

Chapter 20

Poverty Alleviation and Sustainable Development in Mountain Areas: Role of Highland – Lowland Links in the Context of Rapid Globalisation

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20.1 Introduction

The discussion on the above subject can be broadly structured into three inter-related themes, namely, facts, paradoxes, and solutions. The ‘fact’ aspects are covered in terms of prevailing realities and changes characterising mountain areas. The paradoxes refer to coexistence of development potential as well as development efforts along with the persistent poverty and underdevelopment of mountain areas. The solutions, based on the identification of factors behind the paradoxes, are indicated in terms of identification and promotion of mountain development options based on a mountain perspective. The discussion focuses on dominant biophysical and socioeconomic features of mountain areas, called mountain specificities, and their imperatives; and these are generally disregarded by development approaches leading to several negative side effects of external interventions. Section 2 of the paper elaborates on the circumstances that give rise to poverty in mountain areas and the mountain perspective missing from mountain development efforts. Section 3 highlights the role of unequal highland-lowland economic linkages in the persistence of poverty in mountain areas and among mountain people. Section 4 presents the apprehensions about the negative

repercussions of the rapid globalisation process on mountain areas; which, unless it is guarded against may accentuate the processes causing poverty and resource degradation in mountain areas. The last section covers suggestions for altering the ongoing approaches and processes and preparing mountain areas and communities to adapt to the positive and negative consequences of the emerging changes, including rapid globalisation. Based on factual observation and understanding of the HKH region, the paper attempts to develop a conceptual-cum-operational framework to address the issues manifested in its title.

20.2 Mountain Development: The Dominant Scenario

In terms of development situations, barring transformed areas such as Himachal Pradesh (India), Ningnan county (China), and Ilam district (Nepal), most mountain areas in the HKH region have low levels of economic development and persistent poverty, rising population pressure and increasing resource scarcity, natural resource degradation and unsustainability of present patterns of resource use, and finally declining range and quality of unsubsidised production and consumption options for mountain communities (Jodha et al. 1992, Banskota and Sharma 1994). ICIMOD, with a specific focus on agriculture and related land-based activities, which traditionally contributed to environmental and livelihood security in mountain areas, has documented such negative changes, described as indicators of unsustainability, in different parts of the region (Table 20.1).

These changes relate to resource base, production flows, and resource-use practices and options. Some of them exhibit negative changes whereas others reflect the processes potentially leading to such negative changes. Some of the negative changes are clearly visible, but others are concealed by the human adjustment responses to them. Table 20.1 is quite self explanatory and no elaboration is needed on these aspects.

Mountain development: paradoxes and reasons

The emergence of the trends described, as well as the general state of underdevelopment are manifestations of paradoxes characterising the recent development history of mountain areas. Poverty and underdevelopment persist in mountain areas, despite the frequent national and international concerns expressed about them; despite the existence of unused resource potential and the net contributions of the mountains to the development of mainstream (plain/urban) economies; despite (inadequate but) increased development interventions and investment in mountain areas in recent decades; and despite the availability of lessons and replicable experiences of scattered success stories in mountain development (Messerli and Ives 1997). The primary reason behind the said paradoxes and the emerging situation of unsustainability is the fact that policy-makers and planners do not take the mountain perspective into account when they promote and plan for mountain development.

Table 20.1: Negative changes as indicators of emerging unsustainability of agriculture/current resource-use systems in mountain areas

Visibility Aspects of Change	Change Related to ^a		
	Resource Base	Production Flows	Resource-use Management Practices/Options
Directly visible changes	Increased landslides and other forms of land degradation, abandoned terraces; per capita reduced availability and fragmentation of land, changed botanical composition of forest/pasture, reduced bio-diversity, reduced water flows for irrigation, domestic uses and grinding mills	Prolonged negative trend in crop/livestock yields, increased input need per unit of production, increased time and distance involved in food, fodder, fuel gathering, reduced capacity and period of grinding/saw mills operated by water flow, lower per capita availability of biomass, and range of agricultural products	Reduced extent of following: crop rotation, intercropping, diversified resource-management practices, extension of cropping to steep slopes, replacement of social sanctions for resource use by legal measures, unbalanced and high intensity of input use, dependence on subsidies and external inputs
Changes concealed by responses to change	Substitution: of cattle by sheep/goats, deep-rooted crops by shallow-rooted crops, shift to non-local inputs, choice of inferior options, substitution of water flow by fossil fuel in grinding mills, or manure by chemical fertilisers	Increased seasonal migration, introduction of externally supported public distribution systems (food inputs), intensive cash cropping on limited areas, additional production by using marginal areas	Shifts in cropping pattern and composition of livestock, reduced diversity, increased specialisation in mono-cropping, promotion of policies/programmes with successful record outside without required adaptation
Development interventions, i.e., processes with potentially negative consequences ^b	New systems without linkages to other diversified activities and regenerative processes, generating excessive dependence on external resource (fertiliser/pesticide-based technologies, subsidies), ignoring traditional adaptation experiences (new irrigation structure), programmes focused mainly on resource extraction	Agricultural measures directed to short-term quick results, primarily product-centred as against resource-centred approaches to development, service-centred activities (e.g., tourism) with negative side effects, focus on food self-sufficiency ignoring environmental stability/carrying capacity	Indifference of programmes and policies to mountain specificities, focus on short-term gains, top-down centralised focus, excessive and crucial dependence on external resources and advice ignoring self-help and traditional knowledge, generating permanent dependence on subsidies and charity

a Most of the changes are interrelated and could fit into more than one column.

b. Changes in this category differ from the previous two categories, in the sense that they are yet to take place, and their potential emergence can be understood by examining the resource-use processes involved in relation to specific mountain characteristics. Thus, they represent the 'process' dimension rather than the 'consequence' dimension of unsustainability.

Source: Table adapted from Jodha and Shrestha (1994), Jodha (1997a) based on data or descriptions in over 50 studies from the countries of the Hindu Kush-Himalayas and nearly a dozen studies/documents on the Andes and African mountains.

The mountain perspective and mountain specificities

The mountain perspective, described simply, means explicit or implicit consideration of specific mountain conditions and their imperatives while conceiving, designing, and implementing development interventions in mountain areas. This can help ensure the relevance and effectiveness of development interventions. The important conditions characterising mountain areas that, for operational purposes, separate mountain habitats from other areas are called here ‘mountain specificities’. The six important mountain specificities (some of which might be shared by other areas such as deserts in the plains) are considered here. The first four, namely, inaccessibility, fragility, marginality, and diversity or heterogeneity, can be called first order specificities. Natural suitability or ‘niche’ (including those made by humans) for some activities or products in which mountains have comparative advantages over the plains and the ‘human adaptation mechanisms’ in mountain habitats are second order specificities. The latter are different from the former in the sense that they are responses or adaptations to first order specificities. Nevertheless, they are specific to the mountains. It should be noted that these characteristics are not only interrelated (due to their broadly common biophysical roots) in several ways, but within the mountains they demonstrate considerable variability or diversity. For instance, all locations in mountain areas are not equally inaccessible, fragile, or marginal. Neither do human adaptation mechanisms have uniform patterns in all mountain habitats. With full recognition of such realities, we now briefly introduce the mountain specificities in Table 20.2. Table 20.2 lists the features of each of the mountain specificities in terms of factors creating these conditions, their manifestations and implications in operational contexts, and their imperatives in terms of required and appropriate responses. These features create objective circumstances, which in turn present a range of constraints and opportunities and influence human responses directed to the use of mountain resources. Table 20.2 also indicates the circumstances provoking poverty and approaches reducing poverty elicited by the imperatives of different mountain specificities. The key inferences from the contents of Table 20.2 form part of the following discussion.

