

6 Recommendations of the Working Groups

The issues raised at the Introductory Session and during the presentations from different countries and those highlighted by Dr. Pitamber Sharma were remitted for more detailed deliberations to the three Working Groups, under the following broad themes.

1. Integration of Environmental Considerations in Development Planning
2. Intersectoral Linkages – Infrastructure, Gender, and Structure of Economic Activities
3. Area Planning: Delimitation of Appropriate Unit and Data Requirements

A set of questions was posed to each group, covering various aspects relating to the broad theme assigned to it. The issues posed to the three groups and the composition of the groups are given in Annex 4.

Environmental Considerations in Development Planning

Group 1 was chaired by *Professor M.S. Manandhar* and the resource person was *Mr. Ajay Rastogi*. The group made the following recommendations in response to the questions posed to it.

- 1) Selection of the Pattern of Development Activity
 - a) Mountain specificities should be the basic consideration.
 - b) Activities should be site-specific, based on a unit of area, e.g., a watershed.
 - c) Activities could be selected on the basis of resource inventory need assessment and prioritised on the basis of environmental sensitivity and people's need.
 - d) Non-selection of economically-remunerative activities for environmental reasons should be part of a larger scheme incorporated into the national plans and policies. Apart from this, the upland lowland interaction and resource flows should also be taken into account.
- 2) Methodologies to Assess Environmental and Economic Costs and Benefits
 - a) A methodology for pricing natural resources needed to be developed as a prerequisite for environmental accounting.

- b) Shadow prices, with appropriate discounting, could be used for estimating costs of natural resources. The usage value of resources for the local population and society at large should form the basis for deriving shadow prices.
 - c) The cost of using cleaner technologies should be offset against the environmental costs of resource-degrading and polluting technologies.
- 3) Adequacy of EIA
- a) Environmental Impact Analysis (EIA) should be used for most projects, but this should be applied to both pre- and post-project situations.
 - b) For smaller projects, guidelines should be developed.
 - c) EIA in the present form might prove inadequate for assessing the total impact of a structure of development activities, but the methodology could be improved upon for such an assessment. Once natural resource accounting was developed, it would be easy to make such an assessment in terms of impacts of various activities on environmental resources.
- 4) Assessment of Activities on Environmental-Developmental Criteria
- a) A matrix with a combination of economic and environmental potentials with respect to different feasible activities in mountain areas should be developed and the activities ranked accordingly.
 - b) People's preferences should also receive due weightage in assessing benefits, both environmental and economic.
 - c) Some necessity-based 'stand alone' projects and activities (e.g., a drinking water scheme that needed a reservoir) need not necessarily be subjected to ranking and weightage. The socioeconomic need for and benefits of such activities could be so overwhelming that an environmental impact assessment might not be able to hold.
- 5) Market-oriented Economic Policies and Mountain Development
- a) Market-led development strategies and policies needed to be supplemented, in the case of mountain areas, by state action in two crucial aspects: one, regulations for the protection of mountain environment and, two, investments in physical and social infrastructure.

- b) Government intervention would also be necessary in mountain areas in the form of special promotional services and incentives (including subsidies to encourage prevention of natural resource degradation), food security, and a responsible and efficient single-window institutional mechanism for the delivery of these services.

Intersectoral Linkages

The Group on this subject was chaired by *Professor S.P. Kashyap* and *Dr. Kamal Rijal* was the resource person. The group considered the various aspects of intersectoral linkages, including infrastructure, gender, and an activity structure around the concept of the 'lead sector' and made the following observations and recommendations.

