

Potential Resources: Sustainable Development and Deprivation in Himalayas

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Abstract

This paper explores the potential resources, its opportunities, conservation and development with particular reference to nature based energy, tourism and sustainability, in the fragile ecosystem of Himalayas. The paper also covers the issues of ecotourism, deprivation and roles of local people, NGOs and government agencies in the context of sustainable development.

Keywords: Potential Resources, Sustainable Development, Eco-tourism, Deprivation.

Introduction

Himalayas, the Indian mountain, are the world's powerhouses for clean, renewable energy. An adequate and reliable supply of energy is a prerequisite for sustainable mountain development. With the advent of new technologies, population increase and development pressures, natural resources are flowing downhill at unsustainable rates and mountain communities are becoming increasingly marginalized. The development in the Himalayas lack consistency causing degradation of environment, deforestation, soil erosion, floods, poverty, out migration, loss of bio-diversity and cultural heritage, withdrawal of traditional systems of community management and deprivation of benefits to mountain people. Sustainability would be achieved through strategies and policies that reverse the flow of benefits and provide an equitable share to mountain people.¹

Himalaya and its Potential Resources

Mountain areas cover a quarter of the Earth's land surface, with nearly 26 percent of the global population living in them. India is caped by the long sweep of Himalayas stretching 2500 kms long from east to west, and width ranging 250-300 kilometers. About 85% of the Himalayan landmass occurring in India occupies 15% of the country's area and support 65 million people. Mountains are recognized as water towers, sources of hydroelectric energy, mineral wealth, repository of biological diversity, centers of culture and traditional knowledge, tourist attraction, indicators of climate change and regulator of meteorological conditions. The Rio conference in 1992 recognized the crucial role played by mountain ecosystems by highlighting that, the livelihood of

1 A. Agarwal, 'Community participation in restoration of environment', in J. Singh (ed.) *Restoration of Degraded Land: Concepts and Strategies*, Meerut Rastogi Publication, 1992, pp. 291-310.

about 10% of the world's population depended directly on mountain resources such as water, forests and agricultural products and minerals.²

The Himalayas, which is probably one of the highest hydropower potentials in the world includes the Indus, Ganga and Brahmaputra rivers. Small hydroelectric installations have great potential to promote economic development and self-reliance in mountain areas, without disturbing local cultures or the environment. This mountain system represents one of the richest natural heritage sites in the world. One-tenth of the world's known species of higher altitude plants and animals occur in the Himalayas.³ The Himalayan ecosystem is rich in plant and animal species, many of which are untapped and have unknown commercial value.⁴

Realizing the importance of the mountain ecosystem in 1998, the United Nations General assembly endorsed the proposal put forwarded by the Republic of Kyrgyzstan to declare the year 2002 as the year the International Year of Mountain (IYM). Today, mountain tourism has become a flourishing industry in India. It helps to create employment opportunities. Hence, mountain communities of the world are realizing the opportunities for economic growth by preserving their ecosystem to attract tourists.

Mountain women and men possess a great wealth of indigenous knowledge, especially regarding the management of natural resources. Specially, mountain women play a vital role in turning the environmental factors into valuable cultural landscapes. They make a substantial contribution to the sustainable use and conservation of areas. All these resources should be used in a sustainable manner, so that ecosystem and livelihood of that area can develop substantially.

Himalaya and its sustainable development

Sustainable development of mountain regions is a challenging task because these areas have highly diverse and fragile ecosystems. Mountain ecosystems and communities have played a critical role in maintaining a sustainable flow of mountain resources. With the advent of new technologies, population increase and development pressure, the magnitude of these resource outflows has increased dramatically. The importance of mountains as global life support systems has been duly recognized by the proclamation of the year 2002 as International Year of Mountains (IYM), by the United Nations 1998. The overall goal of the IYM is to promote conservation and sustainable development of mountain regions, thereby ensuring the present and future well being of mountain and lowland communities.

2 B.Bhattacharai, "Poor in the Himalaya," in V Singh & ML Sharma (ed.), *Mountain Ecosystems. A Scenario of Unsustainability*, New Delhi, Indus Publishing Company, Vol 39, 1998, pp. 206-207.

3 Ramesh Chand, *Ecological and Economic Impact of Horticultural Development in the Himalayas: Evidence from Himachal Pradesh*, Delhi, Economic and Publishing House, 1992.

4 R.K. Gupta, "Aspects of Environment and Resource Ecology of Garhwal," in *The Living Himalayas*, Volume 2. New Delhi, Today & Tomorrow Printers & Publishers, 1983.

