

Natural Resource Management and Poverty Alleviation in Mountain Areas Approaches and Efforts*

- N. S. Jodha**

I. INTRODUCTION

This paper addressed to the community level natural resource management and rural poverty, first re-examines the mainstream view accusing poor for natural resource degradation. This is followed by discussion on the process of resource degradation, where the traditional and present day systems of natural resource management in mountain areas are compared. This helps in identification of factors and processes contributing to resource degradation. The lessons from the past systems and successful experiences of new initiatives on community forest management in Nepal and India are synthesized to suggest possible approaches to rebuild the community's natural assets. The paper at the end looks at the concerns and uncertainties characterising the forest centred new initiatives and possible ways to address them.

The crucial role of natural asset building i.e. conserving, regenerating, upgrading and equitably harnessing of natural resources, particularly forests, pastures and their links with crop lands, in helping the poor is closely linked to the former's contributions towards enhancing the range and quality of options for livelihood of the poor (Dasgupta 1996). These options are manifested by direct availability of seasonally and spatially varying supplies bio-fuel, fodder, fiber and food items as well as timber and several high value products such as medicinal herbs, honey, mushrooms and vegetable dyes etc. The indirect supplies or rather services offered by forests (and other natural resources) include stability of micro-environment, flow of moisture and nutrients etc. for productive and sustainable farming systems.

The facilitative role of forests is all the more important in mountains regions where: due to limited accessibility and relative isolation people's dependence on local resources is very high; forest imparts important protection against hazards and risks associated with slope induced fragility of landscape; forest occupy central place in sustaining diversified and interlinked land based activities in response to diversities characterizing these areas; forest along with pastures performs integrative role in organically linking different bio-mass based economic and ecological functions. The ideal state of these functions and contributions represent positive eco-system social system links, where community norms and practices are adapted to attributes of natural resources. However, the nature and magnitude of these links (and associated contributions of forests) tend to change following the increased external interventions (through state and market) in mountain areas.

The physical, economic and ecological supplies and services of natural resources are not confined to the poor only, but the latter depends more on the nature-offered options, as unlike the well off groups they do not have enough man-made endowments to support them (Agarwal and Narain 1990, Jodha 1992). And yet, this aspect not only continues to be disregarded by development strategies, but its underlying reasoning is reversed in the scholarly discourse on the causes of natural resource degradation in the developing countries. Accordingly, environmental resource degradation is primarily linked to poverty. We call it poverty-environmental resource degradation (P-ERD) link. Hence, before discussing the central issue of

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** Senior Adviser (Policy Analyst), ICIMOD, Kathmandu, Nepal

poverty alleviation through building natural assets, we question the P-ERD link and attempt an alternative explanation for natural resource degradation, which in turn will be helpful in addressing the central issue mentioned above. The essence of our argument in the above context is that –

- (i) evidence on correlation between P and ERD is not generalisable or it does not exist every where and at all times;
- (ii) the alternative causal interpretation for the correlation (where it does exist), in which ERD causes poverty rather than vice versa; and
- (iii) related to the (ii), the real cause of ERD is inequality (promoted and manifested by different processes) rather than poverty.

In the following discussion we elaborate on the above aspects, with unavoidable overlapping between the three.

Poverty and Resource Degradation Link

The key thinking behind P-ERD link is based on the widespread coexistence of poverty and environmental resource degradation in developing countries. However, this reasoning is focused on the consequence rather than the process behind this phenomenon. The natural resource degradation initiated and accelerated through different processes led to a situation, where poor emerged as the principal user of degraded natural resources, because of a lack of other options and very low opportunity cost of his labour (in comparison to his rich neighbour). Any assessment that disregards the process and concentrates on the current consequence is more likely to support the P-ERD link. However, in the mainstream debate on the subject P-ERD link is emphasized so frequently and effectively (Durning 1989, Mink 1993), that its underlying formulation has acquired the status of stereotype. This not only diverts the attention away from several basic issues involved in the process (Panayotou 1990, Metz 1991), but prevents the recognition and analysis of simple field level observations.

For instance, there is a widespread oral and some recorded evidence that in many areas (villages) currently facing severe environmental resource degradation, the resource users in the past were poorer (in terms of modern indicators of well being e.g. income sources, access to social sector facilities, reduced risks and vulnerabilities etc.) compared to present day and yet the natural resource degradation was consciously prevented (Bromley and Chapagain 1984, Sanwal 1989, Pant 1935). Similarly, in the current context in many areas the contribution of richer groups towards resource degradation is greater compared to those of the poor (Jodha 1992, Prakash 1997). The situational mapping of all districts of Nepal using 39 indicators of development revealed that the economically poorer districts ranked much higher in terms of extent and health of environmental resources, in terms of undepleted, protected forests and pastures, limited soil erosion and unchoked perennial water springs etc. (ICIMOD 1997). Equally important is the case of Bhutan in this respect. The country is poorer even from South Asian standards but has highest extent of undisturbed natural forests and un-depleted soil and water resources (National Environment Commission 1998). The explanation for above paradoxes, manifested by co-existence of poverty and better status of natural resources, lies in the factors and processes influencing patterns of resource use. Firstly, the poor have limited needs as well as resource extractive capacities to erode the natural resources. More importantly, they are spared from external interventions and forces that often accompany the rising richness of the communities. Consequently, the poor communities have undiminished stake in the health and productivity of its environmental resources and institutional norms and practices at their command to safeguard the stakes. Dilution or disintegration of the community stakes and erosion of grass roots level mechanisms to protect and enhance these stakes

constitute the fundamental reason behind natural resource degradation, irrespective of poverty or richness of the communities (Bromley and Chapagain 1984). This critical factor guiding the people's approach and resource use decisions is largely ignored by the generalized mainstream view that directly links resource degradation to poverty. Consequently, one tends to focus on proximate causes (e.g. poverty) rather than the key driving forces causing degradation of natural resources (Prakash 1997). In fact more than poverty, it is inequality in resource ownership, access, power and other endowments, that promotes environmental degradation (Boyce 1994).

The lead line of reasoning behind the P-ERD view is that poverty (and scarcity) cause desperation, which in turn promotes over-extraction of resources leading to resource degradation, causing still greater extent of scarcity and poverty, which again further accentuate the above cycle. This fairly convincingly explains the dynamics of resource degradation and the role of poverty therein. But a major limitation of this formulation relates to the specific assumptions about the poor's approach to natural resources and their resource use-behaviour. The implicit key premises underlying the formulation that concentrates on poverty as prime mover of environmental resource degradation can be stated as follows (Jodha 2001):

- (i) The over-extraction of resources is the only and preferred means of sustenance the poor people know.
- (ii) The poor are ignorant of both limitations of their natural resources and consequence of their extractive usage practices.
- (iii) The poor have little stake in the health and productivity of their natural resources.
- (iv) The poor have high rates of time preference (so that even if they are not ignorant of limitations of resources and have concern for the health of the resources) they cannot afford to limit extraction.

All these premises can be easily inferred from the current pattern of natural resource use in many poor areas. However, our contention is that these are only manifestations of erosion of the past arrangements at grass roots level, where the poor's situation and behaviour (i.e., decisions and actions) were quite opposite to the ones implied by the above premises. This could be illustrated with the help of situations studied in Himalayan mountain regions of Nepal, India, China and Pakistan.

The Mountain Context

The focus on mountain areas is of specific significance in the thematic context of P-ERD link. Most of parts of HK-H (Hindu Kush-Himalayan) region extending from Afghanistan to Myanmar covering eight countries not only belong to the category of poor areas but are faced with the rapid degradation of environmental or natural resources (the two terms used interchangeably in this paper). Furthermore, the past situation of mountain areas, in terms of ecosystem-social system links (i.e., resource users' approach and behaviour conditioned by the bio-physical features or restricted supply side conditions) contrasts sharply with the present situation, where resource use is demand driven, ignoring limitations of natural resource base (Jodha 1998). Finally, as elaborated below, these areas have very high potential for both persistence of poverty and rapid degradation of natural resources.

