

Workshop Discussions and Conclusions

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Policy and Planning

The evidence available on mountain agriculture throughout the Hindu Kush-Himalayas strongly indicates that past policies and planning have not succeeded in reversing the overall negative changes observed in the level of farm outputs and the conditions of farm resources. As a response to this challenge, and in order to place mountain agriculture on a sustainable path in the future, agricultural policy and planning institutions need to be more responsive to the specific needs of mountain environments. Past efforts to replicate plains' oriented strategies have not succeeded and far greater sensitivity in tailoring plans and policies to match mountain conditions are needed.

The development of mountain agriculture is closely linked to specific mountain environments, and these vary widely from place to place. Biophysical environmental considerations play a critical role in determining cropping systems and farming practices. Farmers have traditionally maintained close linkages and balances between agriculture, livestock, and forestry. Land-use patterns have developed on the basis of these linkages and agro-ecological parameters. Given these considerations, it is essential for plans and policies to develop a holistic perspective of both the agricultural economy and the agricultural environment. Plans and policies must take cognisance of how these different systems have interacted and evolved over time, if the desired changes are to have a sustainable impact on the performance of mountain agriculture. The effects on the growth, sustainability, stability, and equity of agricultural development plans and policies need to be carefully examined, and different

alternatives tried, because these four components are critical in determining the overall sustainability of mountain agriculture in the long run. Planning and policy formulation in the past did not sufficiently consider the practical problems underlying implementation. It was believed that a good plan or policy would be implemented. Unfortunately this premise has proved to be unfounded and greater attention is needed to identify and clarify the roles of different agencies in terms of functions in time and space. For different agencies to contribute to sustainable mountain agriculture, it is important to identify practical ways for promoting spatial, sectoral, and institutional integration. Without this integration it is difficult for agencies to respond to mountain agricultural specificities in terms of opportunities and constraints. To facilitate efforts in this direction, greater emphasis is needed in a number of critical areas.

a) *Decentralised Approaches*

There are many aspects of the mountain environment that make it imperative to use a decentralised development approach in all stages of agricultural planning and implementation. A wide range of biophysical and sociocultural conditions emphasises the need for policy adjustments to local conditions, and this is rarely feasible with a highly centralised planning approach. Responding to the conditions of inaccessibility, diversity, and other mountain environmental conditions requires a high degree of sensitivity and flexibility in planning and implementation, possible only with a strong participatory system. Resource allocations, made without giving adequate consideration to mountain environmental characteristics, reduce the effectiveness of investment programmes,

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which is clearly demonstrated in many areas by past experiences.

Decentralised approaches are necessary in order to develop appropriate mechanisms that respond to local opportunities and constraints. While the need for a decentralised approach has been recognised, efforts to promote decentralised agricultural planning have focussed on expanding the central planning agencies without concomitant development of local capacities. This needs to be corrected.

b) *Mobilisation of Formal and Informal Institutional Mechanisms*

Decentralised approaches cannot succeed without a major effort to mobilise formal and informal institutions and to improve their capacity for planning and implementation of agricultural development activities. Expansion of central bureaucracies has resulted in high costs and limited responses to local needs. Their capacity to reach out to the grassroots' level is extremely limited and consequently a deliberate effort is needed for greater mobilisation of local institutional mechanisms - both formal and informal. Experience so far clearly indicates the vast potentials of informal mechanisms such as local user groups. Their effective roles in resources mobilisation, technology transfer, and use of scarce resources have also been documented. A wide range of institutional options exists, and each of these should be carefully considered. In the context of agricultural change, marketing organisations have a major role to play in sustaining changes through their integration of farm production and outside markets. Post-production handling organisations become increasingly important as farm production responds to market opportunities.

The main focus in developing local organisations should be on enhancing the local capacity of the receivers to articulate their needs, opportunities and constraints, mobilisation of local resources, and promotion of local decision-making and management. Planning should address these issues if agricultural development in mountain areas is to be made sustainable.

c) *Human Resource Development*

In the long run, the sustainability of any development programme is determined by the extent to which human resources are developed. The capacity to determine priorities, formulate plans and programmes, mobilise resources and organisations, and ensure a system of effective implementation demands different skills and capacities.