Among the mountain areas of the world, the Hindu Kush Himalayan (HKH) region offers the greatest challenge for sustainability. In 1983, ICIMOD (The International Center for Integrated Mountain Development) was established, "to help promote the development of an economically and environmentally sound mountain ecosystem and to improve the living standards of mountain populations in the Hindu Kush-Himalayan Region."⁵

During 2003-2007, for sustainable development in the HKH region, ICIMOD has been working on developing methodologies for applying the technology in portraying the livelihoods of the people, thus helping for better planning and implementation of development programmes which includes six integrated and interlinked sectoral programmes like, Natural Resource Management (NRM); Agricultural and Rural Income Diversification (ARID); Water, Hazards, and Environmental Management (WHEM); Culture, Equity, Gender, and Governance (CEGG); Policy and Partnership Development (PPD); Information and Knowledge Management (IKM).⁶ Now, ICIMOD seeks support from governments and Non-governmental organizations (NGO), thereby trying to improve living standards and ensure that fair policies govern the lives of the mountain people.⁷

In United Nations 2001 Agenda 21's objectives were promoting integrated watershed development, promoting alternative livelihood opportunities, improving infrastructure and social services and the development of a knowledge based on mountain ecosystems. Two programme areas were identified in Agenda 21 for sustainable mountain development:

- Promotion of integrated watershed development and alternative livelihood opportunities.
- Generating and strengthening knowledge about the ecology and sustainable development of mountain ecosystems.

In India, since 1974, two programmes, the Hill Areas Development Programme (HADP) and the Western Ghats Development Programme (WGDP) had been undertaken specially on mountain areas. The objectives of these programmes were eco-regeneration and eco-preservation, with emphasis on preservation of biodiversity and rejuvenation of hill ecology (Planning Commission, 2001b). Under HADP and WGDP, special central assistance is given to supplement efforts of the state governments

5 Jodha, *Global Changes and Environmental Risks in Mountain Ecosystems*, Mountain Farming Systems Discussion Paper Series No.23, Kathmandu, International Centre for Integrated Mountain Development (ICIMOD), 1992.

6 ICIMOD (International Centre for Integrated Mountain Development), *Mountains 2000 and Beyond: Second Regional Collaborative Programme for Sustainable Development of the Hindu Kush Himalayas (RCPII)*, Kathmandu, 1998.

7 T.S. Papola, *Poverty in Mountain Areas of HKH Region: Some Basic Issues in Measurement, Diagnosis and Alleviation*, Internal discussion paper, ICIMOD, 2001.

in the development of these ecologically fragile regions (Planning Commission, 2001a). National and State level policies for natural resources are assessed in terms of framework of seven key principles and nine key issues of sustainable mountain development described in Mountain Agenda by Swiss Development Agency and United Nations University.⁸

NGOs can play an important role in mobilizing people at the grass root level. They serve as the medium for knowledge exchange and facilitate the flow of information from the government. Also the NGOs has taken initiatives to improve sanitation and access to medical services and modern communication networks in mountain areas.

Ecotourism as a tool of sustainable development in the Himalaya

Any attempt towards mountain ecotourism should focus on sustainability, diversity, institutional reforms, gender equity, local, regional and global economic integration; local financial incentives, and peace and security. It is essential to increase the process of democratization by strengthening local structures and by vesting the community with the autonomy to determine its future so that ecotourism becomes a dynamic facet of economic development. There is a need to develop an applied tool to measure the threshold of tourism impacts and change in socio-economic and environmental status of the site through Criteria and Indicator (C & I), under the framework of sustainability. Conflicts in policies on forests, land use, environment, water, agriculture and grazing have to be analyzed to focus on the need for developing a holistic policy framework.

Himalaya and Deprivation of its people

As we know deprivation is a concept relating to poverty. Absolute poverty can be defined as the absence of the minimum resources for physical survival, whereas, relative poverty relates this to the standards of living. Mountains are rich in biodiversity, but mountain people are among the worlds poorest and most disadvantaged group. They live far from the canters of commerce and power. They have little say over the policies and decisions that influence their lives, and contribute to the deterioration of their mountain homelands. Mountains are often left to marginalized people, such as indigenous communities and cultural minorities. However, a growing number of mountain men are migrating to cities in search of jobs leaving women, children and the elderly; to maintain the homestead.⁹ As a result, mountain poverty has become increasingly the territory of women. Many mountain people live on the economic fringe as subsistence farmers and herders, traders and day laborers. The most valued mountain resources, such as forests, minerals and water, are expropriated and exploited by the outsiders. With the exception of when they are hired as laborers for low pay, mountain people rarely profit from the resources being extracted. Government and

8 J. Pezzey, "Economic Analysis of Sustainable Growth and Sustainable Development, Environmental department", Working Paper No. 15, World Bank, 1989.