In mountain areas, due to their biophysical features such as high degree of fragility, marginality, limited accessibility, narrow location specificities of activities etc., the circumstances tend to favour the persistence of poverty (Jodha 2000a). Due to the above features, the conditions historically associated with enhanced economic performance or reduction of poverty (e.g. resource use intensification, surplus generation, reinvestment, equitable trade etc.), in most parts of the world, are rarely satisfied in the mountain areas. For instance, resource use intensification, and high input absorption for enhanced productivity are constrained by fragility and marginality; gains associated with larger scale of activities are not possible due to high

degree of resource diversity (which favour narrow location specificity of activities); these very factors restrict the scope for surplus generation and reinvestment for poverty alleviation; the gains from trade, external exchange etc. are also restricted by limited accessibility and isolation; fragility, marginality and inaccessibility restrict the harnessing of opportunities linked with small scale, diversified production systems (favoured by rich resource diversities) and specific niche resources of mountains. Faced with the above objective circumstances the mountain communities except in well endowed and accessible valleys have to live with limited, low productivity options and high environmental risks due to fragility and physical vulnerabilities. The mainstream economic and political systems generally (except for extracting niche resources such as minerals, timber, hydro-power) found them unattractive and ignored them as marginalities. Thus nature (and mainstream economy as well) generated high poverty prospects for these areas. Being destined to be poor, as per the P-ERD formulation, these areas should historically have extreme degree of resource degradation. Furthermore, because of fragility and marginality, these areas are more prone to (often irreversible) natural resource degradation following even a small degree of resource use intensification, which again as per the P-ERD reasoning should be, unavoidable because the poor through inappropriate intensification over-extract the resources.

Thus poverty of the people and fragility of natural resources in the mountains make them potentially an ideal place for operation of P-ERD link. However, the failure of this potential to materialize in the past, encourages one to question the overemphasis on P-ERD link. Furthermore, the understanding of the reasons behind non-working of P-ERD link can provide useful insights to evolve options for breaking the vicious cycle of poverty-resource degradation-poverty implied by P-ERD theme. To facilitate this understanding, we have a quick look at the traditional systems of resource use, based on collective stakes and mechanisms to protect and enhance these stakes in the areas under review.

II. THE PAST AND THE PRESENT APPROACHES TO NRM

Here we describe some features of the traditional natural resource management (NRM) systems in mountain areas, which have direct relevance to the poor's resource use behaviour. It should be added that the purpose of highlighting traditional practices in mountain areas is not to idealise them. The objective is (a) to indicate the grass roots level institutional arrangements, which helped, in balancing the protection and extraction of resources to meet sustenance needs; (b) to reflect on the processes and factors leading to erosion and decline of these arrangements; and (c) the possible lessons for the current initiatives directed to re-building of natural assets.

Table 1 summarises the inferences from different studies in mountains areas on the aspects which are central to the natural resource usage in these areas. Accordingly, most of the communities in these relatively isolated, fragile and marginal resource areas, faced with limited, low productivity options with high environmental risks and having limited and undependable external linkages, had to evolve their sustenance strategies through adaptations to the limitations and potentialities of their local natural resource base. They included seasonally and spatially diversified and interlinked land-based activities (diversified farming systems, farming forestry links, common property resources, etc.). The key features of the adaptations were:

- (i) Almost total or crucial dependence on local natural resource base (NRB) leading to community's explicit realization of strong links between their sustenance and protection and productivity of their NRB. Despite internal inequities and occupation-specific differences in gains from NRB, every one's close dependence on local

Table 1: Factors and Processes Associated with the Community Approaches and Usage of Natural Resources in Mountain Areas under the Traditional and the Present Systems

Traditional Systems	Present Day Systems
<p>A. <i>Basic objective circumstances:</i></p> <ul style="list-style-type: none"> (i) Poor accessibility, isolation, semi-closeness: low extent and undependable external linkages and support: subsistence-oriented small populations; (ii) Almost total or critical dependence on local, fragile, diverse natural resource base (NRB) <p>Consequence: High collective concern for health and productivity of NRB (natural assets) as a source of sustenance</p>	<ul style="list-style-type: none"> (i) Enhanced physical, administrative and market integration of traditionally isolated, mountain areas/communities with the dominant mainstream systems at the latter's terms; increased population; (ii) Reduced critical dependence on local NRB; diversification of sources of sustenance (iii) High external demand, NR Extraction <p>Consequence: Reduced collective concern for local NRB (natural assets); rise of individual (extractive) strategies; ERD</p>
<p>B. <i>Key driving forces/factors generated by (A):</i></p> <ul style="list-style-type: none"> (i) Sustenance strategies totally focused on local resource; (ii) Sustenance-driven collective stake in protection and regeneration of NRB; (iii) Close proximity and access-based functional knowledge/understanding of limitation and usability of NRB; (iv) Local control of local resources/decisions; little gap between decision-makers and resource users. <p>Consequence: Collective stake in NRB supported by local control and functional knowledge of NRB</p>	<ul style="list-style-type: none"> (i) External linkage-based diversification of sources of sustenance (welfare, relief, trade, production etc.); (ii) Disintegration of collective stake in NRB; (iii) Marginalisation of traditional knowledge, and imposition of generalized solutions from above; (iv) The state imposed legal, administrative, fiscal measures displacing local controls/decisions; wider gap between decision-makers and local resource users <p>Consequence: Loss of collective stake and local control over NRB; resource users respond in a 'reactive' mode.</p>
<p>C. <i>Social responses to (B):</i></p> <ul style="list-style-type: none"> (i) Evolution, adoption of resource use systems and folk technologies promoting diversification, resource protection, regeneration, recycling, etc; covering forest, pasture, cropland and their organic links (ii) Resource use/demand rationing measures; (iii) Formal/informal institutional mechanisms/ group action to enforce the above. <p>Consequence: Effective social adaptation to NRB</p>	<ul style="list-style-type: none"> (i) Extension of externally evolved, generalized technological/institutional interventions; disregarding local concerns/experiences and traditional arrangements; promoting sectoral fragmentation (ii) Emphasis on supply side issues ignoring management of demand pressure (iii) Formal, rarely enforced measures. <p>Consequence: NR over-extracted as open access resources.</p>
<p>D. <i>End results:</i></p> <ul style="list-style-type: none"> (i) Nature-friendly management systems; (ii) Evolved and enforced by local communities; (iii) Facilitated by close functional knowledge and community control over local resources and local affairs. <p>Consequence: "Resource-protective/regenerative" social system – ecosystem links.</p>	<ul style="list-style-type: none"> (i) Over-extractive resource use systems, driven by uncontrolled external market demands and internal population driven demands; (ii) Externally conceived, ineffective and un-enforceable interventions for protection of NRB; (iii) Little investment and technology input in NRB <p>Consequence: Rapid degradation of fragile NRB; "nature pleads not guilty"; "so does the rural poor".</p>

Source: Table adapted from: Jodha (1995, 1998).

resources, created an integrated collective stake in their natural resources reflected by group action protect and manage them (Berkes 1989, Jodha 1998, Leach et.al. 1997).