Mountains and generalised development models

Since the objective circumstances and implied potential responses referred to above are not fully and appropriately perceived by mainstream policy-makers, mountain development efforts often amount to extending externally conceived and designed approaches and measures to mountain areas (Banskota 1989, Banskota and Jodha 1992, Jodha and Shrestha 1994). To elaborate upon this aspect, it is instructive to juxtapose the objective circumstances created by mountain specificities with the broad conditions historically associated with the transformation/development of different sectors, regions, and countries. This will also help to focus more sharply on the need for understanding and internalising imperatives of mountain specificities in designing strategies for poverty alleviation and sustainable mountain development.

Table 20.2: Mountain specificities and their imperatives

Limited Accessibility	
a) Product of	Slope, altitude, terrain, seasonal hazards, and so on (and lack of prior investment to overcome them)
b) Manifestations and implications (i.e., promoting poverty circumstances)	Isolation, semi-closedness, poor mobility, high cost of mobility, infrastructural logistics, support systems, and production/exchange activities Limited access to, and dependability of, external support (products, inputs, resources, experiences) Detrimental to harnessing niche and gains from trade Invisibility of problems/potentials to outsiders
c) Imperative (appropriate responses, approaches to reduce poverty)	Local resource centred, diversified production/consumption activities fitting to spatial and temporal opportunities Local regeneration of resources, protection, regulated use; recycling Focus on low-weight/volume and high-value products for trade Nature and scale of operations as permitted by the degree of mobility and local availability of resources Development interventions with a focus on: decentralisation and local participation: reduction of inaccessibility with sensitivity to other mountain conditions (e.g., fragility) and changed development norms and investment yardsticks
Fragility and Marginality	
a) Product of	Combined operations of slope/altitude, and geologic, edaphic, and biotic factors; biophysical constraints create socioeconomic marginality
b) Manifestations and implications (i.e., poverty promoting circumstances)	Resources vulnerable to rapid degradation, unsuited to excessive/costly use of inputs; low carrying capacity Limited, low productivity, high risk production options; little surplus generation or reinvestment, subsistence orientation, preventing high cost, high productivity options; disregard by 'mainstream' societies High overhead cost of resource use, infrastructural development; under-investment People's low resource capacity preventing use of costly options that facilitate high productivity, disregard by 'mainstream' societies
c) Imperatives (i.e., appropriate responses, approaches to reduction of poverty)	Upgrading resource and regulation of usage (e.g., by terracing) Focus on low intensity, high stability in use of land Diversification involving a mix of high and low intensity uses of land, a mix of production and conservation measures with low cost Local regeneration of resources, recycling, regulated use, dependence on nature's regenerative processes and collective measures Different norms for investment to take care of high overhead costs Focus on vulnerable areas and people and their demarginalisation
Diversity & Niche	
a) Product of	Interactions between different factors ranging from elevation and altitude to soils and climatic conditions, as well as biological and human adaptations to them, uniqueness of environment, resources and human responses

Table 20.2 Cont.....

b) Manifestations and implications (i.e., potential for poverty reducing activities)	A basis for spatially and temporally diversified and interlinked activities, strong location specificity of production and consumption activities often limited scope for large-scale operation Potential for products, services, activities with comparative advantages
c) Imperatives (i.e., appropriate responses, approaches to harness poverty-reducing opportunities)	Small-scale, interlinked diversified production/consumption activities differentiated temporally and spatially for fuller use of environment Need diversified and decentralised interventions to match diversity

Source: Table adapted from Jodha (1997a) and based on evidence and inferences from over 60 studies referred to by Jodha and Shrestha (1994).

According to Table 20.3, conditions associated with high economic performance in a region, system, sector (e.g., agriculture, a dominant activity for mountain populations) could be grouped under (a) conditions increasing production such as resource-use intensification, input absorption capacity, infrastructural back-up, and economies of scale of activities; and (b) the ability of a sector or system or an economy to link itself with the wider systems (economies) to facilitate gains through trading the surplus as well as learning from and replicating successful external experiences, technologies, and so on . However, when such general basic conditions associated with development or high economic performance (implying poverty eradication in our case) are examined in the context of mountain areas, many of them are missing from most mountain regions, and this is because of the aforementioned mountain specificities. For example, intensification of resource use — including increased use of inputs to improve productivity —is very crucial for high productivity. However, fragility and marginality (implying low pay-offs from use of inputs) do not encourage such possibilities in mountain areas. Socioeconomic marginality (manifested through poverty) also restricts people’s ability to acquire external inputs, generate and invest surplus, and take risks associated with costly resource-intensive production measures that use resources excessively. Limited accessibility/poor mobility further restrict any efforts at resource-use intensification through import of external inputs and technologies. Fragility constrains the building of infrastructure to improve access. The consequent isolation or semi-closedness imposed not only deprives mountain areas of gains from trade but also makes infrastructure and development logistics extremely costly.

The three main features generating constraints in mountain areas, namely, inaccessibility, fragility, and marginality, lead to subsistence (with associated poverty) production systems in the mountains. This blocks the possibilities of mechanisms devised by the people facilitating specialisation of production, generation of surplus, and exchange to facilitate economic transformation with the help of value-adding, secondary (e.g., processing) and tertiary (e.g., service) activities.

Table 20.3: Mountain specificities and conditions associated with high economic performance of activities/sectors/regions

Constraints/Opportunities Generated by Mountain Specificities	Conditions Associated with High Performance Agriculture						
	Production Enhancing Factors				Ability to Link with Wider Systems		
	Intensity of Resource use	Input absorption capacity	Infrastructure	Scale economies	Surplus generation/trade	Replicating external experiences (tech)	Attracting external attention
Limited Accessibility Distance, semi-closedness, high cost of mobility and operational logistics, low degree of dependability on external support or supplies	(-)a	(-)	(-)	(-)	(-)	(-)	(-)
Fragility Vulnerable to degradation with intensity of use, limited low productivity/pay-off options	(-)	(-)	(-)	(-)	(-)	(-)	(-)
Marginality Limited, low pay-off options; resource scarcities and uncertainties, cut off from the 'mainstream'		(-)	(-)	(-)	(-)	(-)	(-)
Diversity High location specificity, potential for temporally and spatially interlinked, diversified products/activities	(+)a	(+)		(-)	(+)	(-)	(-)
Niche Potential for numerous, unique products/ activities requiring capacities to harness them	(+)	(+)		(+)	(+)	(-)	(+)
Human Adaptation Mechanisms raditional resource management practices-folk agronomy, diversification, recycling, demand rationing, and so on	(+)	(+)		(-)		(+)	(-)

Source: Table adapted from Jodha (1997a); the situation illustrated with reference to mountain agriculture applies to other sectors as well.

a (-) and (+) respectively indicate an extremely limited and relatively increased degree of convergence between imperatives of mountain conditions associated with high economic performance. The constraints indicated for the primary production sector also apply to secondary and tertiary sector activities such as product processing and marketing.

