deemed essential to design and implement more effective development responses to promote the sustained well-being of mountain communities.

The establishment of the Centre is based upon an agreement between His Majesty's Government of Nepal and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) signed in 1981. The Centre was inaugurated by the Prime Minister of Nepal in December 1983, and began its professional activities in September 1984.

The Centre, located in Kathmandu, the capital of the Kingdom of Nepal, enjoys the status of an autonomous international organisation.

Director : Dr. K. C. Rosser

Deputy Director : Dr. R. P. Yadav

### **Participating Countries of the Hindu Kush - Himalaya Region**

- |               |              |
|---------------|--------------|
| o Afghanistan | o Bangladesh |
| o Bhutan      | o Burma      |
| o China       | o India      |
| o Nepal       | o Pakistan   |



**INTERNATIONAL CENTRE FOR INTEGRATED  
MOUNTAIN DEVELOPMENT (ICIMOD)**

4/80 Jawalakhel, G.P.O. Box 3226, Kathmandu, Nepal

**Telex : ICIMOD NP**

**Cable : ICIMOD NEPAL**

**Telephone: 521575, 522819, 522839**