As new concerns, such as gender, biodiversity, and the use of indigenous knowledge, emerge, newer skills are needed to respond to these problems which necessitate a strong focus on the development of human resources.

Research and Development

In spite of many different models and approaches to agricultural research and development (R & D) in mountain areas, many gaps in R & D are very evident. The bulk of the current focus is on a limited number of crops that are responsive to a high level of external inputs. Problems of pastures, medicinal plants, and marginal groups and areas are not addressed by existing R & D systems. Environmental components have not been incorporated. Many research outfits operate with very limited mandates and quite often the relevance of ongoing research to local area problems is not examined. The absence of adequate dialogue between researchers and farmers, including their participation in determining research priorities, has been a continuing lacuna in most agricultural R & D systems. Research has been compartmentalised into different scientific subjects to suit the convenience of researchers rather than to contribute to the development of mountain agriculture. Too often, researchers do not see any role for themselves in enhancing local awareness nor in the relevance of their research activities for improving local conditions. There are also many defunct research agencies contributing of little value to mountain agriculture.

Consequently R & D systems for mountain agriculture need to be carefully examined, focussing on the following aspects.

a) *Redefining R & D Priorities*

Given the limited impact of R & D in mountain agriculture so far, priorities need to be redefined to focus on entire production systems for specific areas rather than on individual crops. On account of inaccessibility, the utility of promoting high-value inputs must be carefully evaluated. The need to protect farm resources from further degradation, while attempting to increase farm outputs, is a major challenge for R&D in mountain areas.

In view of these complex issues, there is an urgent need to redefine R & D so that it is capable of addressing the entire chain in the production system, ranging from pre-production to post-production activities in specific mountain environments.

b) *Developing an Eco-regional R & D Focus*

Given the widespread heterogeneity of mountain farming and the great variations in problems and opportunities, R & D systems should develop a very strong eco-regional focus.

This is critical for understanding the linkages and complementarities existing in specific areas. The need to developing human resources to deal with the specific R & D problems of different eco-regions has to be emphasised if R & D activities are to make a significant contribution to the development of mountain agriculture. An eco-regional focus can also facilitate the integration of people's needs and priorities into R & D activities.

c) *Stronger Linkages with Universities and the Private Sector*

Most agricultural R & D agencies operate in isolation, having little contact with either the university systems, training agencies, or related private agencies. More recently, there has been an increasing role for these organisations. There is a need for greater linkages, interaction, and cooperation amongst these different actors in order to avoid duplication, to share scarce resources, and to benefit from each other's comparative advantages.

d) *Internalising the Mountain Perspective Framework*

The 'mountain perspective framework' developed at ICIMOD has provided a very useful system for screening the appropriateness of different activities to specific mountain areas. The framework is fairly flexible and can be subject to further modification. Based upon the nature of activities and areas, such a framework should be regularly used to match proposed activities with ground-level conditions. If it is integrated with project planning and analysis, it could provide very useful guidelines for decisions on investments.

Agricultural Support Services

In view of the multiple agricultural needs of mountain farmers, a wide range of support services is required. Problems are further complicated in mountain areas because of inaccessibility, diversity, and the fragile nature of mountain environments. Inaccessibility raises questions about the location of services in different places so that these are readily accessible to the farmer. The diversity of mountain environments necessitates a wider range of services, while the fragility of mountain environments influences decisions regarding the types of intervention being supported and promoted.