According to Table 20.3, in contrast to the above features constraining development and exacerbating poverty-promoting features, diversity and niche, along with human adaptation mechanisms (including indigenous knowledge systems), do have some potential through which mountain areas can satisfy some of the conditions historically associated with very satisfactory economic performance and transformation of areas and economies. If properly understood and harnessed they can facilitate use of resources and improve inputs (without degrading the resources); can help to generate surplus of tradeable products/services; and can help to link mountain economies gainfully with external systems. However, as elaborated upon later, the potential of the above features remain untapped in terms of eradicating the poverty of mountain people. In fact the overshadowing impact of mountain specificities that generate constraints is so overwhelming that they (mountain specificities) make most of the opportunities and potentials (as well as problems) invisible to mainstream policy-makers. This 'invisibility' is partly responsible for the latter's indifference to mountain areas. The exceptions, however, are niche opportunities (e.g., hydropower, timber, tourism, herbs, horticulture, and so on) used by mainstream economies. The 'invisibility' in turn is caused largely by the lack of information and awareness about mountain specificities and their imperatives as well as their usefulness in designing development interventions. The negative implications of this gap (as discussed later) are all the more serious in the context of the rapid globalisation process affecting mountain areas and communities.

Inferences

The discussion in this Section leads to the following conclusions. The constraining biophysical features of the mountains (fragility, marginality, inaccessibility), unless properly managed, generate circumstances exacerbating poverty and degradation of resources. The safeguards against them are through indigenous folk technologies; institutional arrangements, and diversification of natural resource uses that are feasible and effective with small populations; and the subsistence situation is disappearing in a rapidly changing situation that is caused also by inappropriate institutional and technological interventions intended to help mountain areas. The positive attributes (e.g., diversity, niche opportunities, and human adaptation mechanisms), despite their potential for reducing poverty and promoting sustainable development, are of no help to mountain people either, except in a few selected pockets where features of development interventions match well with the imperatives of mountain specificities (Jodha 1997a,b). Broadly speaking, the process behind the above paradox involves the following.

Firstly, due to the insensitivity of external interventions used in mountain conditions, but not specifically designed for them, the importance of diversity as well as people's adaptation mechanisms receive little attention from development planners and policy-makers. Secondly, harnessing major niche opportunities (e.g., timber, water, hydropower, minerals) remains beyond the capacity of local communities because of (i) their poverty and limited capabilities, especially in terms of generating and

trading surplus gainfully and (ii) because of the social marginalisation of mountain people and their vulnerability, they cannot influence the decisions and actions of mainstream policy-makers to harness mountain niche. Thirdly, the main way of harnessing mountain niche involves extraction of resources by and primarily to meet the needs of downstream/ mainstream economies in national, regional, or global contexts, with limited gains for local communities. Timber, tourism, hydropower, and minerals are well-known examples of exploitation of mountain niche by outside interest groups (Messerli and Ives 1997). Even if harnessing petty resources (e.g., non-timber forest products and other specialised products) involves local communities, their trading transactions are always dominated by mainstream agencies with a disproportionately lower share of gains going to the former (Banskota and Sharma 1999).

Thus, biophysical conditions, such as fragility, marginality, and limited accessibility, directly restrict the range and quality of income-generating options for mountain communities; the man-made circumstances, i.e., the nature of their socioeconomic links and interactions with the external world, tend to deprive them of the gains derived from harnessing mountain niche. In fact, unless checks and balances are introduced, the unequal external linkages are likely to become a major factor behind the persistent poverty, continued underdevelopment, and rapid environmental resource degradation in mountain areas in times to come. The mechanisms and processes of possible approaches to bring about a reversal are the subject of the rest of this paper.

20.3 Unequal Highland – Lowland Economic Linkages

Deprivation as a result of external linkages based on unequal exchange are part of the wider dynamics of highland-lowland economic linkages. No doubt, increased physical integration and opening up of mountain areas to markets in the plains in recent decades has helped the mountain areas in several ways, although their share in the gains associated with trade and exchange has been disproportionately low. The flows of resources, products, and services between the two are characterised by terms of trade unfavourable to the highlands. The issues and mechanisms involved are described below.

How highlands relate to lowlands

The fundamental basis of highland – lowland economic linkages stems from differences in their natural resource endowments and the potential production and exchange opportunities they generate. Equally important are human interventions, ranging from infrastructure and institutions to technological and human capabilities, that shape the pace and pattern in harnessing opportunities. Nature (i.e., biophysical conditions) also plays an important role in determining human interventions. This is more so in the highland context in which, because of constraints imposed by relatively high degrees of inaccessibility, fragility, marginality, and even diversity, the means and mechanisms of harnessing ‘niche opportunities’ and engaging in external

exchange transactions are restricted. Because of these very circumstances, mountain areas and communities acquire the status of marginal entities in their economic and other interactions with the mainstream, more urban, economies in the plains (Jodha 1997b).

The above circumstances, or rather the differences in the mountains compared to the plains, have shaped the nature and patterns of highland-lowland economic linkages. In the first place, the economic relationship between the mountains and the plains has been that of a hinterland-metropolis type in which the highlands served as a source of primary products (raw materials) for the mainstream, lowland economies and societies with all the structural and operational inequities associated with such a relationship.

Second, as a consequence of the above, the selective overextraction of natural resources (e.g., timber, minerals, and water) from the highlands for uncompensated transfer to the lowlands emerged as the predominant method of harnessing niche opportunities in the highlands.

Third, even petty trading by mountain people in special mountain products (e.g., herbs, seed, fruit), constrained by poor mobility, perishability, and low bargaining capacities, amounted to operating in a buyers' market. Consequently, trade in these and other products has been characterised by constant underpricing for producers.

In contrast (viewed from the lowland perspective), the resource and commodity flows towards the highlands have been too small and selective, making the highland-lowland linkages virtually one-way traffic. Besides the limited supply of consumer goods (cereals and industrial products), the main transfer of resources from the lowlands has been investment in infrastructure and related developments in the mountains. However, such resource transfers are guided for the most part by the infrastructural needs of mountain-resource extraction to meet lowland requirements and also by national security concerns in some cases.

Thus, no matter from which angle one looks the terms of trade between the highlands and lowlands have been perpetually against the former. Furthermore, if the unrecognised costs and sacrifices of highland communities in terms of the backlash effects of resource extraction for external profit (e.g., through disruption of their economies and habitats) are considered, the inequities of prevailing economic linkages increase.

Manifestation of economic linkages: resource and product flows

In a concrete manner, economic linkages are manifested by flows of products, services, and resources. An understanding of these flows, i.e., their nature and magnitudes as well as their processes and impacts, can help us develop approaches to make them more equitable and sustainable. This can strengthen the complementarity of highland-lowland economic linkages. However, in view of the prevailing socioeconomic circumstances and the varying degree of inaccessibility, such as lack of access to

markets, characterising mountain areas, any attempt to inventorise the economic flows is a daunting task. A broad idea of the two-way flows showing the economic linkages between the mountains and the plains, based on observation and understanding of the situation in many parts of the HKH region, can be presented. Accordingly, Table 20.4 presents the major activities and their relevant features to indicate the highland-lowland economic linkages, their dominant features (i.e., processes and impacts), and possible approaches to alter the unfavourable circumstances consequences for mountain areas/communities. Some inferences can be drawn from Table 20.4 that are of direct relevance to the issues discussed in this paper.