9 S. S. Negi, *Garhwal: Land and People*, Delhi, Indus Publishing Company, 1994.

other officials often pay little attention to the needs and capabilities of the mountain people. Economic activities in mountain areas are seldom managed sustainably, leaving mountain people to live in the degraded or highly polluted environments. As a result not only the infrastructures and human lives are lost, but also hundreds of marginal farmlands are rendered uncultivable, and in turn the mountain people are deprived from their livelihood.

Additionally, greater agricultural burden placed on women as a result of male out-migration and lack of access to improved seeds and other agricultural services, compounds the problem of food deficits.¹⁰ The study revealed that, over 30% of the population suffers from under nutrition which in turn leads to mental impairment among children and low work output among adults. Chronic under nutrition also has a tendency to precipitate nutritional deficiency disorders, such as, anemia, goiter, and night blindness. Under nutrition further accentuates adult chronic diseases such as, diabetes, heart disease, hypertension, and cancer. Treatment facilities are difficult to construct because of poor infrastructure and dispersed land. Mountain dwellers receive little compensation for electricity, wood and charcoal derived from their homelands. This results in negative social and environmental effects. Smoke from the fires and stoves used for cooking and heating, pollute the environment and damage the health of the mountain people. The use of animal dung and agricultural waste as fuel deprives the soil of valuable organic fertilizer. The processes of enhancing economic opportunity, decentralizing political power, and improving social and technical infrastructure can contribute to a more balanced and sustainable form of development only if gender mainstreaming is integrated.

Followings steps are to be adopted by the central as well as state authority for the sustainable use of mountain resources and maintaining the sustainable development in the concerned area:

- Mountain communities should be given more power to determine their region's development path and how local resources are used.
- National subsidies should be created for agriculture and other forms of development in mountain regions.
- Health care and education should be improved.
- To a great extent, profits from tourism should be put into the hands of local people.
- Putting power back into the hands of mountain people and advocating policies and practices that ensure equitable access to and distribution of the benefits from mountain land, water, forests and mining.

10 S. N. Nandy & K. S. Rao , Population dynamics of Indian Himalaya: Himalayan Ecology and Development, *Census 2001*, Vol 9, 2001, pp. 6-21.

- The special schemes for the mountain areas have to be focused more on ecology and general services like health and education.
- Subsidies should be provided to small and marginal farmers for agricultural implements, power sprayers, high-yielding annual vegetable crops, and perennial crops.
- Alternative livelihoods such as animal husbandry, dairy development, sericulture, and tourism should be encouraged through specific allocation of funds.
- Making proper infrastructure for educating people on implications of environmental degradation.
- Steps should be taken to ensure effective use of traditional technology and development of appropriate technology required for hill areas.

Conclusion

Himalayas are rich in potential natural and human resources. Therefore, economical and sustainable use of these resources and policy implication can only bring about development in the area so that people are not deprived. Policies, laws and instruments with specific mountain focus are needed to be developed both at National and Local levels to reduce political and economic marginalization of the Himalayas and its people. Despite the importance of mountains in sustainable development, the specific challenges to development in mountains are rarely reflected in national policies and instruments.¹¹ Separate policies should be considered, in addition to national policies and programmes developed for protection of forests, biodiversity, water and other natural resources. Sectoral development models suitable for mountains are needed to be enforced and implemented in the name of equitable sustainable development. The need is for energy policies and programmes that can take into account the vulnerability of mountain ecosystems and the nature of mountain communities. These policies and programmes must be developed by mountain dwellers themselves in order to ensure that technologies match lifestyles and meet peoples real needs.¹²

11 UCN, *The Future of Sustainability: Re-thinking Environment and Development in the Twenty-first Century*, Report of the IUCN Renowned Thinkers Meeting, January 29-31, 2006.

[url.www.cmsdata.iucn.org/downloads/iucn_future_of_sustainability.pdf](http://www.cmsdata.iucn.org/downloads/iucn_future_of_sustainability.pdf)

12 Allen Will, "Learning for Sustainability: Sustainable Development", *Journal of Royal Society, New Zealand*, Vol. 39, No. 4, 2007, 239-242.