

## Socio-economic factors of degradation in mountain areas

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"The number of people affected by floods from 1991 to 2000 is reported to be around 1.5 billion. Disasters caused by floods have been increasing in the recent past, mainly as a consequence of the expansion of settlements and the growth of investment in flood plains", says latest World Meteorological Organization Report.

Southeast Asia constitutes one of the world's most extended high altitude rainforest regions. This region is seriously threatened by various forms of degradations and encroachments, mostly those made by human interventions. With its dramatic geological history, Pakistan spans a remarkable number of the world's broad ecological regions. These range from the coastal mangrove forests of the Arabian Sea to the spectacular mountain tops where the western Himalayas, Hindu Kush and Karakoram ranges meet. Misguided economic policies have widened inequalities and forced mountainous people to exploit biodiversity at rates that are no longer sustainable. As a result, processes such as deforestation, overgrazing and soil erosion have become major threats to the remaining biodiversity of high lands in Pakistan. This situation indicates that poverty, lack of planning, bad political system, disproportionate pressure on resources causes degradation in uplands. "Poverty is not the only reason for degradation", is the outcome of this paper.

The Executive summary of Biodiversity Action Plan Pakistan prepared with support from IUCN/WWF and financed by World Bank/GEF August 1999 printed in year 2001 alarmingly indicates as:

"It is now feared that Pakistan is having the world's second highest rate of deforestation. This destruction is leading to the wholesale disappearance of trees, shrubs, and ground flora together with the vertebrate and invertebrate fauna they normally support".

I have to mention another paragraph from another official report before I proceed.

"Almost 7,000 to 9,000 hectares are deforested every year and this rate is especially severe in the north where the per capita consumption for fuelwood is 10 times higher due to the severe winter. The following factors are the main causes of deforestation", says Government of Pakistan (GOP) Biodiversity Action Plan 1992-93.

Situation is quite alarming in Kaghan and Saren Valleys. According study of Archer in 1996 and reviewed by Ecotourism Society Pakistan (ESP) in 2001, Siran Valley (Hazara, NWFP), shows a 52% decline in the resource between 1967 and 1992. If present continued at the present pace, the Siran forests will disappear by the year 2005 (Archer 1996). Similar cases are present in the Kaghan Valley and Allai Valley. Kaghan and Saren Valleys are situated at the opposite sides of one mountain ridge.

Following two questions need to be addressed before we concentrate on socio-economic factors of degradation in Kaghan Valley.

- Where actual degradation starts and how it effects in low land areas and what is the most important source of degradation in high lands?
- Does poverty a real cause for degradation while we talk about socio-economic factors of degradation?

**Where actual degradation starts at high lands and how it effects in low land areas?**

Degradation in high mountain areas starts in high altitude water sheds where many factors particularly deforestation results in soil erosion. Degradation and soil erosion start working as causes of more degradation. Affects becomes causes and causes becomes affects in this "degradation cycle". It is a direct causal relationship. Vital economic resources, such as water, are usually managed with policies, institutions, and practices that are disconnected from, or even in direct conflict with, those designed to protect forests, wetlands, and other habitats from which the water comes. Moreover, watersheds face growing stress from rapid economic development, increasing human populations, and often wasteful use of natural resources like woodcutting for more housing, mining, timber for energy needs, over-grazing etc.

One should look into cause and affect chain of watersheds degradation:

- Removal of forests or other vegetation sharply reduces water retention and increase erosion, resulting in reduced water availability in dry seasons and more siltation downstream.
- Absence of trees provide bad effects on shrubs which lost shelters (tress) and some times die out under burning sun of May and June---time before monsoon hit this area.

- Changes in river flow and sediment and pollutant loadings resulting from activities far inland degrade downstream ecosystems. Dams are the worst hit of sedimentation.

#### **Kaghan Valley case regarding watershed degradation:**

Taking example Kaghan Valley, we can see that massive forest cutting around Malika Perbat (Queen of Mountains), Lake Saiful Maluk, Saren Valley, Shogran, Sharan and other Lalazar Meadow caused massive landslides in Kaghan after 1985. Moreover illegal mining by local landlords for precious stones in Jhalghat area is also causing havoc as they are using dynamites for mining, resulting instant erosion and landslides in respective area. These are areas from where water flow in small springs and create countless small water channels which fall in Kunhar River which mingles with Jhelum River which is the source of Mangla Dam---the second biggest dam of Pakistan.