- Broadly speaking the economic linkages between the mountains and plains that are seen in the different types of flow have been grouped as (a) flows of traded commodities and services, (b) managed/semi-managed natural resource flows, (c) human resource flows and associated monetary flows, and finally (d) social transfers and (mainly) public sector investment flows.
- In the case of (a) unfavourable terms of trade, lack of local processing/value additions in products traded or resources reduce the gains of mountain areas. In the case of (b) managed and semi-managed natural resources, most of the flows from the highlands to the lowlands are largely uncompensated for or inadequately compensated. Moreover, this compensation in terms of royalties for resource extraction is mostly from government to government level or agency to agency level without involving the communities conserving these resources.
- Mountain people have definitely benefited from remittances or the ‘money order economy’. However, the picture of net gains to the mountains through human and associated monetary resource flows is quite mixed. If formal jobs in the plains employing mountain people (the army for example) are excluded, most of the migrants to the plains are unskilled, seasonal or regular workers who earn low wages. The monetary benefits of the latter are likely to be discounted by their negative impacts on the seasonal labour available for crops in the hills. On the other hand, the money received by most workers from the plains stationed in the mountains — mostly in government establishments or project activities — also flows back as remittances to their respective destinations in the plains, demonstrating another form of resource outflow or capital flight.
- In recent decades, on account of both welfare (relief, social services, subsidies) and development, visible resource flows (money and materials) to the mountains have taken place. Despite certain inadequacies, inappropriateness, inherent inequities, and leakages (i.e., money received going out of mountain areas on several accounts), this is an important trend as it increases the resource flows from the lowlands to the uplands or from the mainstream economy to marginalised areas within largely mountainous countries. Nevertheless, seen in the overall context of upland - lowland economic flows, this may not cover even a reasonable fraction of the resource flows from the mountains in categories (a) and (b), namely products and services traded as well as managed/semi-managed resource flows.

Table 20.4: Major flows of products, services and resources manifesting highland-lowland economic linkages^a

1. Broad Categories of Flows	Traded Commodity and Service Flows	Managed/Semi-managed Natural Resources (NRs) Flows	Human Resource Flows	Social Transfers; Public Sector Investment Flows
2. Major items under (1)	a) Special mountain products (herbs, flowers, fruit) b) Timber/other forest products c) Hydropower/ water d) Tourism e) Consumer/industrial goods from the plains	a) managed NR flows (e.g. irrigation water) from mtn. b) Semi-managed NR flows (nutrients, environmental resource/ services) from mtn	a) Seasonal/periodical migration of mtn. labour to the plains b) Workers from the plains managing interventions in mtn. areas	a) Cash/kind relief, subsidy flows to mtns. b) Development, welfare investments from the lowlands
3. Dominant features, i.e., processes, impacts of (2)	(a-b) traded as unprocessed primary products; little local value additions, unfavourable terms of trade for the mountains c) Designed-developed externally, mainly for lowland use, very little local gains d) High-value activity, little local gains (a-d) backlash effects exceed gains to mtns., likely to accentuate with globalisation e) Disproportionate profit to the plains	a) Largely uncompensated use of water resources by lowlands; backlash effect for mtns., but little sharing, ploughing back of gains b) Costs/efforts of local resource management (i.e., conservation) benefiting lowlands never compensated, global environmental services neither priced nor compensated	a) Migration of unskilled labour represents a mix of gains/losses as local labour shortage compensated by higher and more regular earning b) Salaried, lowland workers as part of development interventions to help implementation, bulk of their earnings get back to the lowlands	a) Has limited development orientation b) Little effectiveness; the extent disproportionately low compared to resource/product flows from mtns. to lowlands; terms decided by lowlands
4. Possible approaches to alter (3)	Alter terms of trade by realistic pricing; local processing (value-adding), improving local skill levels and infrastructure; and suitable sharing or compensatory mechanisms	Using environmental costing techniques evolve/implement appropriate compensatory mechanisms for both 'managed', and 'semi-managed' resource flows	Build infrastructure, enhance local skills, and encourage local development, micro-enterprises etc to reduce migration; impart better skills for higher earnings from migration	Appropriate and enhanced investment in mtns. to raise their productivity and comparative advantages, local participation in development decisions

^a Table adapted from Jodha 1997b. Also see Banskota and Sharma 1999. The table is based on observations and inferences from various studies in the field of natural resource use, production, and marketing in HKH areas.

- The key conclusion from the above discussion is that mountain areas are net donors of resources to the economies in the plains. The impacts of this phenomenon percolate to the community in different forms and constitute some of the reasons and circumstances responsible for unreduced poverty, deprivation, and underdevelopment in these areas. Hence, an understanding of the net drain of material/economic resources (forget environmental resources) from the mountains is a key step towards understanding the poverty and lack of development in most mountain areas.

Emerging awareness and importance of economic linkages

The facts and tendencies described above are not new but have been rarely recognised and much less have they elicited a response. On the contrary, over time their magnitudes and negative impacts have increased. In fact, the extent and intensity have increased with the increased physical, administrative, and market integration of historically, relatively isolated mountain areas with the lowlands. Table 20.4, section 4, presents steps that can help redress this situation. Furthermore, the possibility of building approaches and strategies incorporating these elements is quite encouraging in light of some of the recent developments supporting the cause of the mountains. It should be noted that, of late, inequitable economic linkages between the highlands and the lowlands have become a key area of attention for those concerned with the worsening economic and environmental situation of the highlands and its associated consequences for the lowlands. Factors directly or indirectly contributing to this awareness, concern, and the need to alter the situation are as follow.

Rising awareness about the mountains:

During and following the Earth Summit in 1992, awareness about mountain development has increased substantially. As a major source of the world's fresh water supplies, as the still surviving habitats of rich biodiversity in the global context, and as a natural regulator of downstream resource stability and productivity, the mountains have drawn global attention. In the process, several mountain problems, such as rapid resource degradation and mounting poverty, and their relationship to inequitable highland-lowland linkages have also received some attention.

Economic and social roots of resource degradation

Increasing recognition of economic and social causes of environmental degradation in the mountains has also led to acknowledgement of the inequities of highland-lowland economic linkages as a central component of exploitative resource-use dynamics.

Advances in environmental costing

Both conceptual and empirical studies on realistic costing of natural resources and environmental services have helped to raise concern for the uncompensated drain of

mountain resources to the plains and have helped to project the mountains as net donors of resources to mainstream (lowland) economies. However, such costing becomes more relevant when mountain people's perceptions are incorporated.

Recognition of off-side impacts

There has been an increasing emphasis on recognition, measurement, and monitoring of externalities and off-site impacts of mountain resource conservation/management, helping the downstream economies, and need for sharing or at least partially ploughing back gains to mountain areas to compensate the highland communities for their efforts in helping the lowlands.

Rising community aspirations and emergence of a mountain constituency

Related to the above factor is the rising ethnic consciousness and growth of unsatisfied community aspirations which often use the unequal highland-lowland linkages as part of the highlanders' agenda to project their grievances in their fight against the domination of the mainstream/lowlands. To this one can add the gradual emergence of a mountain constituency manifested by mountain states/governments/NGOs.

Inseparability of the long-term development prospects of lowlands and highlands

Increasingly, it is being realised that there are limits to separating the ecosystem and economic linkages of the highlands and lowlands, and none can be developed in isolation from the other. Hence, the urgent need for an integrated approach to highland-lowland development.

