

# **SAGARMATHA (MT. EVEREST) NATIONAL PARK: CONSERVATION FOR SUSTAINABLE DEVELOPMENT**

**Khadga Basnet**  
Tribhuvan University, Kathmandu

## **Introduction**

In general, the purpose behind establishing national parks is preservation of indigenous plants and animals, and historical places- the biotic environment and cultural heritage. Although priorities may differ in space and time, safeguarding such valuable national assets demands that specific areas be permanently set aside or at least temporarily restricted from human interference so that natural resources are not relentlessly depleted through irrational use by humans.

The aim of this paper is to qualitatively review the past and present situation of Sagarmatha National Park (SNP) in terms of conservation of natural resources and analyze the problems in managing it. Major constraints and their solutions to promote ecologically sustainable development of the park and its people are also proposed.

## **Sagarmatha National Park**

Sagarmatha National Park is a sprawling region of 1248 Sq. Km. which shares its northern frontier with Tibet and includes Mt. Everest, the highest peak in the world, of course, and several other world-famous peaks. The park was established in 1976 with the prospective view of preserving unique fragile mountain ecosystem and indigenous Sherpa culture for years to come (Mishra 1973; Jefferies 1982). Moreover, promoting and ensuring the tourism industry in this highest land of the world was another important part of the park policy (Mishra 1973).

Sagarmatha National Park with its spectacular scenery of unique physiographical features and varied flora and fauna together with the cultural heritage has attracted people from all over the world. Because of its unique

natural and cultural features, UNESCO, in 1980, acting upon the Nepalese Government's proposal, designated Sagarmatha National Park as a World Heritage site under the world heritage Convention in order to prevent natural and cultural degradation.

### **A Brief Historical Review**

**Political and economical transformations.** In 1947, Nepal opened its borders to foreigners. Initially, Nepalese government gave permission to scientific and mountaineering expeditions to visit the Nepalese Himalayas (Bjonness 1983). The number of tourists has increased continuously since then, especially after 1965 (SNP 1984; NPC 1991). Today, more than 10,000 tourists visit Sagarmatha National Park each year.

The Sherpas of Khumbu, who has always managed to adjust themselves according to the changing environment, shifted their trade-based economy slowly to a tourist-based economy (Haimendorf 1975). The need to make this change was mainly due to the following factors: (a) political change both at home and abroad. Tibet became an autonomous region of People's Republic of China in 1959, and the international frontiers were closed. This affected the trade between Nepal and Tibet and consequently the economy of the Khumbu area itself (Haimendorf 1964), (b) an overwhelming inflow of tourists who started entering the Sagarmatha National Park (NPC 1991).

The Sherpas managed to manipulate these changes in their favor not only because of their own qualities but also because of the sequence of the external and internal changes which turned out in their favor. Gurung (1979) puts it this way, 'The Sherpas would have faced the economic plight of similar trading communities in other Himalayan ranges, but the opening of Khumbu for tourists preceded the closure of the Tibet trade by a decade'. After the closure of the trade with Tibet in 1959, tourism which was in its infancy at that time, has proven to be a windfall for the Sherpas who have monopolized the trekking, mountaineering, and other services related to tourism which brought new economic wealth to the region (Fisher 1978; Pradhan 1981). Most of the Sherpas are involved in these businesses, having abandoned subsistence agriculture, trade, and other less lucrative occupations.

**Population dynamics.** According to Haimendorf (1975), there were 169 households in 1836 compared to 596 households (2205 people) in 1957. According to Lang (1970) the population of Khumbu was 2761, whereas in 1978 it was only 2474 (Fisher 1978). However, the population and the household numbers increased to 2929 and 638 respectively in 1979 (Sherpa 1979). According to the Village Panchayat records of Khumjung and Namche, there were 645 households in 1982/83. At present, the population

of the park is about 2500. These figures, which include the immigrants from Tibet and the lower regions, show that the natural growth of the Khumbu population has remained very low. However, a rapid increase of external population has substantially modified the once healthy environment: the indigenous culture and the fragile Himalayan ecosystem (e.g. Bjønness 1983).