- (ii) In the context of relative isolation and small size of the rural communities, the latter's physical proximity to their environmental resources imparted better knowledge and understanding of limitations and usability of their NRB. This not only helped in developing folk technological practices to protect and regenerate the resources while using them, but also facilitated creation of locally enforceable range of regulatory measures to guide use-intensity of resources (such as rotational grazing, periodical fallowing of lands, combining annual and perennial based activities and periodical contributions (labour, grain etc.) towards investment for trenching, fencing and other practices for upkeep and development of the resources (Pant 1935, Jodha, 1998, Tamang et.al. 1996, Bijoness 1983).
- (iii) Most importantly, enforcement of the above measures was facilitated by social sanctions or community norms, group action and in some cases feudal arrangements for punishing the defaulters. The ultimate source of strength for enforcement of these arrangements was local autonomy or local control over local resources (and local affairs) and the resources users' collective experiences and knowledge of resource base, (due to close proximity). Despite the presence of some unegalitarian elements, these collective arrangement worked because despite differences in individual group needs, the commonness of the source of supplies, helped in integrating the individual stakes into a collective stake in the local natural resources (Jodha 1998, Sanwal 1989, Leach et.al. 1997, Tamang et.al. 1996).
- (iv) The regulatory measures and collective efforts also extended to different demand side aspects of resource use as indicated by collective sharing arrangements for food, fodder etc. during scarcity and crisis periods; management of demand pressure in general through periodical migration of people and animals and restrictions on the size and composition of animal holding, etc., (Jodha 1995, Bijoness 1983, Prakash 1997). In fact in some mountain communities the demand pressure was controlled through restricting the population growth by making eldest sons as Buddhist monk. To an extent this practice is still prevailing in countries like Bhutan.

To sum up, the foundations of the traditional systems of natural resource management in mountain areas included: (a) the community's sustenance-driven collective or integrated stake in the health and productivity of local natural resources; (b) physical proximity and practical experience-based knowledge and understanding of natural resource base, as a basis for evolving technical and institutional measures to prevent over-extractive resource usage, (c) local control over local resources and adherence to social sanctions that empowered the community to protect and enhance community stake in its natural resources and enforce the measures which helped in balancing supply and demand aspects of resource use in the community context.

The above arrangement significantly helped in preventing the operation of P-ERD link in the past. However, as Table 1 also shows, these arrangements got eroded following the changes which (except population growth) were initiated from the outside following the closer physical, administrative and economic integration of mountain areas in to mainstream economy and society. The most critical and common element of these changes has been the conception, designing and implementation of external interventions by the state agencies at grass roots level without sufficient understanding of the ground realities including local communities'

concerns, capabilities and knowledge systems. These externally designed interventions, directed to development or transformation of mountain areas without mountain perspective, in their respective ways created circumstances and perverse incentives (such as individual centred subsidies for resource use intensification and acceptance of external advice and technologies), which finally led to: (a) disintegration of community stakes in the natural resources, (b) disempowerment of the communities to manage the grass roots level problems including natural resource protection, and (c) marginalisation of local knowledge system and institutional arrangements which helped in enforcing NRB protection in the past as reported by several studies (Somanathan 1991, Tamang et.al. 1996, Guha 1983, Butt and Price 1999, Bromley and Chapagain 1984). Table 1 focuses on these aspects by indicating the provisions which went against the above traditional arrangement and eroded them without providing effective substitutes. The examples may include legal and administrative impositions on resource access and usage; extension of resource intensive technologies unsuited to mountain areas; focus on supply promotion ignoring demand control etc.

To elaborate further, in the first place enhanced physical, administrative and market integration of traditionally less accessible, marginal areas in to the mainstream systems reduced the crucial (if not total) dependence of local communities on local NRB. Integration, brought several gains to these areas including external linkage-based increase and diversification of sources of sustenance through welfare and relief schemes, new production possibilities, increased gains through trade and exchange, infrastructural facilities social-sector services etc. But it had some backlash effects in terms of: (i) dilution or disintegration of collective community stake in its NRB; (ii) disregard and erosion of the traditional arrangement which in the past helped in protection and regulated use of NRB (a consequence of imposition of several externally conceived and designed technical/institutional interventions with little understanding and sensitivity to grass roots level realities); (iii) depriving the local communities of their role and responsibilities in managing local resources and local affairs. This happened through (a) introduction of largely outward looking and politically-oriented formal institutions such as village Panchayats; (b) empowering of government revenue officials or forest officials as custodians of natural resources; (c) replacement of locally evolved institutional arrangements and customary provisions by legal and administrative arrangement evolved at higher level; and (d) distortion of community incentive system by patronage, subsidies, relief, etc., that also added to the pressure on local resources without regenerating them. The point of concern here is not to question the integration and its benefits, but its process which disregarded and marginalized the traditional arrangements for managing and strengthening the communities' natural assets. The rural poor obviously can not be held responsible for this change.

To reiterate, the integration has surely helped the mountain communities (though not equally) in several ways including by reducing the extent of poverty and vulnerability characterizing mountain communities. But this change in bulk of the cases could not facilitate communities', collective involvement in NRM.

Another negative side-effect of aforementioned integration with very significant relevance to the natural resource degradation relates to the shift from supply driven usage to demand driven over extraction of resources. The two way adaptation process i.e. adapting demands to resource limitations and adapting or amending resources to rising human needs (e.g. through terracing water harvesting, annual-perennial combinations etc.) characterizing traditional systems has become a one way process. In here the meeting of uncontrolled external and internal demands accompanied by enhanced technological capacities and support systems to over extract the resources has become dominant pattern. The "greed" of the rich through market rather than "need" of the poor as mountain people often say, has become the driving force behind over extraction. An associated feature of external demand driven resource

extraction is unequal high land – low land economic links, leading to unrealistic pricing and little to limited compensation for resources/products/services (timber, hydro-power, NTFPs, tourism services), flowing from mountains to low land economies (Jodha 2000a). The integration could not facilitate provisions for internalization of gains from mountain areas availed by the low land systems.

III. LESSONS FOR REBUILDING NATURAL ASSETS

In view of the visible failures and ineffectiveness of most of the government efforts to protect natural resources and prevent their degradation, one may be tempted to look for some leads from the traditional arrangements. However, before venturing in to this direction, it should be clearly stated that pleading for revival of traditional arrangements for natural resource management could be dismissed an exercise in futility, because, most of the objective circumstances associated with them in the past have completely changed to permit their revival and ensure their effectiveness in the present day context. For instance: (i) market penetration and changes in the attitude of village communities have promoted the values and approaches which put very low premium on collective strategies; (ii) population growth, rise in factionalisms, and increased economic differentiation have made it difficult to evolve and maintain a collective community stake in natural resources; (iii) depletion of natural resources and depletion of culture of group action (or social capital) tend to reinforce each other in accentuating the community's indifference towards rehabilitation of natural resources for collective gains; (iv) the legal, administrative and fiscal mechanisms (despite lip-service for the opposite) have strong tendency for centralization and application of uniform, generalized, top down solutions, ignoring the diversities at the grass roots levels.

However, without pleading for revival of traditional arrangements (in the form they existed), one can focus on a search for functional substitutes of the traditional arrangements, which can fit with the present day circumstances. For doing so one should focus on the three pillars of traditional systems, which in the past played very crucial role in preventing human-induced degradation of community's natural resources in mountain areas. To reiterate, these elements along with the objective circumstance that promoted and strengthened them were: (a) strong community stake in their local NRB, driven by community's almost total dependence on the same; (b) local control over local resources resulting from isolation and inaccessibility-induced degree of autonomy; (c) resource users' and decision-makers' functional knowledge of limitations and usability of their diverse natural resources resulting from people's close physical proximity and access to resources.

The incorporation of the three elements (i.e., community stake; local control and functional knowledge of natural resources), into the present resource use systems may help in rehabilitation and conservation of natural resources, and therefore should be promoted. But revival of their historically associated objective circumstances (e.g., exclusive and almost total dependence on local resources, semi-closed communities, physical proximity for all stakeholders) is neither possible nor (in some contexts), desirable. Hence, the challenge lies in creating present day functional substitute of the past circumstances, which can promote the three key elements (community stake, etc.) and induce communities to protect and develop their natural assets while using them.