Permanent under-investment

The debate in mountain areas often links their poverty and underdevelopment to permanent under-investment in mountain areas and the inappropriateness of top-down interventions, which in turn are attributed to the unequal economic and institutional linkages between the highlands and lowlands.

Global liberalisation - new challenges and new opportunities

Mountain areas, like other areas, despite their poverty and the dominance of a subsistence-oriented production system are unable to escape the impact of emerging market-driven global liberalisation. As a positive development, globalisation has helped to bring the 'mountain issue' out into the open. Once such a window is opened, it is up to the mountain constituency to take advantage of it (as discussed later).

On the other hand, the primary apprehension about this change is that, being driven by market forces that help the stronger party in exchange transactions, globalisation could accentuate the historical bias of economic linkages against the highlands. Furthermore, since markets favour selectivity and efficiency based on specific criteria, the selected niche opportunities of the highlands may be subject to overextraction by external agencies at the cost of a diversified, local perspective and opportunities

focused on needs. At the same time, at the national level, promotion of liberalisation may encourage entry of formal private sector entities with their capital and enterprise – to promote enterprises and their links with lowlands. Thus such a change could greatly alter the complex of highland-lowland linkages. The way negative and positive repercussions of globalisation for mountain areas and communities take shape would, however, depend on the match or mismatch between the imperatives of mountain conditions and features of the rapid globalisation process. A few of these issues are described in the next section.

20.4 Globalisation and Fragile Mountain Areas/ Communities

Put simply, the globalisation process implies adoption of market-friendly economic policies and programmes specifically directed to liberalisation of trade and exchange policies, reorienting development and investment priorities, and restructuring of rules and provisions guiding economic transactions as well as the roles of different actors in the process, as dictated by the pressures and incentives generated by global economic forces and their legal and institutional instruments (UNDP 1999). The key implication relevant to the present discussion is the fact of according primacy to global perspectives and external concerns while dealing with local problems and, in the process, disregarding local perceptions and practices. The mechanisms through which global perspectives could be imposed at micro-level (or in the mountain context) are commodity trade and associated use of resources and changing production patterns, restructuring of property rights and access to resources, dismantling of existing regulatory provisions and their enforcement mechanisms, curtailment of welfare and promotional support for the needy, and promotion of preferred technologies and support systems through a range of investments, taxes, and price incentives, as dictated by market requirements which in turn are insensitive to both social and environmental concerns (Norgaard 1999). Mountain areas and communities are likely to face a range of problems in the context of such mentioned changes and pressures which may accentuate the circumstances promoting poverty discussed earlier.

The presumed virtues of globalisation, such as increased gains from the free flow of resources and products ensuring more efficiency, as well as the increased growth of wealth and welfare at global level, and assigning of the development and distribution business to market forces, which through transactions driven by incentives can perform ‘more efficiently’ (World Bank 1999), present a number of questionable assumptions (South Centre 1996). The latter become more clear when the process of globalisation is seen in the micro-level context, e.g., with reference to the mountains and their communities.

Globalisation and mountain areas

To begin with, the process of globalisation tends to create circumstances that are beyond the control of communities in mountain areas. This can marginalise the nature-

based economic niche of mountain areas. It forces them to interact as a the weaker party in a competitive world market. The process is governed by driving forces that are insensitive to the concerns of fragile ecosystems and their residents. Furthermore, the process is so rapid and overpowering that the communities affected have neither sufficient lead time nor the capacities required to adapt to rapid changes. If the scattered evidence emerging is any indicator, as a final consequence, globalisation may increase the exclusion of local communities from the specific resources as well as the pace and pattern of rapid economic transformation in mountain areas. It may accentuate the inequities associated with highland-lowland economic linkages. In particular, the process of exclusion could cause the loss of local access to resources and promote degradation of them; leading to the marginalisation of well-adapted production options and practices which in the past helped environmental sustainability and maintained the standards of living of people in mountain areas (Jodha 1999). More specific and interrelated contexts for understanding the potential repercussions of rapid globalisation on the mountains and their dependent populations are elaborated upon below.

One can understand the possible consequences of globalisation for the mountains by putting its key features in the context of circumstances characterising mountain areas into different categories: (a) visible incompatibilities between the driving forces of globalisation and the imperatives of specific features of mountain areas; (b) the possibility of globalisation accentuating the negative impacts of past interventions; (c) the erosion of practices and provisions imparting resilience and protection to mountain communities (including welfare programmes); and (d) the loss of niche and access to opportunities, an emerging 'exclusion' process. Based on the above understanding, one can also think of (e) indicative approaches or possible ways to influence and adapt to globalisation in mountain areas. Table 20.5 summarises the details.

Visible incompatibilities between the driving forces of globalisation and the imperatives of specific features of mountain areas

According to Table 20.5, section (a), the globalisation process is driven by market forces that (guided by short-term profitability and external demand) promote selectivity and narrow specialisation in the choice of production activities, encourage indiscriminate, and heavy use of resources, and lead to overextraction of niche opportunities/ resources with little concern for their environmental and socioeconomic consequences. These orientations are directly in conflict with the imperatives of specific conditions of the mountain areas rooted in their high degree of fragility, marginality, diversity, specific niche, and so on. These specific features create objective circumstances that favour diversifying resource use and production activities, balancing intensive and extensive uses of land resources as well as production and protection needs facilitating environmental and livelihood security in fragile ecosystems. Evidence of the above process at farm level is already visible in the focus on selected high-value crops, including horticultural crops, with heavy

Table 20.5: Potential sources of adverse repercussions of globalisation for mountain areas and communities and approaches to adapt to them^a

Potential Sources	Elaboration/Examples
(a) Visible incompatibilities between: (i) driving forces of globalisation and (ii) imperatives of specific features of mountain areas (fragility, diversity, and so on)	<p>(i) Market-driven selectivity, intensification of resource use and overexploitation induced by uncontrolled external demand versus</p> <p>(ii) Induced by fragility-marginality balancing of intensive and extensive resource uses; diversification of production systems, niche harnessing in response to diversity of resources</p> <p>Consequence Environmental resource degradation; loss of local resource-centred, diversified livelihood security options; increased external dependence</p>
(b) Accentuation of negative side effects of past development interventions through globalisation due to their common elements (approaches, priorities) with adverse effects on mountain areas	<p>Common elements between the past public interventions and market driven globalisation</p> <p>(i) Externally conceived, top-down, generalised initiatives (priorities, programmes, investment norms) with little concern for local circumstances and perspectives or involvement of local communities</p> <p>(ii) Indiscriminate intensification at the cost of diversification of resource use, production systems and livelihood patterns, causing resource degradation (e.g., deforestation, landslides, decline in soil fertility, biodiversity)</p> <p>(iii) General indifference to fragile areas/people, excepting in the pockets with high potential, creating a dual economy/society; overextraction of niche opportunities (timber, mineral, hydropower, tourism) in response to external (mainstream economy) needs, with very limited local development</p> <p>Consequence Environmental degradation and marginalisation of local resource-use systems, practices, and knowledge, likely to be enhanced due to insensitivity of the market to these changes and gradually weakened public sector</p>
(c) Globalisation promoting erosion of provisions and practices imparting protection and resilience to marginalised areas/people (including disinvestment in welfare activities)	<p>(i) Traditional adaptation strategies based on diversification, local resource regeneration, collective sharing, recycling, likely to be discarded by new market-driven incentives and approaches to production, resource management activities</p> <p>(ii) Shrinkage of public sector and welfare activities (including subsidies against environmental handicaps) depriving areas/people from investment and support facilities (except where externally exploitable niche opportunities exist)</p> <p>Consequence Likely further marginalisation of most of the mountain areas and people</p>

^a Table adapted from Jodha 1999

Table 5 Cont.....

