

# Sustainable Mountain Agriculture: Policy/Planning Institutions

KAILASH PYAKURYAL<sup>1</sup>

## Introduction

Mountain agriculture is characterised by a highly interactive relationship between crop-livestock-forestry. There is wide-scale poverty in mountain areas devoid of off-farm employment opportunities. Mountain areas suffer from the locational disadvantage of remoteness, as development efforts either reach very late or inadequately address the problems of inaccessibility (Banskota 1990; Jodha 1992; Jodha 1993; and Ponce 1989). Traditional land-use systems cannot meet the demands of the increasing population. Increasing demands for food, fodder, fuelwood, and timber have forced the mountain people to use marginal land and further deplete the scarce natural resources. Moreover, public policies which advocate self-sufficiency in foodgrain production to hopefully offset the problem of inaccessibility in mountain regions have led to the further dependency of mountain people on the fragile mountain environment, as well as inhibiting the generation of off-farm employment opportunities (Sharma 1993 and Yadav 1987). Such policies have led to the cultivation of more marginal lands with insignificant output gains as evidenced by Nepal's hill and mountain districts, most of which have remained food deficit.

The mountain environment thus is characterised by unique conditions, viz., inaccessibility, fragility, marginality, diversity, and niche. The first three conditions can be modified (improved or further aggravated) through human intervention. Diversity and niche, if properly explored and realised as advantages, can be harnessed for the welfare of mountain people.

It has been increasingly realised that suitable institutional arrangements<sup>2</sup> are essential for the development of sustainable mountain agriculture (Jodha 1993). Keeping this in mind, the Mountain Farming Systems' Division at ICIMOD, through various institutions and individuals from the HKH Region, attempted to review the status, scope, performance, gaps, and potentials of institutions related to:

- i) agricultural policies and programmes;
- ii) agricultural research and development (R&D); and
- iii) agricultural support services to examine whether they had or had not addressed the "mountain specificities".

This note is limited to some of the policy-related issues for mountain agricultural development. Observations are made based on experiences drawn from the review reports of Bhutan, China, India, Nepal, and Pakistan.

It should however be noted that the units of analysis for these countries are different. For example, in the cases of Bhutan, India, Nepal, and Pakistan the policy/planning institutions are national-level institutions and in the case of China they are at the county-level.

Table 1 gives the countrywide mountain specificities and their institutional imperatives (policy and planning).

An attempt has also been made to see how these countries fare compared to each other with regards to addressing the mountain conditions (Table 2).

1. Professor of Rural Sociology, Tribhuvan University, Kathmandu.

2. Institutions and Organisations are interchangeably used and adopt Dr. N.S. Jodha's operational definition which appears in his paper entitled "Sustainable Mountain Agriculture: The Crucial Role of Institutional Support".

**Table 1: Mountain Specificities and Their Imperatives for Institutional Interventions**

Mountain Specificities	Structure/Mechanism			Imperatives for Institutions (Policy and Planning)		Mandate and Priorities	
	Bhutan	China	India	Nepal	Pakistan		
Distance, poor mobility, semi-closedness, high cost of logistics, low dependability of external support, invisibility for mainstream decision-makers <b>(Inaccessibility)</b>	A: MCA activities, Decentralised Dzongkhag - Zoning of 5 agro-ecological regions B: Integrative approach with local resource mobilisation	A: Highly decentralised and autonomous institutions at the county level B: People's participation and cost-sharing	A: Transport subsidy, decentralised Panchayat Raj organisation, viz., Gram Sabha and Gram Panchayat B: Self-governance in approving annual programmes	A: Transport subsidy District Development Committee, emphasis on roads B: DCC responsible for District Development Plan but not yet materialised	A: Transport subsidy - more centralised		
Low-carrying capacity, prone to disasters, limited and low payoff options, impediments to high intensity, high productivity options, low input absorption, low surplus generation, investment, prone to neglect/disregard by the mainstream <b>(Fragility/Marginality)</b>	A: Concepts of stability & resilience introduced B: Integrative approach to agricultural development	A: Poverty alleviation programmes - Self-determined organisations at village-level policy implementation B: Under the Household Responsibility System villagers can decide for themselves	A: Provision of Sixth Schedule designated hill areas B: Diversification: planting trees (horticulture) on marginal lands	A: Agricultural policy to emphasise livestock and horticulture in mountains and hills, conservation under national parks B: Pasture development does not match fodder requirements - National Park programmes do not go along with agroforestry	A: National Conservation Policy 1992 B: To preserve and develop the mountain environment		
High location specificity, limits to specialisation and scale of operations, use of external experiences, basis for diversified interlinked activities <b>(Diversity)</b>	A: Realised Dzongkhag, Gewog, and villages are involved at field level	A: Grassroots' organisations decide B: Diversification of farming underway	A: North-eastern Region known for colour pattern of woollen, silk, and cotton textiles such as shawls, blankets, sheets, and skirts B: Crop diversification policy for the hills	A: Policy Institutions do not exist on such lines	Lack of policies		
Potentials for products, activities with high comparative advantages, liable to be over-exploited. <b>(Niche)</b>	Needing more attention	A: Autonomous local organisations B: Making decisions on land use at local level	A: Hydropower potential not well explored B: Uttaranchal Sub-plans envisage decentralisation of planning - HP plan also recognises niche for horticulture and special crops	A: Small farmers' development project especially designed for small and marginal farmers - Policy for upland pasture exists but inactive	Lack of policies		