Under Table 2, we briefly summarise the relevant issues in this respect. Accordingly, we indicate the constraints to such change with respect to each of the three elements. This is followed by possible remedial measures to address the aforementioned constraints. Some of the suggested possibilities could amount to loud thinking on the subject but they are supported by small and scattered evidence based on successful initiatives on community forestry in the

recent years. Accordingly this discussion on possible approaches to rebuilding of natural assets combines the usable elements of traditional systems of natural resource management as well as the experiences of recent initiatives on community forest management particularly from Nepal and India. Some specific issues relating to these programmes are also discussed separately later.

(a) Reviving Community Stake in Natural Resources

The community stake in the local natural resources is most central to their protection development and equitable use. However, in the present day context there are more circumstances discouraging this than those supporting it.

- (i) *The external controls and perverse incentive systems:* In most cases local communities respond or simply adjust to external interventions and impositions, (i.e., government laws and regulations), rather than control or plan their own approach to resources. The whole incentive structure-permitting privatization of community resources, illegal extraction with little penalty, priority to political patronage and unrealistically low or little pricing of high value natural resources products – is designed and operated against the community involvement in resource protective and regenerative efforts.
- (ii) *Increased economic differentiation and diversity of interests:* The reconciling the interests of diverse groups in the villages, constitutes yet another challenge for building community's collective stake in the health and productivity of natural resources. Internal heterogeneity and inequities are not a new thing in the South Asian villages. However, following the already mentioned changes (Table 1), decline of culture of group action, increased economic differentiation and socio-political factionalism, the differences and divisions in the rural communities have greatly increased.

Furthermore, the traditional circumstances (e.g. dependence on common resource base) facilitating informal inter-group bargaining and reconciliation (Leach et.al. 1997) do not exist any more. For instance, in place of local natural resource base as common source of sustenance, now there prevail multiple and diverse sources of sustenance (of internal and external origin) for the village economy; the long lead time available for internal bargaining and adaptations by action, is no more available; socio-political contexts for different groups at times also fall outside the boundaries of local community's influence; the organic links between different NR based activities (e.g. farming-forestry-livestock complementarities) are broken due to out sourcing of their input needs and product disposal destination (Jodha 2002). All these factors would obstruct the evolution or revival of community's collective stake in natural resources.

- (iii) *Highly depleted status of natural resources - not worth a stake:* In the context of present bio-physical (and economic) status of community natural resources, the local control over local resources may not induce positive response of the community. The natural resources in many areas are depleted to a level which does not inspire much hope, let alone community's group action for their management. The emerging tendency on the part of the people (both rich and poor) is to some how grab the common property resources as private property, rather than collaborate in collective efforts to rehabilitate the depleted common resources.

Remedial measures

Most of the aforementioned constraints to reviving community stake in local natural resources are of institutional nature, requiring different approaches and lead time-periods to resolve them. However, in view of the evidence that people care more about the more productive units than the unproductive units of the same type of community resource (e.g. pasture, forest etc.) as reported by Jodha (1992) and in the rapidly changing socio-economic situation indicating people's rising preferences and priorities to economic gains (Jodha 2002), one can identify the last constraint (e.g. depleted state of community resources) as an entry point for reviving collective stake in the community natural resources. Viewed in terms of the philosophy, thrusts and strategies of natural assets project, the remedial efforts have to focus on converting (depleted) natural resources in to (productive) natural assets. In other words, regeneration and development of community resources, equitable access to resources and their gains (including for the poor) and reward or compensation for the downstream services of natural assets built and maintained by the local communities, have to be the integral components of remedial strategies.

The structure of our reasoning is as follows:

- (i) Eliminate the conditions that induce people's indifference towards community natural resources;
- (ii) Raise resource-productivity to achieve (i);
- (iii) Promote investment and associated activities to enhance resource productivity;
- (iv) To facilitate (iii), mobilize communities and their effective participation in resource management;
- (v) To promote participation ensure both local control (or local autonomy) over local resources and equitable access to them for all groups of the community;
- (vi) Enhance local capacities not only to achieve local control, but also to bargain for ensuring internalization of downstream gains of stable and productive natural resources.

Not with standing the broad sequencing of the logical steps outlined above, the linch pins of the whole process are (a) community mobilization (and participation) including incentive structures to facilitate the same and (b) enhancing local capacities for new tasks including empowerment to seek macro-level attention and support for their initiatives. The two aspects are inter linked in several ways.

In the context of highly differentiated rural communities in most areas, the effective group action implied by the above propositions may be dismissed as a wishful thinking. However, the ground experience of some successful initiatives offer different perspectives and inspires greater hope for the change. To cite a few of them: (i) Agha Khan Rural Support Programme (AKRSP) in mountains and other areas of Pakistan has effectively promoted social mobilization for natural resource development and economic well being of the communities; (ii) Rapid regeneration of forest (as revealed by both satellite imageries and field observations), and other natural resources through state supported community efforts in several parts of India, specially in the states such as West Bengal, Gujarat, Madhya Pradesh and Andhra Pradesh have been reported by Poffenberger (1995), Hazra et.al. (1996), Saigal (2001).

The often cited case of Sukhomajri Project in India, where community involvement in total watershed management including natural asset building and their equitable use through innovative mechanisms (e.g. exchangeable share-holding in gains through water right to non-land owning households etc.), illustrates the scope for mobilising diverse groups for collective resource management (Sarin 1996, Agarwal and Narain 2000?).

The harvesting and community irrigation systems as well as user group forestry programme in Nepal involving mobilization of communities for local resource development and management as reported by (Shivakoti et.al. 1997) and Joshi (1997) furnish further evidence supporting the role and effectiveness of group action in building natural assets.

There are many other success stories of social mobilization not only for natural resource management but for collectively addressing the poverty eradication problems in different countries. The Ford Foundation supported programme on natural and other assets building in different countries (Ford Foundation 2002), involving collective efforts is one case in point. UNDP supported programme focusing on the decentralization and participation based rural poverty eradication, such as Participatory District Development Programme (PDDP) and Local Governance Programme (LGP) in Nepal is another example. These initiatives specifically focus on social mobilization as a key component in several districts of Nepal (PDDP 2001, LGP 2001). IFAD supported work in uplands and elsewhere has also helped building group action for poverty eradication in their project areas (IFAD 2002).

The essence of the above discussion is that social mobilization for natural asset building and other development activities is not only being increasingly emphasized but has demonstrated their effectiveness in several areas.

Focus on Economic Gains

A Common feature of most of the successful social mobilization efforts is the visible economic gains perceived by the communities. The mechanisms to ensure this even in the short-run differs from intervention to intervention. In most of these cases the initial component-specific subsidies (payable before or after accomplishment of the tasks), repayable activity-specific loans (often with collective undertaking for repayment), encouragement for local resource mobilization including through micro- credit schemes; support to local demand driven rather than top-down, supply-driven activities etc. are focused.

In the case of natural assets, globalization process through encouraging the trade in high value NTFPs (herbs etc.) and certified organic natural products can also offer much needed economic incentives for their development and efficient management. This can also encourage needed diversification and value adding processes to enhance gains from healthy and productive natural assets as seen in the case of parts of China, India and Nepal. If equitably shared, these changes can further encourage community participation and their changed organizational and technical capacities to suit the needs of natural assets in the globalizing world (Jodha 2002).

One of the most effective means to ensure enhanced economic gains from natural assets, is internalisation of gains of efficient management accruing to the low land/external economies almost free of cost. For instance, communities in Indian Himalayas spent effort on resource conservation that helps prevent downstream floods and silting of dams. The farmers in downstream plain (e.g. state like Punjab) using the irrigation water and electricity through these dams, pay no water and electricity charges. Furthermore, the royalties received by the hill states for water and power generated through such projects, rarely reach the community levels (there is one exception represented by Nepal, where the state shares with the local communities the revenue generated by mountain tourism). Rectification of this situation would call for compensation to the mountain communities for custodianship of well manage natural resources. In the natural assets project context this will be a concrete case of internalization of gains, which would work as an important economic incentive to induce community action to build and manage natural assets. If compensation for overall environmental services offered by mountains

is paid, it will work as yet another strong incentive for communities to treat and manage natural resources as their assets.