Past experience with agricultural support services in mountain areas has clearly shown that very few have reached the target groups. These services have been characterised by highly centralised systems, lack of ecological focus, little integration among complementary support services, a lopsided focus on a few inputs and a few crops, and an inability to generate adequate resources to become self-sustaining. Expansion in support services has resulted in overstretching the government machinery which is manned by poorly motivated staff, lacking in knowledge about the client's needs. Linkage of support services with research systems is at best limited. Extension personnel are generally lacking in understanding about local environments, and the bulk of the services has focussed on supporting richer groups. On account of all these factors,

governments have faced severe problems in making these support services relevant and sustainable. Changes are needed in many areas if the effectiveness of these support services is to be enhanced. Some of the critical areas requiring greater emphasis in the future are given below.

a) *Support Services' Systems as Partnerships between Clients and Service Agencies*

It is clear from past experience that, while governments have an important role in promoting support services, they cannot be sustained by the government alone and that mountain farmers, as well as the private sector, must also play an important role. Each of these groups has their respective advantages and disadvantages, and the nature of their responsibilities should be based on these.

Mobilisation of all these groups will help reduce the burden on one agency and, because each is focussing on what it is most suited to undertake, there are better chances for these services to become sustainable in the long run.

The fact that the receivers of these services are also actively involved ensures their appropriateness and timeliness, and this has been a major problem with government-controlled support services' systems in the past.

b) *Support Services Focussing on the Local Environment and Conditions*

Available support services have focussed too heavily on providing inputs from outside. While there is still a role for outside inputs, more attention should be given to the use of local resources, developing local extension personnel, developing linkages with local research activities, and incorporating a greater marketing orientation while providing support services.

In this context, it is essential for support services to understand changing land use and watershed conditions so that support services provided do not endanger the resources available in the area.

c) *Learning from Success*

No system is perfect, and it is important for all systems to be flexible so that they can incorporate successful examples from other areas, and eliminate their own mistakes.

It is therefore important for local support services' systems to be aware of different alternatives and see for themselves how others are engaged in providing different services to farmers. There are different forms of organisation and approaches to integrate various services. These need to be highlighted so that appropriate elements of different systems can be adopted. In some cases, a one-window system may work well, whereas in others multiple outlets may be more effective.

d) *Increasing Gender Concerns in Support Services*

This aspect has been neglected so far. It is necessary to develop more effective mechanisms for incorporating gender concerns in technologies, extension, and types of services provided.

e) *Human Resource Development*

This aspect is also critical for developing effective support services, particularly in terms of marketing linkages. Training local people in different areas of pre- and post-production will be very useful if the training focusses on local opportunities and constraints.

The Role of ICIMOD

Discussion about the role of ICIMOD vis-a-vis agricultural development plans and policies, research and development, and agricultural support services focussed on a number of issues. Keeping in mind the mandate of ICIMOD, it was generally agreed that ICIMOD's role was that of a development think tank on sustainable mountain development strategies and approaches and that of a facilitator for promoting integrated mountain

development activities. Special attention was needed in the areas listed below.

a) *Capacity Building*

As a facilitator of integrated mountain development, ICIMOD has a major responsibility for improving national and local capacities for undertaking and managing sustainable development programmes in mountain areas. Apart from directly assisting mountain development outfits in the region, ICIMOD should also work closely with universities to develop human resources for mountain development.

b) *Sensitisation, Awareness Generation*

Mountain development concepts, issues, and approaches are still relatively new, even in mountain areas. Research and training in mountain development problems are scarce. ICIMOD should assume a major role in closing the existing gaps and in sensitising all levels of decision-makers, development workers, and professionals. As new development issues emerge, appropriate methods and tools to handle these must be developed and ICIMOD should play a principal role in this activity.

c) *Replicating Success Stories and Identifying Lessons from Failures*

Given the rapidly growing development activities in mountain areas and their relatively poor performance, it is important to learn why some succeed and others fail. The preconditions of success, as well as factors responsible for failure, need to be identified, so that future development programming can be improved and successful activities replicated in other areas. Through case studies and research work, ICIMOD is in a unique position to bring this knowledge within the region and provide a comparative perspective on different aspects of success and failure in mountain development activities and show how successful cases can be introduced to new areas.

d) *Development of Training and Training Materials*

Mountain development skills, not only in the field of agriculture but also in other areas, were very limited and ICIMOD has a major role to play in closing this gap. This is an important mechanism for enhancing both national and local capacities and also for improving the human resource skills needed for integrated mountain development.