- 1) The structure of production which featured the money-order economy in the mountains should be altered and the scope for expanded production possibilities explored.
- 2) The lead sector approach, which implied production for surplus generation, should be adopted to alter the structure of production. Lead sector(s) would, of course, have to be identified on the criteria of an economically and ecologically usable resource base and the development potential of an activity in the area.
- 3) The lead sector approach, resulting in an enhanced level of activities, led to greater interdependencies among the activities and the people. It should be ensured that advantage was taken of the collective and mutually supportive approach in order that the linkages did not result in an exploitative relationship between the resourceful and the resourceless, and between outside entrepreneurs and traders and the local people.
- 4) Development of the lead sector might not take place easily and spontaneously in mountain areas. It would need to be facilitated through outside interventions.
- 5) Public intervention, most importantly, would be in the development of general infrastructure, both physical and social, as well as services related to the identified, area-specific lead sector and related activities.
- 6) The infrastructure that needed to be developed would not necessarily consist of a standard package for all areas; its form (e.g., road and non-road modes of transport) would depend upon the physical specificities of the area and the nature of products promoted through the lead sector strategy.
- 7) Provision of energy, both for meeting the basic needs of the population and for use of productivity-enhancing technologies,

- was very crucial. Minimising the social cost of energy production and evolving a pattern of energy supply that suited local resource endowments and emerging consumption and production requirements should be basic considerations in energy development.
- 8) While planning and promoting economic activities based on a lead sector approach, besides considering local resources, attempts should also be made to use the traditional skills of local people and the time-honoured knowledge and practices in production and organisation. Technological changes that were incremental in nature were likely to have the best chances of success and sustainability.
 - 9) The centrality of women in mountain economies was of crucial importance. This centrality should be maintained and developed by improving the resource, educational, and skill endowments of women in order to enable them to participate effectively in the new development processes, rather than being further marginalised due to the lack of capabilities.
 - 10) The 'software' aspects of development, comprised of the social, cultural, and institutional mechanisms which had a crucial role in integrated and equitable development, should be given prime importance. Planning exercises for different areas should, therefore, include the use of methods such as social soundness analysis, social assessment, beneficiary analysis, gender analysis, and stake-holders' consultation. Besides the overall development of an area, planning should also incorporate a target group approach, giving special attention to the needs and potentials of women and the poor.
 - 11) As an initial step towards diversification of mountain economies and development of lead sector(s), land-based activities would have better chances of success. These activities would take the form of crop diversification, horticultural development, and animal husbandry. Increasing the efficiency of land and water use would be a necessary condition for this transition. The next step in diversification would consist of internalisation of the different stages of agro-processing. Subsequently, or even simultaneously, the feasibility of development of skill-based, but foot loose, industries, suitable to the agroclimatic conditions of mountain areas should be explored and promoted.

Area Planning

Group three, dealing with the subject of delimitation of an appropriate planning unit, its internal and external linkages, and data requirements was chaired by *Dr. B.P. Maithani* and *Mr. Hubert*

Trapp was the resource person. The findings and recommendations of the group in respect to the different issues posed to them are given below.

1) Area Planning Unit: Delimitation and Methodology

- a) An appropriate spatial unit for planning and implementation should correspond to the existing administrative units (e.g., district), as it had various advantages.
- b) The homogeneity of physical characteristics and the resource base, though useful, need not be the overriding criterion for delimiting planning units.
- c) Regionalisation, based on temperature, topography, soil, and water conditions, was important for the inter-district synchronisation of natural resources' management and effective development planning based on agroclimatic zonation.
- d) ICIMOD should introduce database development projects in all member countries to create knowledge bases and real time sharing of experiences.

2) Sharing Environmental Costs and Benefits

Mountain areas were capital poor but rich in certain natural resources (e.g., water, forest, minerals) with their demand and use extending beyond mountain habitats. Protection and conservation of these resources had to be seen from the point of view of the ecological stability of the mountains and the plains, as well as from the point of view of the proportional use of these resources for the benefit of the mountains and the plains. Therefore,

- a) protection of mountain environments should remain the specific responsibility of the respective mountain communities;
- b) the cost of protecting the environment of the mountains had to be borne by people elsewhere who used mountain resources or whose ecology was dependent on the health of the mountain habitat; and
- c) the cost could be in terms of investments for building physical and social infrastructure, for opening environmentally-friendly development and income-earning opportunities in the mountains, and in terms of subsidy for environmentally-friendly alternative energy and technology. Such investments could be realised by imposing taxes on the use of mountain resources.