Through considerable conceptual work on assessing the economic value of environmental and other natural resource flows has been done but the compensating mechanisms based on such flows from high lands to low lands have not been attempted in South Asia. However, outside the region there do exist some cases where communities and other agencies have evolved mechanisms to ensure compensation for environmental services and related flows by beneficiary areas/communities to those who facilitate the former. As reported by Koch-Weser (2002) they include: irrigators pay up-stream land owners for improvement of stream flow in Colombia, irrigators financing the upstream reforestation in Australia; Watershed Conservation Fund for Quito (Ecuador) helping upstream farmers, Perrier Payments for Water Quality (France), Makilink Forest Reserve (Philippines) pays to farmers for land retirement; Hydroelectric Companies pay upstream land owners via FONAFICO in Costa Rica; New York City pays upstream Farmers for protecting its drinking water.

However, in South Asia such efforts are yet to take place. Such efforts (which can facilitate the internalization of gains of natural asset building/management) are constrained by lack of awareness, usable operational mechanisms, and persistence of state to state (politically influenced) negotiations on royalty payments without involving or directly helping the communities for their resource conservation efforts.

(b) *Local Control Over Local Natural Resources*

An important pre-condition or rather facilitative factor that could help in rebuilding the community stake in natural resources and converting them in to natural assets discussed above is the community control over resources.

Traditionally, the mainstream decision-makers permitted greater local autonomy to communities in several mountain areas. This, however, was more due to default (i.e., their inaccessibility-imposed ignorance and indifference towards mountain areas) rather than a conscious decision. With the increased physical and administrative integration of fragile, remote, marginal areas with the mainstream political-economic systems, most of the local natural resources belonging to the communities were taken over by the state either through formal law or through disregard of customary laws and practices (Hiremath 1997, Poffenberger et al 1996, Guha 1983). In India it happened through the then colonial British government extending its control over forests and establishing Forest departments to look over them as property of the Crown, used for commercial extraction. After independence national government inherited the system, with some recent changes (Hobley 1996). In Nepal a major change happened with nationalization of forest in 1957 and debate on new changes is still continuing (Baral 2002). Lynch and Talbott (1995) analyse the processes in different Asian countries including India and Nepal. The consequent lack of local control over local resources prevents the community decisions and action for protection and regulated use of their natural resources. Deprived of the ownership of forests, communities tend to overextract the resources (Bromley and Chapagain 1984). The importance of changing this situation (as being attempted in these days), can hardly be overstated.

Constraints

Genuine and effective devolution or restoration of the local control over local natural resources is faced with several constraints emanating from the state's resistance to self disempowerment. Despite all the talk of decentralization and power to people etc. when it comes to the control of a

Table 2: Approaches and Constraints to Revival of Key Elements of Traditional Resource Use Systems in the Present Context

(A) Community Stake in Local Natural Resources	(B) Local Control Over Local Natural Resources	(C) Recognition and Use of Resource Users Perspectives and Traditional Knowledge System
<p>Constraints</p> <p>(1) Formal legal, administrative fiscal controls/restrictions creating a range of perverse incentives; reactive mode of community behaviour as individuals</p> <p>(2) Highly depleted status of NRB creating no hope and incentive to have a stake in it.</p> <p>(3) More diverse and differentiated communities with different, individual rather than group-based views on community resources.</p>	<p>Constraints</p> <p>(1) State's inbuilt resistance to self disempowerment through passing decision-making power to local communities; focus on 'proxy arrangements', e.g., village panchayats</p> <p>(2) Faction ridden, rural communities driven by diverse signals and concerns.</p> <p>(3) NGOs as key change-facilitating agents, often governed by own perspectives, concerns</p>	<p>Constraints</p> <p>(1) Top-down interventions with a mix of "arrogance, ignorance and insensitivity" towards local perspectives and traditional knowledge systems.</p> <p>(2) Focus on (old context specific) forms of traditional practices rather than their rationale for use in the current context.</p> <p>(3) Rapid disappearance and invisibility of indigenous knowledge.</p>
<p>Possible remedial approaches</p> <p>(1) Genuine local autonomy for local resource management (see 'B' for constraints to this); legal framework and support system for NR user groups.</p> <p>(2) Resource protection, investment and use of new technologies for regeneration/high productivity of NRB (using experiences of successful initiatives).</p> <p>(3) Collective stake through planned 'diversification' and 'shareholding' system in natural resource development and gains (using experiences of successful initiatives).</p>	<p>Possible remedial approaches</p> <p>(1) Genuine decentralization, decision-making powers and resources to communities; raising latter's capacities to respond to the above (with the help of NGOs).</p> <p>(2) Rebuilding 'Social Capital', mobilization and participatory methods using NGO input; focus on diversified, high value products from rehabilitated NRB (using successful experiences).</p> <p>(3) Required changes in NGO approaches/perspectives by introspection; involving small local groups, and unlabelled agencies.</p>	<p>Possible remedial approaches</p> <p>(1) Promotion of bottom-up approaches to resource management strategies, using participatory methods and NGO help.</p> <p>(2) Focused efforts to identify present-day functional substitutes of traditional measures for resource management.</p> <p>(3) R and D to incorporate rationale of traditional knowledge system (using experiences of successful initiatives).</p>

Source: Table adapted from Jodha (1998)

property or productive resources the state operating through its sectoral bureaucracy always tries to avoid the issues through different devices (Jodha 2000b). For instance it tries half hearted compromises such as under the Joint Forest Management (JFM) in India, where community is involved in protecting resources and limited sharing of specific products (e.g. timber) plus use of intermediate products (such as fodder, fuel, minor forest products, etc which state finds difficult to use) or attempts to recapture authority given to the community as being currently debated in Nepal, with reference to user group forestry policies.

Use of proxy arrangements is another approach adopted by the state. This is illustrated by creation of formal institutions such as the Village Panchayats with all legal powers and provisions as decided by the decision-makers at the top. In most cases such bodies are small scale political bodies with very little concern and involvement in NR management, except when relief and subsidies could be mobilised by showing the extent of community resources in the village has (Jodha 1992, Saxena 2000) These bodies (despite recent focus on decentralisation) may not be a substitute for 'user groups', as their goals are too diversified, and the natural resource protection constitutes a small component therein. Difference between village commons managed through village elders or user group leaders and those elected by Panchayat (village councils) makes this aspect clear. The former give greater attention to the up keep of natural resources while the latter treat them as object for getting government subsidies. Besides, the latter are largely political bodies (Brara 1987, EERN 2000). Conflict between the elected village councillors and JFM or Forest User Group Leaders tends to erode the gains of the new participatory initiatives in different parts of India (Jodha 2000b).

Faction ridden and differentiated rural communities as already alluded to earlier, and their high dependence on government patronage complement the constraints originating from the state side.

Remedial measures: Emerging Scenario

Despite strong resistance to devolution on the part of the state to facilitate natural asset building through effective community involvement, current scenario offers some options to gradually alter the situation.

To begin with there is greater awareness efforts at national and international levels promote decentralization and community participation to ensure sustainable development. The latest global thrust promoted by rich donors such as the World Bank and IMF, through their PRSP (Poverty Reduction Strategy Programmes) accord high importance to community ownership of development programmes facilitated by decentralization and participation. Already referred field initiatives by the Ford Foundation, UNDP, IFAD etc. also focus on the above changes.

Induced by the above global thrusts as well as pressurized by donors in some cases, the national government through various decentralization initiatives (e.g. in Nepal and India) are slowly proceeding in the direction mentioned above. This is reflected by various donors supported projects including those involving natural assets.