It may be mentioned that Kaghan Valley is a prime example of mountain feudal lords as more than 70 percent of Valley belong to only two families which are again relative to each other. So, utilization of land is totally at their own disposal and government write is quite weak over here.

Valley has faced two massive devastated floods within one decade which have cause death of more than 1000 people and a number of villages flushed away in these two major floods which were ultimate result of heavy deforestation at watersheds. Kaghan's economy depends upon fruit growing and tourism and both sectors have been faced negative impacts due to two floods and countless mud slides. Massive mud-sliding in Kaghan Valley on July 11, 2001 drastically reduced domestic tourism in Kaghan where almost 320 were people injured and 21 dead under this greatest mud-slide of the history of Kaghan. It blocked Kunhar River and a new small Lake has developed there. It happened in the peak domestic tourism season. People had not forgotten September 1992 floods (again a high season of domestic tourism) in Kaghan and this recent event totally shocked domestic tourism market.

Valley falls under the onslaught of monsoon. Unfortunately a number of departments have their writ on watersheds in Pakistan and of course in Kaghan Valley including Environment Ministry, Ministry of Water and Power (WAPDA), Forest department and federal and provincial local bodies departments. There is no collaboration and liaison among these departments to tailor and follow any viable strategy to reduce bad impacts on high altitude forests. For example, vital economic resources, such as water, are usually managed with policies, institutions, and practices that are disconnected from, or even in direct conflict with, those designed to protect forests and other habitats from which the water comes. Moreover, watersheds face growing stress from rapid economic development, increasing human populations, and often wasteful use

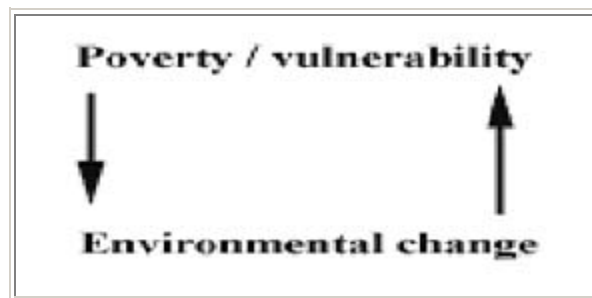
of natural resources like woodcutting for more housing, timber and energy needs, over-grazing etc.

**Does poverty a real and the only cause for degradation while we talk about socio-economic factors of degradation?**

Now we discuss some common approaches to poverty-environment linkages.

Figure 1 shows poverty and environmental change in direct interaction, as some studies of poverty and the environment assert. This implies or assumes that: (a) people's livelihoods are based more or less exclusively on the use and management of environmental resources: (b) poverty and environmental change have a direct causal relationship, and can feed each other in some kind of cumulative causation process, and that (c) poverty is the principal or only cause of environmental degradation, and environmental degradation is the principal or only cause of poverty.

**Figure 1**



Studies restricted to this kind of framework commonly assume poverty to have a negative impact on the environment. That is, poor people are forced to over-exploit natural resources to meet short-term needs regardless of the long-term consequences for their environment, being driven, for example, to overgraze their herds cut wood to sell for charcoal or cultivate and degrade marginal land. A declining resource base directly contributes to further poverty, and so the process continues in a 'downward spiral' (Durning 1989). But while some case studies appear to fit this pattern, it is neither self-evident nor well-researched. It is contradicted by studies in which causality appears to run the other way. Poor people often manage their environment in sophisticated and sustainable ways, and poverty can serve to limit their impact on the environment and increasing wealth can evidently lead to environmental degradation (Holmberg and Thompson 1991). Indeed the latter is assumed by models in which environmental degradation automatically increases with a growth in the number of people, income per head or resource-using technical change (eg. UNFPA 1991).

Kaghan is the best example of increase in wealth and increase in degradation.