### Conservation Practices Before And After 1950s

The Sherpas of Khumbu practiced a very efficient and effective traditional way of conservation of nature for centuries. They maintained a very strict discipline of preserving forests and encouraged local participation in an ancient, but effective form of community cooperation. They realized the importance of conservation and cultivated the spirit of community welfare. Every village of Khumbu appointed two local officials known as *Naua* (literal meaning as guards) to control the use of the village lands and to prevent community disorder (Haimendorf 1964). *Shingo-naua*, an indigenous traditional forest guard, was elected unanimously by all the villagers to keep watch over the local community forests. He was a powerful person with authority over the forest area, whose duty was to enforce the unwritten laws of forest preservation. People were not allowed to collect green wood freely in those days. Those who needed timber for construction or an additional amount of firewood for some special purposes, such as construction of houses, had to get a permission from *Shingo-naua* who could fine a defaulter (Sherpa, K.C., personal communication). Firewood and timber were abundantly available, since the forests of Khumbu were well preserved and self-sustaining. The people successful in achieving a sustainable balance between the needs of the local people for fuel, construction material, poles for fences and the capacity of the natural environment to provide these local requirements. *Osho-naua*, the guard of agricultural lands functioned to control the land use pattern in a parallel manner to *Shingo naua*. Thus, the delicate ecological balance, regenerative capacity, biotic potentiality, and biodiversity were maintained. Conservation practices among the Sherpas were a part of the Buddhist belief system (Haimendorf 1975) and can be seen as bottom-up approaches (Hough and Sherpa 1989).

This tradition of the high Himalayas proved less effective after the nationalization of forests for the following reasons. First, this top-down approach represented by nationalization polarized interests of the government and the local people who deemed that the forests now belonged to the government rather than to them (Forestry Plan 1978, 1988; Bjønness 1983). Secondly, most Sherpas diverted to tourist-oriented jobs. Thirdly, Chinese action in Tibet brought a large number of refugees into Khumbu, which

made it even more difficult for the Sherpas to preserve their traditional laws effectively. After the establishment of the national park, the situation of local conservation practices was further aggravated and for sometime *Shingo-naua* in practice did not exist. However, Phortse, a village which is off the trekking route never gave up the traditional methods, so the forests in its vicinity are well maintained. Forest, an ecological complex, preserves the water-catchment area, thereby reducing the soil erosion which affects the stability of ecosystems. Moreover, it also promotes recreational, aesthetic, and scientific values.

### **Major Constraints and Solutions**

There are some problems in managing the park, a proposed international biosphere. Lack of education, alternatives, and understanding are the major constraints in such conservation programs (Basnet, in press a). The park could neither gain the local support nor enforce the rules and regulations. For instance, most of the tourists entering the park are not self-sufficient in energy. A functionless kerosene depot at Jorsale, the entrance gate of the park, was just a burden for taxpayers.

1. **Education.** Promotion of education should be of high priority as it may play multiple roles in the success of the long-term programs such as conservation. Both formal and informal education must be an integral part of the planning and management.
2. **Ownership.** Primarily, an agreement between the landowners and the officials of the park is most desirable. In retaining their rights, the landowners must agree with certain conditions affecting land use and management. There must be mutual cooperation between the local people and the authorities of the park (Basnet, in press a). The main objectives of the park and its policy should be explained and discussed with local people who are the beneficiaries.
3. **Preserving traditional approach.** The traditional method of forest and land conservation should be revived. This could alleviate many of the problems of conservation (e.g. Basnet, in press a). *Shingo-naua* has been restarted in some places through the financial support from Himalayan Trust (F. Kharel, personal communication).
4. **Alternative technology.** Lack of alternative energy sources has compelled the locals and tourists to depend completely on the dwindling forests for their energy. The subsistence balance between the people's

needs and the capacity of local natural resources to meet the demand is in jeopardy. The innovation of alternative energy sources, like solar and wind energy and mini-hydroelectricity plants, is imperative for the Sagarmatha National Park as deforestation is related to the consumption of energy (Basnet 1986, in press b).