Apart from the above, largely supply side factor indirectly favouring local control of local resources and local affairs, we may also refer to some demand side possibilities. Accordingly, mainly through NGOs and community organizations the advocacy and demand for greater control of local resources by local communities is increasing at both national and international levels. This demand is supported by convincing evidence that devolution can help better management and sustainability of natural resources. The state in many cases has positively responded to such demands.

The above awareness and voices of communities for greater local resource control is partly a product of capacity building and empowerment of local communities through various institutional interventions supported by NGOs, donors and enlightened government agencies. Krishna et al (1997), Zazueta (1995), Gilmour and Fisher (1991), Saxena (2000), record the successful experiences of different interventions along with their future prospects and problems in different countries.

One of the practical ways to exhibit local control of local resources (in defacto sense) is to ensure internalization of external (downstream) gains of natural resource management by mountain communities through various conservation practices. The moisture and nutrient flows, clean water for downstream dams, reduced floods, unique bio-diversity etc. are different forms of environmental products and services available to downstream economies and societies facilitated by better management to natural resources by mountain communities. These downstream flows products and service are neither realistically valued nor appropriately compensated. They represent a part of unequal highland lowland economic links. their rectification (leading to compensatory payments to mountain communities) would not only eliminate the arbitrary subsidy systems, but act as strong economic incentive for the communities to build and manage natural assets.

(c) *Use of Local Perspectives and Traditional Knowledge Systems*

Even when the advocacy and promotion of natural resource management involving communities is conceived at national or global levels, in the practical context they relate to the local or micro levels. Hence, the perceived and projected approaches to natural asset building have to be sensitive to the local perceptions. An important dimension of local perceptions relates to the traditional knowledge and experiences about the potentialities and limitations of natural resources and possible ways to address them. Examples may include differences in soil treatment, crop combinations, crop fallow rotation etc. according to slopes in mountain areas. These aspects are usually bypassed while initiating interventions designed for local resource development as reported for Nepal and India (Jodha 1992, Tamang et.al. 1996). Even the global initiatives (e.g. treaties and conventions on bio-diversity conservation etc.) completely ignore the local concerns and indigenous knowledge. Macro-level perceptions are rarely linked to diverse micro-level realities. In the process they lose valuable technical (folk-agronomic) knowledge, which could help in enhancing productivity of natural assets.

Constraints

As reported by Jodha and Partap (1994) and Tamang et.al. (1996), the important factors obstructing the incorporation of indigenous knowledge in the present day interventions for natural resource development are: (i) attitude (involving some degree of arrogance and insensitivity) of the planners of the top down approaches towards the local communities as source of information to solve local problems, such as degradation of community natural resources; (ii) general non-availability of indigenous knowledge in very articulated form on the one hand, and the technocrat decision-makers' focus on "form rather than rationale" of the traditional practices, on the other.

Since the forms of traditional practices had been context specific (e.g., extensive farming practices worked well under low population pressure, or in a semi-isolation context total dependence on local resources helped in building community stake in natural resources), they became less feasible or ineffective with the changed situation (e.g. increased population and improved accessibility in mountain areas). The decision-makers, instead of evolving alternative forms or practices to suit the changed situation, have discarded both the form and rationale of

traditional practices for resource management (e.g. by combining annual-perennials, husbandary of water springs etc.).

Remedial Measures

The formulation of the above constraints itself may suggest some remedial measures. Accordingly, focus on bottom-up approaches to natural resource management; sensitization of decision-makers to local community's perceptions through advocacy and participatory approaches; identification and incorporation of rationale of traditional practices in to new technological and institutional measures planned for natural resources, should be encouraged. Some of the ongoing initiatives supported by NGOs such as water harvesting, bamboo plantation, regeneration of pasture, rehabilitation of commons etc. are already using these approaches (Tamang et.al. 1996, Sanwal 1989, Saxena 1995). Globally rising concerns for indigenous knowledge system and practices may help in this regard. In the context of economic globalization, the rising demand for natural and organic products may further promote the case for use of indigenous knowledge systems. For example agencies collecting medicinal herbs from different areas in HK-H also collect information on their usage and processing methods (Jodha 2002). Similarly, the increasing attention to indigenous resource use systems in the context of sustainable development strategies can help in incorporation of local knowledge in to interventions for local resource development. However, this is still largely an unexplored area.

IV. RECENT INITIATIVES: COMMUNITY FOREST MANAGEMENT

Due to factors such as: adverse downstream consequences (e.g. floods and silting of dams) following natural resource degradation in mountain areas; rising global concern for protecting mountain natural resources as a source of international public goods (e.g. environmental services, unique biodiversity, fresh water etc.); the state's inability to police these resources, despite increased expenditure on it; and the successful experience of a number of small scale community initiative to protect and rebuild natural resources, a number of programmes to conserve, regenerate and protect the natural resources, particularly forests through involvement of communities, have been initiated during the last two decades in different countries including in the mountain areas of HK-H region. The details of these aspects for different countries have been analysed by different studies (Shackleton et.al. 2002, Brown et.al. 2002, Butt and Price 2000).

In the following discussion we focus on the two most known programmes in this area e.g. Joint Forest Management (JFM) in India, and User Group Forestry (UGF) in Nepal. JFM programme initiated over a decade ago in India, has spread to all most all states in the country and covers more than 14 million hectares or over 18 per cent of total forest land in India. By June 2001, 62,890 JFM groups are involved in managing these forests (Saigal 2001). These figures relate to whole country and not mountain areas alone. Through User Group Forestry in Nepal, over last 20 years, more than 5,000 User Groups have taken control of more than 600,000 hectares of forest for protection and regeneration. With assistance from ICIMOD they have formed the Federation of Community Forest Users in Nepal (FECOFUN) to promote the interests of FUGs. The similar efforts supported by ICIMOD has led to formation of Himalayan Forum for Community Forestry (HIFCOF) to promote dialogue among senior officials of the forestry sector in the Hindu Kush-Himalayan region as a whole (Upadhyaya 1999). We have already referred to some of their experiences in the preceding discussion. Here we briefly comment on their achievements and limitations including their possible contribution towards helping the poor while rehabilitating and strengthening the forests as natural assets.

Despite difference of history, scale and complexities characterizing the subject in India and Nepal as well as inter-area variations in the performance of the intervention in the same country, we comment on some common features of these initiatives. Broadly speaking the new initiatives are considered a success, particularly, when seen in terms improved status of forestry e.g. forest cover, biomass production etc. Both field observations and satellite imageries indicate this in most areas. The positive achievements of these initiatives are also indicated by other changes briefed below. They have resulted from the community involvement in protecting the forests by controlling encroachments, regulating their use and promotion of conservation and development activities. An important positive change observed in several areas following the community forestry programmes relates to attitudinal changes reflected through increased degree of trust between communities and the forest department officials, the lack of which in the past contributed to degradation of forests. Through regulated collection of intermediate products (fodder, fuel etc.) and wage employment on forest conservation/ development activities, the earnings for the people have also increased in some areas. Besides, through collection and sale of specific forest products the management committees of forest user groups have succeeded in building investable funds for undertaking development activities for the communities. A major facilitative role in the above successes has been played by NGOs, donor agencies and the responsive forest department officials (Upadhyaya 1999, Saigal 2001, Shackleton et.al. 2002). One major distinctive feature of these programmes is that they require people's input or sacrifice in terms of foregoing the opportunities to collect bio-fuel, fodder and other supplies or grazing of animals due to complete closure or restricted access to forest areas to promote conservation and regeneration of resources, before the gains of enhanced supplies and income flow to them after resources are regenerated and rehabilitated, unlike most of the rural programmes that start with bribing (i.e. subsidising) the people to induce their participation in the programme (Jodha 2000b).