Kaghan was a paradise on earth till early 80s when big land holders did not have money for infrastructure and they were depending moderate tourism activities, fruit growing and farming. However, 1985 party-less elections under the Martial Law rule sponsored and elevated these landlords against major political parties for creating a apolitical society. These landlords reached Assemblies and Islamabad, the capital of Pakistan. Now they had more resources and political power behind them. This social leap provided them great chances to get power and money, resulting in massive infrastructure development and uncontrolled forest cutting. They were in power (of course they are still in power) so there was nobody to stopped them from illegal logging. Local small land holders had no power to stop them or raise voice against them. This "Naked Dance of Power" continued till no forest left at thickest pine patches of Kaghan Valley. This change in social fabrics indicates that money and power some times play havoc with environments under ill-governments and bad political systems.

By earning money through timber sale, this timber mafia entered into motel and hotel business and now you can see hotels and motels everywhere in Kaghan Valley even around the most fragile ecosystem of Lake Saiful Maluk. Nobody stopped them because owner of one of the biggest motel chains and a big landlord of this managed to become the Federal Minister for Tourism. Non Government Organisations (NGOs) failed to play any role to stop this deforestation and unplanned growth of motels, transportation and housing as they (NGOs) believe that they (NGOs) can not work without the support of "Important Locals and Local Leadership" and in major cases this leadership and important local people are accused and responsible for degradation.

This study and paper indicates that following are the major socio-economic factors for degradations in Kaghan Valley:

- Bad political systems which usually provide shelter to big and influential in mountain areas for getting their political support.
- Un-proportionate planning by departments responsible for watershed managements.
- Lack of co-ordination among major actors of planning and execution of work in water sheds.
- Non Government Organisations (NGOs) which are not bold enough to counter "Important Locals" when they are playing havoc with environments and mountain cultures.
- Failures of "Poverty Elimination Programmes" run by international bodies in mountain areas which have failed to provide energy resources and economical channels to poor people living in mountain areas.

- Lack of strong legislation and weak enforcement of existing laws to control encroachments, deforestations and degradation in water sheds.
- Land Reforms of 1972 have failed in Pakistan to distribute land among poor which is controlled by big landlords.
- Lack of accountability by international donor agencies which have never asked governments and NGOs about status of development and activities where these agencies are provided funds. They accept fake reports provided by federal and provincial governments and by NGOs working in the field of sustainable mountain development.

### What is to be done

- I. Small credit schemes may be introduced for farmers of mountain areas.
- II. Energy resources like electricity and kerosene oil may be subsidised for people living in remote valleys for minimising use of expensive wood for fuel purposes.
- III. International Donor Agencies (IDA) should tailor project monitoring system instead of depending upon departmental reports or NGOs submissions. Third party investigations may be done through professional consultants and chartered accountants for knowing facts.
- IV. Promote coordination among the institutions involved in conservation of biodiversity at federal and provincial levels and integrate sustainable mountains development into the Perspective Plans, Five Year Plans and Annual Development Programmes (ADPs), and into relevant sectoral plans, particularly those for wildlife, forestry, fisheries and agriculture.
- V. Sustainable Mountain Planning (SMP) wing should be established. Professionals including engineers, town planners, professors and consultants should be inducted as members and participation of government bureaucrats and NGO people should be reduced only 33 percent of total members of SMP.
- VI. Review 1973 Constitution to make the sustainable use of mountains and watersheds. Existing legislation should be reviewed to identify deficiencies and other shortcomings in relation to over all biodiversity conservation in Pakistan and to define clearly the jurisdictional limits of different law enforcement agencies in mountain areas.
- VII. Local government laws should be amended to provide for greater community level participation in activities supporting sustainable mountain development.
- VIII. The laws relating to communal ownership and access to sensitive eco-systems like water towers and water sheds should be reviewed and revised so as to protect and encourage customary natural resource management systems.
- IX. Improve the effectiveness of existing legal mechanisms by creating greater awareness of regulations and enhancing the capacity of law enforcement agencies.

- X. Review, and where necessary, revise existing laws to ensure that an effective legal framework is in place which promotes sustainable use; establishes clear rules on jurisdiction and responsibilities among agencies and permitted users; and clarifies rights of ownership to biological resources.
- XI. Forest Management Plans may be tailored by provincial governments which should have computerised data of all trees and forest reserves open to access for public. It will create accountability process.