5. **Research.** Basic research, one of the objectives of any national park, should be facilitated to explore natural phenomenon. It will not only provide the insight of the actual problems for planning and implementing programs but also open up a new horizon of sustainable development-partnership among scientists, planners, and managers who work with real grass root people. Research, however, must be of high quality, appropriately designed to test the existing/new hypotheses. Most of the studies, including big projects financed by reliable international agencies, were just of a survey type (see Byers 1987). What is worse is that one cannot find reports of such studies in Nepal. Some research areas include an ecological assessment of land use pattern, carrying capacity of the local environment in terms of energy, food, fuel, livestock, and causes of deforestation (Basnet, in press c; Stern. 1983).
6. **Legal options.** Inappropriate activities, e.g. collecting and selling green wood, should be discouraged. The enforcement of the park rules and regulations is essential. All tourists should be self-sufficient in energy. Safeguarding measures should be taken unless people begin to morally support the program.

### **Conclusions**

Sagarmatha National Park, a biospheric reserve, demonstrates all kinds of interactions and demands an integrated approach for sustainable development which needs long-term planning. Absolute and immediate solutions to problems of such dimensions are rare. Reducing the problems to a bearable limit by tackling component problems of whole ecological complex may be the best solution.

### **Acknowledgements**

F. Kharel and M. Shrestha read the earlier version of the manuscript. Special thanks are extended to people of Khumjung, Kunde, and Namche in Khumbu.

## References

- Basnet, K., 1986. "Fuelwood demand versus deforestation in Sagarmatha National Park, Khumbu Region, Nepal: An Ecological Dilemma." A report to United Nations University.
- \_\_\_\_\_. *in press a*. "Conservation Practices in Nepal: Past and Present." *Ambio*
- \_\_\_\_\_. *in press b*. "Deforestation as a consequence of firewood demand in Sagarmatha National Park, Nepal." *Tribhuvan University Journal*.
- \_\_\_\_\_. *in press c*. "A brief note on deforestation and research in Nepal." *Journal of Natural History Museum*. T.U.
- Bjonness, I.M., 1983. "External economic dependency and changing human adjustment to marginal environment in the high himalayas, Nepal." *Mountain Research and Development* 3:263-72.
- Byers, A.C., 1987. "A geological study of landscape change and man-accelerated soil loss: The Case Study of Sagarmatha National Park, Khumbu, Nepal". Ph. D. Dissertation. University of Colorado, Boulder, Colorado.
- Fisher, J., 1979. "Preliminary Data From a Tourist Survey." Sagarmatha National Park Office.
- Gurung, H., 1979. "Khumbu Region Tourism Study: Summary Report." Kathmandu: Industrial Service Center.
- Haimendorf, C.V.F., 1964. *The Sherpas of Nepal*. University of California Press.
- \_\_\_\_\_, 1975. *The Himalayan Trades*. London.
- Hough, J.L. and N.M. Sherpa, 1989. "Bottom-up vs basic need: integrating conservation and development in the Annapurna and Michiru mountain conservation areas of Nepal and Malawi." *Ambio* 18:435-441.
- Jefferies, B.E., 1982. "Sagarmatha National Park: The Impact of Tourism in the Himalayas." *Ambio* 11:274-281.

- Mishra, H.R., 1973. "Conservation in Khumbu: the proposed Mt. Everest National Park. A Preliminary Report." Kathmandu: Department of National park and Wildlife conservation.
- National Planning Commission, 1991. *Statistical Pocket Book*. Kathmandu: Central Bureau of Statistics, HMG of Nepal.
- Nepal's Forestry Plan., 1976. *Nepal Australia Forestry Project; Technical Note 1/82*, Kathmandu, Nepal.
- \_\_\_\_\_. 1988. *Forestry Sector Policy*. HMG of Nepal.
- Pradhan, P., 1981. "Social Impact of Tourism in Nepal." *Nepalese Journal of Public Administration*.
- SNP., 1984. Sagarmatha National Park Office File.
- Sherpa, N.W., 1979. "A report of firewood use in Sagarmatha National Park, Khumbu Region." Sagarmatha National Park.
- Stern, A.C., 1983. Promoting firewood Conservation in Nepal's Sagarmatha National Park: A Strategy For Survival. A report to HMG, Nepal."