**Table 2. A Comparative Assessment of Policy Institutions Addressing Mountain Specificities**

Mountain Specificities	Indices	Bhutan	China	India	Nepal	Pakistan
Inaccessibility	Recognised	Y	Y	Y	Y	Y
	Organisations existed	Y	YP	YI	YI	N
	Mechanisms for sustaining	YI	Y	YI	N	N
Fragility/ Marginality	Recognised	Y	Y	Y	Y	Y
	Organisations existed	YW	YP	YI	YI	YI
	Mechanisms for sustaining	NC	Y	YW	N	N
Diversity	Recognised	Y	Y	Y	Y	Y
	Organisations existed	Y	YP	YI	YI	YI
	Mechanisms for sustaining	NC	Y	YW	N	N
Niche	Recognised	Y	Y	Y	Y	Y
	Organisations existed	N	YP	YW	YI	YI
	Mechanisms for sustaining	N	Y	YW	N	N

Key: Y = Yes; N = No; P = Plenty; I = Inadequate; W = Weak; NC = Not Clear

## Policy/Planning Institutions

Policy/planning institutions vary in number as well as in scope among the countries of the region. However, a common feature is that the Planning Commissions are responsible for national development in each case. The other institution dealing with funds, and which is an important partner of development, is the Ministry of Finance. The third important institution is the line ministry, i.e., the Ministry of Agriculture.

If we put the countries of the region into a continuum, beginning from highly-centralised to decentralised policy/planning arrangements, then Pakistan would appear first and China last. Bhutan and Nepal have recently restructured policy/planning institutions. Adoption of the Renewable Natural Resources (RNR) concept in Bhutan and of District Planning in Nepal are some examples, but their effective implementation is yet to be seen (Fig.1).

Figure 1: Policy/Planning Continuum

Pakistan	India	Nepal	China
Low	Degree of Decentralisation		High
Federal-level Planning	State-level Planning	District-level Planning	County-level Planning

A comparative study of each country involving people in policy/plan formulation could also be undertaken. Planning and policies have at least three major stages, i.e., formulation, implementation, and monitoring and evaluation. Some countries involve only government institutions for all of these functions of policy and planning and others do it jointly.

In China, the policies and plans are formulated jointly, i.e., by the Government as well as people's organisations. But in Bhutan, India, Nepal, and Pakistan, it is the Government which formulates, implements, and monitors/evaluates all plans/policies. However, India (through the *Panchayat Raj* Institutions) and Nepal (through District Development Councils) have feedback mechanisms to voice the people's needs in 'government' plans and policies.

## Lessons Learned

1. Mountain specificities have been recognised as important factors to be considered for mountain development in general and the development of mountain agriculture in particular, but proper institutional arrangements for addressing these issues at various levels,

i.e., federal, State, district, county, and village, either do not exist or are inadequate.

2. Policy is a guiding principle or a course of action pursued consistently over a period of time and a plan is a detailed scheme for the accomplishment of an objective within a specified period of time. A programme is a statement of situation, objectives, problems, and solutions. Thus a sound programme is based on an analysis of the facts of the situation. There should be a linkage between policies, plans, and programmes. **But a review of the reports suggests that agricultural policies mostly do not relate to mountain agricultural conditions nor are the R&D and support services linked to the policies.**

3. For "bottom-up" planning, implementing agencies must have sufficient flexibility in their operational styles to meet the varying conditions and needs of their target groups. Such a policy should also give due consideration to mountain specificities.

4. The development of mountain agriculture, in addition to other factors, is the function of well-designed and effective public institutions, agricultural universities, and people's participation. The performance of mountain agriculture has improved in places where governments have had greater commitments and universities have been mandated for re-search as is evidenced in Himachal Pradesh.

### Recommendations

1. Policies relating to the development of mountain agriculture should be reformulated and suitable policy/planning institutions should be restructured/formed at various levels. Policy Institutions at the federal and state levels and planning units up to district levels appear useful and essential.
2. Decentralisation of planning and implementation of government services, as well as providing effective mechanisms to coordinate the efforts of various agencies at the local level, are essential for the sustainable development of mountain agriculture.
3. Policies that encourage the production of graduates in 'Hill Agriculture' and a greater involvement of universities in research can lead to sustainable development of mountain agriculture in the long run.

### Future Research Thrusts

1. Policies often do not match mountain conditions. The case of Nepal is an example; fragmentation of landholdings, poverty, and dry farming are the characteristics of mountain farming systems. The region also faces an acute shortage of fodder, fuelwood, and timber. But agricultural policies promote irrigated, crop-biased agriculture.

Policy analysis research aimed at evolving policies that help develop sustainable mountain agriculture is needed.

2. A survey of diverse production systems and design of appropriate resource management packages containing an agriculture (crops and fruits), livestock, and forestry mix may be useful.
3. Study of the structure and scope of hill/mountain agricultural development cell in the Ministry of Agriculture and the Planning Commission may be useful, and ICIMOD's assistance in institution-building could be explored.
4. Assessment of the planning and policy units required at various levels of the hierarchy for greater decentralisation.
5. Assistance to Agricultural Universities/Educational Institutions in designing courses for Hill Agriculture may be desirable and ICIMOD could take a lead in this.