3) Rural-Urban and Highland-Lowland Interaction

Rural-urban linkages were crucial for integrated planning in mountain areas, because villages in mountain areas were very small and widely scattered. Rural areas, being the supply base, always supplemented urban areas which were the demand base points.

Terms of trade were always in favour of urban areas because of the out-migration of able-bodied people causing a brain drain. There was a need to establish a human resource balance.

a) The Rural-Urban Balance and Linkages

- i) It should be clearly recognised that the agricultural sector could not absorb the growing local labour force in rural areas.
- ii) Primary and intermediary markets needed to be developed to promote farm and non-farm activities.
- iii) Farm to market road networks should be developed so that other development followed.
- iv) Tools of spatial organisation and rural growth centre planning could be used for this purpose.

b) Highland-Lowland Interaction

- i) This interaction could be reinforced by creating interdependence based on the locational advantage principle, e.g., seasonal vegetables.
- ii) Suitable mutually-agreed criteria could be evolved sharing the costs of environmental preservation in the mountains with the people living in the valleys and plains through taxation or subsidies.
- iii) Inter-zonal variations in the altitude could be incorporated through land use/land capability classifications.

4) Use of GIS and Data Requirements

- a) Geographic Information Systems (GIS) could incorporate data from different sources that provided information on, e.g., natural resources, infrastructure, services, and socioeconomic data.
- b) Generally, there was no lack of data. Data might already be available, but constraints, such as access to these data, cost of data, data quality, cost of data entry, and the problem of data compatibility needed to be reduced.
- c) Using GIS and building a database helped to overcome the methodological problems concerning an appropriate area

unit. The base of data collection might be the administrative unit, but the system should facilitate focus on either particular watersheds within this unit or agroclimatic zones, or road corridors, and so on. For example, the census data available at the administrative level could be transferred to other units of interest.

- d) GIS should be used for the temporal change analysis of spatial information, e.g., land use, change in accessibility, or delivery analysis for marketing products.
- e) All spatial analysis in mountain areas needed a 3-D perspective. GIS facilitated the introduction of elevation as a parameter for analysis, and this was one of its big advantages over the traditional methods of data presentation.

5) Manual on Area Planning for Mountain Areas

Many area plans had been developed in many countries, but there were very few planning/training manuals. The scope and approach varied among them – some concentrated on methods and techniques and others on area planning experiences. Invariably, they were, at best, area/region-neutral or, at worst, lowland biased. It was, therefore, necessary to modify the available manuals or prepare new ones that reflected:

- a) mountain specific area planning issues,
- b) analytical techniques that were mountain specific, and
- c) mountain specific norms/standards/indicators of development and environmental dimensions.

6) Use of Local/Traditional Practices, Community Organisations and Modern Institutions

The wealth of knowledge, practices, and social organisations prevalent among different cultural and ethnic communities in mountain areas could be suitably harnessed, but they would need modifications in order to use them for development purposes.

- a) Environmental awareness should be created among the communities by building up different awareness methodologies.
- b) The gap between planners and implementators could be bridged through close interactions.
- c) Local leaders should be involved through local self-government institutions.
- d) Devolution of authority to local self-governing institutions was necessary.

- e) Mountain-biased NGOs/agencies could be encouraged to engage in the development process.
- f) Traditional institutions and traditional leaders could be suitably involved and incorporated in the development planning and implementation process.

7) Field Experiments on Integrated Area Planning

It would be desirable, and also feasible in most countries, to try out the integrated planning methodology in selected watersheds/areas in the HKH region, jointly through national agencies, institutions, and ICIMOD. For this purpose, however, the following aspects needed to be clearly specified.

- a) Rationale for area planning
- b) Purpose and functions of the area planning exercise
- c) Heterogeneity and diversity of the hills and mountains
- d) Different circumstances in and experiences of the countries
- e) Some countries required more than others on such exercises
- f) Modality of the exercise