<p>(d) Loss of local resource access and niche-opportunities through the 'exclusion process' emerging</p>	<p>Niche resources/products/services with their comparative advantages (e.g., timber, hydropower, herbs, off-season vegetables, horticulture, minerals, tourism) and their likely loss under globalisation through the following.</p> <ul style="list-style-type: none"> i) Market-driven overextraction/depletion as a result of uncontrolled external demand ii) Focus on selective niche, discarding diversity of niche, their traditional usage systems, regenerative practices; indigenous knowledge iii) Transfer of 'niche' to prime mainstream areas through market-driven incentives, greenhouse technologies, infrastructure, and facilities (e.g., honey, mushrooms, flowers produced more cheaply and abundantly in greenhouse complexes in the Punjab plains compared to naturally better suited Himachal Pradesh) iv) Acquisition and control of access to physical resources: forests, waterflows, biodiversity parks, tourist attractions by private firms through sale or auction by government, depriving local's of access, destroying customary rights, and damaging livelihood security systems <p><u>Consequence</u> Loss of comparative advantages to fragile areas or access to such gains for local communities</p>
<p>(e) Adapting to the globalisation process, possible approaches to loss minimisation</p>	<ul style="list-style-type: none"> i) Sharing gains of globalisation through partnership in primary and value-adding activities promoted through the market; building of technical and organisational capacities using NGOs and other agencies, including market agencies, to promote the above ii) Promotion of local ancillary units (run by the local people) to feed into final transactions promoted by globalisation; this needs institutional and technical infrastructure and capacity building iii) Provisions for proper valuation of mountain area resources and compensation for their protection, management by local people for use by external agencies iv) Enhancement of sensitivity of market-driven initiatives to the environment and local concern to be enforced by the international community and national governments v) All the above steps need local social mobilisation, knowledge generation, and advocacy movements; as well as policy-framework and support <p><u>Consequence</u> If the above steps are followed, there are chances of influencing the globalisation process and reducing its negative repercussion on mountain areas/people</p>

use of chemical inputs, in the hills (Nagpal 1999). The impacts on the environment and productivity of monoculture or reduced diversification are also increasing (Kreutzmann 1995, Jodha 1997c). Over-extraction of resources (timber, mineral, hydropower, herbs) with its negative side effects is also well recognised.

Possibility of globalisation accentuating the negative impacts of past interventions

It may sound strange, but as far as the mountains are concerned, most of the past development interventions by the public sector and the new market-driven processes under globalisation have a number of elements in common (Table 20.1 part 'b'). They include extension of externally conceived and designed, very much standardised and pronounced top-down interventions into mountain areas with little concern for local biophysical and social circumstances; indiscriminate intensification of resource use with little concern for fragility and diversity; overextraction of niche resources to meet external demands, and imposition of external perspectives, institutions, and technologies, marginalising the traditional well-adapted systems (Jodha 1998). These elements have been the source of negative side effects from development interventions in fragile areas (Ives and Messerli 1989, Banskota and Jodha 1992). Globalisation processes, governed by external market forces (and being much less sensitive to local circumstances), are likely to accentuate the above trends. A weakened state, yielding to the incentives and pressures of the globalisation process, will find it increasingly difficult to act against the accentuation process.

Globalisation can strengthen another feature of past interventions, namely, coexistence of the policy-makers' general indifference to mountain areas along with their intense focus on niche that can be exploited for the mainstream economy. The significant niche resources (timber, hydropower, herbs, minerals) offer attractive opportunities, through globalisation, for market agencies to exploit the resources with limited benefits for local populations and with most of the gains going to the mainstream economy outside these regions. Because of unequal highland - lowland economic linkages, this may increase the already substantial uncompensated flows of resources and products from the mountains to the lowlands (Jodha 1997b, Banskota and Sharma 1999).

Erosion of practices and provisions (including welfare programmes) imparting resilience, protection, and security of livelihood

There are two broad categories of provision and practices that have helped mountain people in the past. First, their traditional adaptation strategies to ensure both protection and use of fragile and marginal resources as well as security of livelihoods. These are manifested through diversified and flexible resource use, resource recycling, common property resources, and various risk-sharing arrangements (Jodha 1998). Despite their decline in recent decades, these practices are still an important part of their economic and social transactions. To this, one can add the gains from local harnessing and exchange of petty niche products with comparative advantages for the highlands.

Second, despite their limitations, public policies, through welfare programmes and subsidised development interventions, have been helping mountain people to compensate for the natural and other handicaps faced by them. The public sector plays a crucial role in these activities.

The above protective provisions and practices are likely to decline as a result of the pressures generated by globalisation (Table 20.1 part 'c'). Accordingly, traditional practices, despite their continued rationale and utility, are likely to be disregarded and marginalised by market-driven processes triggered by globalisation. We have already alluded to such traditional practices and arrangements, and they will be subject to a serious backlash from the new short-term, profit-centred production and resource management systems driven by external trade and dominated by external perspectives. There is a strong possibility that a dual system consisting of rich and resourceful groups/pockets participating in the change process and the bulk of the poor left with limited options will emerge. This is already visible in the gaps between the progressive and transformed areas participating in market processes and the bulk of mountain areas that are still outside this process (Jodha et al. 1992).

Similarly, with rapid shrinkage of the public sector and the deminished role of the state and a change in efficiency and productivity norms for resource allocation and performance assessment under strong 'market-dominated regimes', both welfare and subsidy supported development programmes are likely to be de-emphasised. The consequent lack of investment in welfare and protective programmes is already emphasised by structural adjustment plans (Reed 1996, Roy 1997). Yet another major negative consequence of globalisation is seen in communities in fragile zones losing their niche resources and opportunities. This is part of the 'exclusion process' discussed below.

Loss of niche and access to opportunities: an emerging 'exclusion process'

Mountains are endowed with unique environmental and resource characteristics that have potential for products and services with comparative advantages. As already mentioned, timber, hydropower, off-season vegetables, seed production, valuable herbs, minerals, and tourism constitute niche for mountain areas. Under market-driven compulsions and facilities, these areas may lose their niche. The process is likely to include the following (Table 20.1 Part d).

Production and trade-related exclusion

First, the survival and sustainable use of niche resources is closely associated with protection concomitant with use and their interlinkage with diversified, resource-based activities. Neither of these conditions would be likely to be satisfied in the face of external market driven pressures and incentives for selective overexploitation and indiscriminate intensification of resource use.

Second, the globalisation process would bring in new sets of incentives, technologies, infrastructure, and support systems which, in response to high demand and profitability, might facilitate creation of facilities made by people for production of items outside mountain areas in which the latter hitherto had a comparative advantage. Already there are several examples of this. For example, products such as honey, mushrooms, flowers, herbs, off-season vegetables, and quality crop seed, hitherto mainly produced in mountain areas such as Himachal Pradesh (India) are now produced more cheaply and in larger quantities in massive greenhouse facilities in the plains of Punjab. There is yet another development encouraged by trade policies that could marginalise the 'niche' opportunities of mountain areas by substituting their products with cheap imports. Thus, facilities made by people (circumstances) tend to increase the comparative advantages to the plains over the naturally endowed advantages of mountain areas. The negative impact of OGL - open general license for imports in India - on apples from the hills is one example (Sharma 1999).