However, without minimizing the above achievements it should be mentioned that these new initiatives have shown rather mixed or limited success in terms of several crucial aspects as discussed below. The following assessment, however, is explicitly qualified by stating that the inter-area, inter-country differences in the stated situation do exist.

(i) Resource-centred rather than people-centred focus

From the very beginning the programmes under review were directed to rehabilitate the degraded forests by providing some incentive and authority to the communities to participate in the programme. Consequently, addressing the people's concerns and perceptions was never an explicit part of the initial design. Furthermore, the performance of the programmes too is usually judged in terms of changed status and productivity of forest, and the factors contributing to the same (e.g. reduced extent of encroachment, changed image of and attitudes towards forest officials etc.) rather than changes in people's life and economy. Viewed this way the programmes have helped in rehabilitating and building "natural assets", but "whose assets"? (Jodha 2000b, Hiremath 1997, Agarwal 2001).

(ii) Goal of poverty alleviation: neither primacy nor explicit focus

This issue emerges as a logical consequence of the feature stated under (i) above. Notwithstanding the fact that community forestry has enhanced the biomass productivity of forests; created occasional wage employment for the community and contributed to accumulation of investable resources with forest user group councils, the programmes in several areas have also adversely affected the poor, women and other disadvantaged groups.

First, unlike the traditional forms of communal resource management (which typically recognized the use rights of all village residents), the new formal arrangements exclude many, specially women, and poor both as partners in decision making as well as users of resources (Agarwal 2001, EERN 2000).

Second, despite increased biomass productivity, collection of material is restricted to a few occasions in a year. Besides, they mechanically use the equity norms, where per household extent of access is same irrespective of the differences in the economic and occupational needs of the rich and the poor. The latter, specially the head loaders (the poor, having little resources of their own, who collect and carry head loads of bio-fuel or fodder for own use or sale) lose the most and are compelled to encroach the forest areas of own or other villages to meet their barest needs. The time required for collection of fuel (a key product of forest needed by the women) from distant places has increased by many folds in different areas (Agarwal 2001). The nomadic pastoralists in high mountains (who also use small ruminants as pack animals in their trading occupation) have suffered most due to reduced access to common property resources following the imposition of restriction on access as a part user group forestry in Nepal. This has forced many to abandon petty trading and reduce their herd size (Upadhyaya 1999).

Finally, the organic links between farming-forestry-livestock activities, as a part of the poor's coping strategies against risk and vulnerabilities have been disintegrated following the restrictive provisions of community forestry which do not allow free and unlimited access to forest resources, in the interest of conservation and regeneration.

Third, the products preferred and used by the poor (fodder, fuel) get lower priority in product composition, focused by the forest user group councils (favouring timber etc. with long waiting period). The poor has little voice in changing the priorities of user groups.

Exceptions:

Despite lack of explicit concern for the poor, in some areas both under JFM and UGF, poor (when allowed to harvest) have gained from increased productivity of community forests (Shackleton et.al. 2002, D'Silva and Nagnath 2002).

Nepal's leasehold forestry programme is the most known initiative that exclusively focuses on the poor i.e. the households below poverty line. The programme run by HMG of Nepal is supported by IFAD, FAO and Netherlands government, is implemented in ten districts of Nepal. It is focused on allocation of degraded forest lands to the poor households on 40-years lease. The programme is judged quite successful in terms of rehabilitating the forest (with ownership of trees resting with the state), building agro-forestry and fruit tree based new opportunities. However, there are some uncertainties in terms of continuation of the programme once donor support ends; and doubts on the transfer of lease rights to son once the father having the lease right expires. Besides, there a few other obstacles faced by the programme. It is reported that it takes more than two years to get lease certificate for a forest tract (Mahapatra 2002, Kathmandu Post 2002).

(iii) Nature of community involvement: illusion of autonomy and empowerment

By very design and intention the community involvement in the forestry programmes was more of an arrangement to seek people's participation to help policing of forest, which the state was unable to do despite increased expenditure. Facilities to collect intermediate products (fodder, litter, some NTFPs) and sharing of benefits of final product (e.g. timber) were included as

incentive. Authority to prevent encroachment and regulation of intermediate product collection was also part of the arrangements.

However, beyond the above arrangements, rest of the authority including for promotion (formation) and recognition or registration of forest user groups/communities; disqualification of the groups for certain reasons, as well as right to approve their work plans etc. fully rested with the forest department. Thus communities, involvement in the forestry programmes has been similar to a dignified collective-tenant. There has been not enough in terms of real autonomy or devolution of real authority for management of community natural resources (Shackleton et.al. 2002, Butt and Price 2000). In effect, communities under these forestry programmes are care takers of the state's natural assets, where any legal or other change affecting the asset is the sole right of the state. This may not be very conducive to building community's collective stake the local natural resources. This assessment is further strengthened by recent talk of "collaborative forestry" or "corporatisation of forestry", where forest could be given to private firm as collaborators or otherwise. This fuels the communities' suspicions about intentions of the state vis-à-vis the forestry sector (Saxena 1995, Hiremath 1997).

(iv) State approved group formation: proxy for social capital

Under these programmes the forest department not only provide the broad guidelines for formation of forest user groups and their plans but puts stamp of recognition before the user group is entitled to have some facilities and authority. Even the existing traditional community groups efficiently managing their forests, specially in tribal areas and self created groups (in India) need to be registered by the forest official for their formal recognition (Jodha 2000).

Such state sponsored/guided user groups, follow the top-down standard norms and procedures about inclusion and exclusion of membership and have little sensitivity to diversities of local situation. Except the "membership of a user group" the involved people may not have other commonalities, required for building trust and confidence within the group. Such groups may not represent what is described as "social capital". However, effective mediation by NGOs have helped in converting such formal groupings in to "social capital" in some areas. Recognition and acceptance of any product/service as an important shared item by the community has also promoted genuine group action for natural resource upkeep in many cases (EERN 2000, Butt and Nath 2000, Saxena 2000).

(v) Missing institutional perspectives and conflict situations

Quite related to the feature mentioned above, is another dimension of community forestry programmes. JFM or UGF should be seen as institutional arrangements, which attempt to help communities to mobilize themselves to protect and conserve their natural resource base despite unclear terms and conditions offered by the state. However, due to rather mechanical approach of the state, forest user groups are established without sufficient understanding of their institutional context in terms of local history, existing group dynamics, socio-economic differences and power relations etc. and possible ways and processes to address them (Jodha 2000b, Agarwal 1997, Gilmour and Fisher 1991). Accordingly, in some sense forest department seems to treat "grouping of people" not different from "bunching of logs" in forest areas. Consequently, unless there are active NGO mediation to manage these differences the composed groups are often faced with a variety of actual and potential conflicts e.g. between traditional community groups and new (state formulated) groups; between formal political leadership (elected representatives of village councils) and the leaders of forest user groups; and between intra-community sub-groups based on class, caste, gender, losers and gainers etc. (Saigal 2001, Agarwal 2001). Such conflicts often erode the gains of communities' collective

effort to manage forest resources. Community forestry programmes therefore need some provisions and preparations to address this problem (Saxena 2000).

(vi) Persisting ambiguities and uncertainties

The community forestry initiatives are faced with a number of ambiguities and uncertainties which can act as risks in the future (Mahapatra 2002, Saigal 2001, Jodha 2000b, Upadhyaya 1999, Saxena 2000).

First, in purely legal terms, in most cases (at least in Indian states) these initiatives and their functioning are product of administrative orders of the government without any legal (legislative) foundation for the same. Unlike law, the order can be withdrawn any time. The pressure by NGOs, media and communities for changing the situation is already growing (EERN 2000).

Second, the provisions about registration and functioning of community forestry programmes, provide disproportionately greater powers to the forest officials, which can be used to limit the initiatives of the communities including by disqualifying the user groups and their work plans.

