IMPACT OF TOURISM ON THE ECOLOGY OF THE LADAKH HIMALAYAS

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Ladakh is exposed to accelerating environmental changes. Tourism which is a recent occurrence in Ladakh, has now recorded 3,000 per cent growth during the past eighteen years, with the result that the ecological set-up of Ladakh region is greatly affected. No doubt tourism has brought improvement of living standards of local inhabitants, provides jobs and employment of all kinds at all levels and for every conceivable form of regional development (Verma, 1989). Therefore, in this context the development of tourism has now become a need of the day.

The increase of the tourist industry, though it is supporting the economy of the Ladakh region, also results in indiscriminate converting of cultivated land of Leh and Kargil towns to Hotels, Guest Houses and Government buildings. Villages in the vicinity of these towns do not have enough land for grazing animals.

Farmers of these villagers are becoming more and more money minded, using chemical fertilizer in excessive quantity, causing the land to become dry and more hard.

The traditional practices which were once prevalent to protect their crops from insects or pests such as Sadak-don-dol, Sadak-tuk-chos etc., are now hardly seen in these villages. Instead villagers of these areas are now using pesticides like Dithen-Z, which is no doubt killing the harmful pests. But sometimes the excess use of such kinds of pesticides is harmful to the other animals and insects who are helpful for the crop production. Thus, decreasing the population of one harmful pest ultimately causes the increase of the population of new pests and diseases in crops as well as among other living beings.

Increasing water-borne disease among human beings and stomach disease among livestock are quite common in Leh, because the water used by them is no more free from pollution. Air pollution caused by motor vehicles, aircraft, road transportation, coal-fuel, oil, natural gas, wood-fuel etc. is now gradually emerging as a new
problem before locals, resulting in eye and throat problems. To meet the tourists' demands, a large amount of food stuff is imported to Leh by Kashmiri merchants. These vegetables and semi-ripe fruits bring infections to Leh and its surroundings. During the tourists season diarrhoea is now becoming a common feature among the children in the Leh area, because of tourists and labourers, especially Nepalis and Biharis, brought in by tourism, who are mostly engaged in construction works in Ladakh.

In addition to the problems of air and water pollution, a new kind of disturbance, noise pollution, has come into prominence specially in Leh and other tourist centres due to frequent travel and population growth. Variety of sounds produced by vehicles, machines, radio and television at these centres intensify the noise pollution.

In the past couple of years, trekking and mountaineering has become popular among tourists. Every year trekkers and climbers climb on mountains (Jina 1986), thus, polluting the environment in the following ways:
1. Throwing all wastes such as plastic bags, tins, water bottles along tracks.
2. Polluting water near the camping sites.
4. Disturbing wild animals.
5. Catching butterflies and other helpful living beings.
6. Trampling the vegetation and soils.

Hence, many species like snow leopard, marmot and black necked crane are becoming rare; varieties of butterfly and plants along the treks are becoming extinct. This degradation of vegetation leads to an acceleration of erosion.

Other changes in the ecology are due to the increase of the human population in the recent decades, including the presence of the army. Population increase and increase in agriculture have modified the climate of Ladakh. Three days of unprecedented continuous rain fell in September 1988. Exceptionally heavy snow fell on 14th December, 1986, and around 450 vehicles were snowbound, with the result that around 50 dead bodies were recovered; not only this but a number of person suffered from snow or frost bite (Jina 1990). Recently the unexpected snow fall during 2nd week of May and heavy rain fall on 12th to 15th July 1993 resulted in around five rooms of Central Institute of Buddhist Studies collapsing. These are a few examples which show the reactions of the environment in Ladakh.

The need for the conservation of resources is in fact a problem
of human ecology. In its present form, therefore, an understanding of the emergence of many ecological and environmental problems of the present day may be associated with such dynamic processes as population growth, changes in technology, or the changing social and political circumstances. In Ladakh, the increase in population from 85,551 in 1961 to 163,710 (Jina 1993) has largely been due to changing traditional system viz. the ban against polyandry, providing modern education for children instead of monastic education, and a decrease in donating one son or daughter to their respective monasteries.

Therefore, keeping to the above facts, if only a few groups of tourists are occasionally passing through so that the intervals between them are longer, their impact will be little and incidental on the ecological set-up of Ladakh Himalayas.

Careful studies are needed of the impact of tourism. If tourism greatly increases it will result in ecological disturbances in Ladakh. In this case local people will be more and more busy during tourists season. They will have much less time to stay with their families and parents in villages. Ultimately cultural erosion will be serious. Similarly road and transportation changes will change the infrastructure. New urban areas will come into existence. More and more hotels, guest houses, shops and restaurants will meet the tourists' demands. Migration of rural youths towards cities will take place. Thus population pressure in and around urban areas will increase. Such activities will generally upset the ecological balance.

References
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