Resource-related exclusion

The exclusion process related to production and trade indicated by the above possibilities is accentuated by resource-based 'exclusion'. This implies alienation of the local communities from their niche resources and associated niche opportunities. Accordingly, there are situations in which, as a result of physical or economic inseparability of niche from their spatial location, the marginalisation of niche opportunities in the mountains is not possible through production and trade mechanisms. In this situation, a different way of depriving the local communities of their niche opportunities is emerging in the HKH region. This involves external agencies (e.g., private firms, rich individuals) acquiring ownership or exclusive access and usage rights to landscapes and specific resources in mountain areas. Disregarding the customary rights and local control and access to such resources and products, large areas are given by the state to private companies in the name of developing resources and harnessing products. Auctioning or leasing of so-called 'wastelands', areas for mining or development of herbal farms, rights to water flows for hydropower, forests for timber, enclosures for parks and biodiversity, and prime spots for tourist resorts (and private dwellings for the rich) are among the examples of changing ownership and access to resources seen in different countries of the HKH (Jodha 1999). These developments alienating local communities from their own resources are complemented by the well-known global initiatives manifested by global treaties and conventions in which enlightened national and international policy-makers, including donors, rather than market forces, play the key role in alienating people from their own resources, e.g., in conservation areas, sanctuaries, and parks (Zerner 1999).

Possible ways to influence and adapt to the globalisation process

The overall situation described above portrays a rather bleak future for mountain areas and their communities. At the same time, in view of the realities unfolding at

national and international levels, it is not possible to wish away the process of globalisation. The best option lies in eliminating or minimising its negative repercussions for mountain areas, and in harnessing the positive gains of globalisation.

This in turn calls for influencing and modifying the said processes and adapting to the changes led by globalisation (Table 20.5 part 'e'). The way to achieve the above objectives should include a context-specific mixture of steps. The specific focus of the steps could be on minimising economic losses, preventing exclusion, ensuring local participation in the decision to harness resources, and creating compensatory mechanisms for environmental services offered by mountain areas and their people to the rest of the society and the economy. Some thinking on these issues is presented below.

- ***Partnership and sharing of gains*** — To begin with one should focus on a mechanism that can help mountain people share the gains of globalisation through their share in primary and value-adding activities based on opportunities in mountain areas promoted by globalisation. This implies their participation in a market-driven process of change. To facilitate their participation, the local people would have to be equipped with the requisite skills and capacities. This in turn would require social mobilisation and technical as well as organisational/management training. Several NGOs are already attempting this in scattered locations and activities (Preston 1997). Private firms entering mountain regions could be involved in the process by demonstrating to them the utility of local participation in market-driven initiatives. Local perceptions could prove immensely useful in dealing with the environmental implications of the new resource-intensive ventures likely to be encouraged by market forces in fragile ecosystems.

One of the most effective ways to ensure local participation in external initiatives in mountain areas would be to associate the local communities through ancillary activities with supporting the main ventures in production/ harnessing resources as attempted in China (Rongsen 1998). In such instances, one would have to guard against ancillary activities becoming exploitative of local participants.

- ***Compensating mechanisms*** — Yet another means for local communities to share in the gains of globalisation would be by providing adequate compensation for their losses through various 'exclusion processes' as discussed above. The recognition of customary rights and related practices and protection of intellectual property rights (IPRs) are other issues that could form part of the compensation or the basis for local partnership in market-driven initiatives (ICIMOD 1999).

The biggest factor requiring compensation relates to the current pattern of uncompensated flow of resources and products from the mountains to the mainstream, lowland urban economy. There is an urgent need to devise and use a valuation procedure to assess the real worth of resources (timber, water, hydropower, environmental services, tourism, and other specific natural products) (World Bank 1996) that are mostly protected and regenerated through the

management practices of communities in fragile areas. Thus, it is through their efforts and investments that environmental resources and services are available to the mainstream economy. If this task were performed well and appropriate compensation measures worked out, the mountain areas would not have to look for charity and subsidies from any agency. If the globalisation process were made accountable for externalities and induced to compensate fully for the resources and services used, the loss caused by the shrinking public sector and disinvestment in welfare activities could be compensated for sufficiently. Nepal's focus on tourism for local development is a worthy example to follow in this respect (Sharma 1999).

- ***Sensitising market-driven decisions/actions*** — The second strategic step for influencing or modifying the globalisation process would be to sensitise the market-driven decisions and actions to the environmental concerns in fragile areas. Since globalisation normally follows the signals provided by market forces, the sensitisation proposed would be not an easy task. Yet, if the international community were serious about the concerns presented in different forums, some strict limits would have to be imposed on extraction of resources and manipulating the environment; and these should arise from the discourses and decisions of international agencies (e.g., World Trade Organisation [WTO], United Nations Environment Programme [UNEP], World Bank) and national governments. However, as alluded to earlier, these agencies themselves, as promoters of global treaties and conventions affecting mountain areas, are too indifferent to the imperatives of specific features of mountain ecosystems such as fragility, marginality, and diversity and their interlinkages, and advocacy based on knowledge would be required at national and international levels to influence them.
- ***Mobilising diverse stakeholders*** — This task requires the mobilisation of local communities and sympathetic external voices from NGOs, environmental activists, academia, donors, and sensitive government agencies. In the age of the information revolution and communication technologies, linking the voices and concerns from multiple agencies and locations should not be difficult. Besides, the official or semi-official agencies dealing with issues of global warming and climatic change, biodiversity conservation, and desertification have considerable clout to influence governments and international agencies. Their awareness and convictions about the consequences of globalisation could surely draw the attention of policy-makers at the highest level. However, in all this, the mobilisation of voices and views would have to start from the mountain areas themselves.

However, to evaluate, improve, and add to the above suggestions, to build a strategy that could be implemented, an overall guiding framework and a support structure would have to be provided by the policy-makers dealing with mountain areas and their sustainable development. To facilitate this, the same issues could be projected for policy-makers.

20.5 Indicative Policy Challenge and Choices

Even this rather sketchy account of the emerging situation on the repercussions of globalisation for mountain areas and communities and the possible approaches to address them could help to identify steps that policy-makers could promote to minimise the negative consequences and harness positive opportunities associated with globalisation for mountain areas.

A sound information base and understanding

- The first task that policy-makers should undertake is to facilitate a better understanding of the emerging impacts of globalisation (i.e., the policies, programmes and procedures involved) on mountain areas and communities. To begin with, this would be an information intensive activity. A systematic research effort should be initiated into understanding the repercussions of globalisation, particularly the percolation of impacts at micro-level.
- The framework, focus, and design for such a research effort could be built around the issues discussed in this paper. The issues to be addressed could be placed into two categories: (a) issues of a conceptual nature such as the degree of incompatibility between imperatives of mountain specificities and the driving forces and operational mechanisms of globalisation elaborated upon earlier; and (b) complementing the conceptual issues are other aspects that illustrate the operational dimensions of the former. The latter include inferences from the field evidence on specific changes such as the changing status (i.e., marginalisation) of mountain niche, exclusion of mountain communities, increased inequality of highland-lowland economic linkages, and the efforts emerging to adapt to negative and positive impacts of globalisation. They could constitute the sub-themes for operationally oriented research efforts.