Third source of uncertainties is government's shifting approach to community forestry. They may relate to sharing the benefits specially from high value NTFPs (as in India); permitting private sector entry or rather corporatisation of community forestry as tried by new law in Nepal for Terai region and debated in India for last several years. Such prospects of change can shake the people's trust in government initiatives promoting community forestry (Saxena 1995, Hiremath 1997, Brown et.al. 2002, Shackleton et.al. 2002).

Fourth, source of uncertainty relates to possible withdrawal of donor support to community forestry. In view of the significant performance gaps between the projects with and without donor support, the potential consequences of possible withdrawal is seen with concern (Brown et.al. 2002). Building local support (including from within the communities) is a major area that should be addressed in this context. Such uncertainties may act as opportunity for rich global corporations to coopt the community forestry programmes as a means for over extraction of forests.

Fifth, the well functioning community approach and collective mechanisms addressed to protection and conservation of forests, may face serious disruptions once the programmes move from protection to production (or harnessing) stage of resource management. Levels and modes of extraction as well as distributive arrangements may face different type of problems. Both processing and marketing requirements may need different management skills. The conflict levels may also change. These problems require forward looking, pro-active strategies to manage community forests in the future (Jodha 2000b; Saxena 2000, Upadhyaya 1999).

Six, one of the major sources of uncertainties and associated risks and potential opportunities relates to the process of rapid globalisation affecting mountain areas and their economies and communities. Due to unprecedented primacy accorded to market and gradual marginalisation of the role of state (public sector), the process of change may lead to (i) corporations acquiring community resource (i.e. exclusion of communities); (ii) over extraction of resources (driven by external demands); (iii) profitability driven selectivity focused on premium products (e.g. NTFPs-herbs) discarding diversity as a source of sustainable forestry; (iv) major shifts in forest management favouring individualistic approaches in place of collective efforts; (v) accentuation of unequal high land low land economic links (Jodha 2000a).

This may also be added that globalisation may also generate new potential opportunities through enhanced trading opportunities, new technologies etc. for helping community forestry. However their identification and enhanced capacities to harness them is a major challenge. The aforementioned potential changes have already been recorded from different mountain areas in the Himalayan region (Jodha 2002). For instance some exploratory exercise on globalization and fragile mountains by ICIMOD in five Hindu Kush-Himalayan countries revealed that several NTFPs such as medicinal herbs, mushrooms, wild flowers, vegetable dyes etc. have become important high value export products. In some cases a number of these products are being promoted through multi-national firms from Western Countries. Though the gains to local communities in the process is disproportionately low. Besides, over-extraction such niche products is a continuing challenge. Finally, the whole subject of globalization and community natural assets is a new and un-addressed area for the promoters of community forestry.

A related unaddressed issue involving community forestry in mountain areas relates to the irony of some provisions of Kyoto agreement, where reforestation activities are compensated by a global fund. However, activities directed to protection and promotion of existing forests do not qualify for this support. Thus, the poor mountain communities, the custodians of forests and other bio-diversity are not eligible for support unless they deforest the mountains first.

To understand and address the above uncertainties and various other issues summarized in this section, a forward looking, proactive approach is required. This can be built upon using the experiences of initiatives tried in different areas, particularly the comparative experiences of successful and unsuccessful initiatives. To be fair to the policy makers, it should be noted in the case of community forestry initiatives, they have been more responsive to the emerging issues in this field compared to many other programmes in rural areas (Jodha 2000b). In Indian case this is indicated by New Guidelines for JFM in February 2000, which try to address several constraints and uncertainties discussed earlier (Saxena 2000). In Nepal's case too issues affecting UGF and Lease Hold Forestry Programmes have been also debated by the law makers and media in response to issues raised by FECOFUN and others (Mahapatra 2002, Upadhyaya 1999). The equally important fact is the growth of civil society, sensitive bureaucracy, community consciousness as well as mobilization, global environmental discourse etc., all of which in their respective ways support genuinely decentralized and participatory management of community natural assets.

V. SUM UP AND CONCLUSIONS

The discussion under this paper was focused on community level natural resource management and factors helping or hindering the same in Himalayan region. The paper, first questioned the mainstream view that poor are responsible for resource degradation. This was attempted by looking in to the traditional arrangements directed to collectively protect and regenerate the resources by the communities in mountain areas. The decline of traditional institutional arrangements and breakdown of community's collective stake in the natural resources led to degradation of these resources. This happened as a negative side effect of increased physical, administrative and economic integration of mountain economies in to mainstream plain economies. For this change poor pleads "not guilty".

An examination of the factors and processes leading to breakdown of communities' collective stake in to their natural assets indicates some possibilities of reviving and rehabilitating the community assets. In this connection one should focus on three pillars of traditional systems namely (i) community's collective stake in natural resources; (ii) local control of local resources and (iii) learning from indigenous knowledge systems and practices. Paper identifies the present day constraints to revive them and possible remedial measure to address them.

Based on the emerging evidence, the economic gains as perceived by the communities from different collective initiatives, aimed at promoting community involvement in natural asset building, appears as an important area. The paper elaborates on economic gains of natural asset building including through internalization of gains flowing downstream.

The major operational aspect in the above context focuses on social mobilization. Evidence from different ongoing programmes supported by NGOs, donors, government agencies etc. inspires hope in participatory approaches to natural asset building.

The above discussion is supplemented by comments on recent initiatives such as Joint Forest Management in India and User Group Forestry in Nepal. The paper highlights their performance, prospects and constraints. Base on the above, one can draw the following inferences from the present discussion.

Conclusions

1. Blaming poverty as a prime-mover of community natural resource degradation amount to discarding the real factors and processes promoting the community indifference toward their natural resources.
2. The strategies for promoting community's natural assets, should focus on (i) understanding of how traditional arrangements got eroded and (ii) identification of their elements which could be re-used in today's changed context.
3. Focus on visible economic gains (including through internalization of gains flowing downstream) and social mobilization should constitute the key thrust areas for interventions to promote community involvement in natural asset building.
4. To promote the above thrusts one can benefit from the experiences of ongoing interventions in this field.
5. With respect to the above, JFM in India and UGF in Nepal offer useful lessons.
6. To strengthen and mainstream the JFM and UGF, one can venture to make the following suggestions.
 - (i) The state needs to give more autonomy and authority to communities in dealing with protection and usage of forest resources.
 - (ii) Provide means and mechanisms for promoting equity within the programme with special focus on improvement in the condition of the poor and women.
 - (iii) Ensure effective facilitative role of NGOs and other agencies in mobilizing forest users to form groups, where internal differences and conflicts are mutually settled.
 - (iv) Ensure increased attention and understanding of historical, cultural and economic diversities of the entities constituting the forestry user groups.
 - (v) Have clear cut policies and programmes to reduce or eliminate the uncertainties emanating from legal gaps, gaps between authority of the community and the powers of the state (forest department) and from changing stages of the programme (i.e. shift from protection phase to usage phase of resource management).
 - (vi) Have forwards looking approaches and strategies to minimize the risks and harnessing of new opportunities associated with globalisation. In concrete terms this will require: (a) shift away from subsistence orientation to commercial orientation of community forestry (or an appropriate mix of the two); (b) focus on silvicultural

research guided by (a); (c) equitable partnership between external (corporate agencies) and communities focused on fair trade; (d) enhanced community capacities for (c); (e) replacement of adhoc/reactive approach by forward looking proactive approach to building community's natural assets, and finally (f) pleading for and concrete action on compensating the mountain communities, for the environmental services offered by natural resources managed by them to the down stream society/economy (i.e. internalization of gains of natural assets).

Consideration and implementation of the above suggestions may not only help in reducing poverty, but would take the attention away from P-ERD link currently dominating the mainstream discourse on the subject of natural resource management/

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