Strategies and approaches: strengthening mountain niche

Building upon the relevant database and analysis, the operational strategies to harness gains of globalisation and minimise its backlash effects on mountain areas and communities could be developed around two focal areas, namely, (i) limitations and weaknesses of mountain areas/communities vis-à-vis the mechanics of globalisation and how to convert them into positive aspects and (ii) strengths and facilities associated with globalisation, the harnessing of which can help mountain areas. This is explained below.

- One of the key limitations of mountain areas with reference to the present discussion is that, in the past, these regions have relied mainly on niche or comparative advantage provided by nature. Facilities made by people to improve the niche for local development and favourable terms of trade in their external exchange have not emerged. Hence, the key challenge for agencies interested in the prosperity of mountain areas in this era of globalisation is how to strengthen their old niche and identify new niche opportunities through R&D, infrastructural support, private sector partnership, and people's participation.

- In the short run, using globalisation's own norms or tools, e.g., product differentiation, a number of niche opportunities could be created by 'branding mountain products' (as organic products and eco-friendly products to fetch high prices and exclusive markets). Introduction of value-adding for local processing of mountain products, e.g., herbs and fruit, could be another area. Some NGOs and self-help groups are already attempting such measures. Research and development (R&D) in the mountains could be focused on the 'quality aspect' of niche products as, for example, in Himachal Pradesh (Sharma 1999) and many parts of China (Rongsen 1998). However, institution building and infrastructural development efforts need a strong impetus and substantial investment. Mutual learning between different mountain areas could be another rewarding step in this direction as demonstrated by ICIMOD's multi-country projects (Papola 1998, Sharma 1999).

Arresting the 'exclusion process'

The issues of 'exclusion of mountain communities' in terms of both access to resources and participation in newly emerging, high pay-off activities are closely linked to the capacities, skills, and resources in the command of mountain people. Having lived largely with the support and management of nature-endowed options, the mountain communities find themselves completely lost in the face of challenges and opportunities created by globalisation in which human interventions play the dominant role.

- To address this problem, the essential steps would be information and awareness generation, skill formation, and institutional arrangements to strengthen the capacities of mountain communities for new tasks. As already mentioned (in discussing adaptations to change), associating local communities with private agencies promoted through globalisation is one promising area in which to involve and strengthen communities for new tasks. These capacity building efforts would help to ensure local participation in globalisation-generated options for mountain areas. Some initiatives have already been undertaken by NGOs and self-help groups. These efforts now need to be complemented by public policies and programmes. Despite the shrinking role of the public sector, the above-mentioned measures, being part of social overheads, will have to be a focus of the state.
- The 'exclusion process' through alienation of mountain communities from their resources and products is a clearer case for policy attention. Besides restricting the indiscriminate transfer of land resources from the local community to others, as guided by market forces, other obligations for the buyers or lessees need to be provided for in the overall approach in this field to ensure access to resources and ownership on the part of mountain communities. A few areas where policy-thinking and action could be focussed include: partnership or gainful involvement of local communities in the enterprises built upon the aforementioned transfers of property or access rights; legal or related provisions to guide the establishment

and operation of new agencies acquiring resources and their obligations to ensure alternative earning options for the people alienated from local resources through the changes.

Advocacy of 'local' responsibilities of global stakeholders

The moment national or international private corporations become involved in mountain areas directly as users or suppliers of resources, products, and services or indirectly through influencing development decisions and actions, they become stakeholders in the present and future of mountain areas. Being stakeholders, they also have responsibilities towards mountain areas. However, the awareness and execution of these responsibilities continue to be a major gap. Policy-makers could address this gap by initiating action on the following lines.

- Lobbying agencies setting the global agenda and promoting liberalisation about the special problems and issues of mountain areas, as a result of inaccessibility, fragility, marginality, and diversity which call for regulation of market-driven initiatives that otherwise marginalise the mountain niche and enhance 'exclusion' of mountain communities. This also calls for compensatory mechanisms in terms of well-focused financial support or application of modified norms for investment returns and performance in mountain areas. This is essential because, in view of the biophysical constraints, mountain economies are seriously handicapped when they participate in the competitive market (Messerli *et al.* 1997).

It should be added that provisions for support facilities need not be a matter of charity or extra favours for the mountains. In fact, if systematically worked out, such resource transfers would account for a small fraction of the uncompensated resource and product flows from the mountains to the rest of the world (Jodha 1997b). To explain this, all local efforts towards conservation of land, water, and biodiversity have several externalities offering more benefits to the downstream regions than to mountain people. At least some compensation for such services would justify the suggested special treatment of the mountains, which otherwise would not be possible as a result of the rapid marginalisation of the public sector and rising primacy of market forces in guiding economic transactions.

A related point is the need for realistic valuation of mountain resources (forest, water, biodiversity, minerals) and environmental services, currently acquired and used at arbitrarily low prices. Methods for valuation of natural resources and environmental services are already available (Ahmad *et al.* 1989). Market forces/agencies must be sensitised to this aspect. This has both economic and ecological justifications.

The regulatory framework for market agencies harnessing or developing mountain resources should also include measures to sensitise them to environmental problems in order to facilitate their acceptance of restrictions on the free play of market forces.

- Partnership between mountain communities and agencies of the global process (private firms) producing, processing, and marketing mountain products and services is another mutually rewarding area which should be advocated and focused upon to ensure gains from globalisation for mountain areas. This aspect has already been discussed earlier in different contexts. This needs both a policy framework and an operational programme in mountain areas.
- New sources are needed to relax mountain constraints. As indicated earlier, most of the constraints in mountain areas are a product of conditions associated with high degrees of inaccessibility, fragility, marginality, and diversity. Despite knowing about them, these problems have persisted because of the policy-makers' indifference towards them or because of a lack of resources to address them. The globalisation process has improved the access to and availability of investment resources as well as relevant technologies to handle the above problems to a great extent. Hence, involvement of global or national agencies in activities such as building physical infrastructure could be another area for harnessing the benefits of globalisation. A systematic reduction in remoteness or isolation itself could go a long way towards enhancing the mountain economy's competitiveness in global markets. However, a side issue to enhancing the facilities and harnessing mountain resources by external agencies is their sensitivity to environmental concerns in the mountains, most of which have been ignored even by public-sector development interventions in the past. Under the new arrangement to be promoted by the private sector (through globalisation) this aspect should to be explicitly addressed.

A forum for dialogue and decisions

The final point in the above context relates to the fact that, even if the above-mentioned indicative approaches are not readily acceptable to market agencies driven by the globalisation process, they could be persisted with by involving different stakeholders. One positive feature of the globalisation process is that, as an internationally endorsed framework, coordinated by WTO, it is slowly evolving. It provides a platform for dialogue and resolution of conflict through periodical WTO meetings where issues emerging can be presented. Repercussions of globalisation for the mountains and their resolution could be a fit subject for such discussion and decisions. However, such, advocacy has to be supported by detailed information and analysis about the issues. Agencies/NGOs, such as the Mountain Forum, are already in place to promote lobbying for mountain problems. They should also focus on the problems of mountain areas related to globalisation.

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