

A Monitoring Framework for the Carrying Capacity of Mountain Areas in Northern Pakistan

Introduction

A monitoring and evaluation system is an essential part of the development process, particularly in the case of the tourism sector where community development is a major concern. However, this is also the weakest point of the system. The only type of evaluation that exists is the end of project evaluation for development projects. A monitoring system that can act as a mechanism to guide the development process and identify constraints and critical issues, such as degradation of resources or disbenefit to the community, by following a particular method or course of development does not exist.

Even for public sector projects, the only form of monitoring pursued is that of quarterly or annual reports on the status of project activities. It does not possess a mechanism to solve on-the-spot problems or reverse a critical situation.

If the community is to benefit from the development of the tourism sector, certain preconditions will have to be met. As a first step, the key issues will need to be identified in the context of the state of the existing resources. This will be followed by

- a list of strategic thrusts,
- the establishment of measurable parameters for monitoring environmental and socioeconomic development, and
- operational processes.

Key Issues

Regarding the existing status of tourism resources (already discussed), the key issues that need to be addressed are the following.

- How can tourists be encouraged to venture deeper into the areas to enjoy the pristine natural assets and avoid saturating the resorts in Kalam and the reception areas in Hunza?

- How can the resort settlement in Kalam and the reception areas in Hunza be converted from tourist destination areas pure and simple into staging areas for further excursions?
- How can organised tourism be encouraged to reduce overloads in the Kalam resort area?
- In Kalam, there is a need to promote local ownership and management of tourism facilities in order to prevent leakages of income and increase local jobs and markets for local goods. What should be the degree of local ownership and control to ensure sustainable development?
- In Hunza, most of the tourism service industry is owned by locals who neither sell land nor allow outsiders to build hotels or restaurants. While local ownership and control of resources are desirable, the question arises as to the best way to upgrade facilities and organisations to meet the increased tourist load?
- How can the cultural heritage (both language and culture) of the mountain communities be preserved?
- To what extent do tourist activities bear upon the level of inflation in the area in terms of an increase in the cost of living?
- In what manner and to what extent do tourist activities affect changes in the ecosystem?
- What percentage of the income from tourism goes to locals, and how much of it leaks out?
- How has tourism affected the socioeconomic status of the local people over time?

These are some of the key issues that have to be addressed through monitoring indicators.

Strategic Thrusts for the Monitoring Framework

The strategic thrusts will have to be made through the critical factors listed earlier, namely:

- critical resources,
- critical institutions,
- critical infrastructure, and
- factors critical for social development.

It will involve the following.

- Making an inventory of the existing resources.
- Specifying standards for resources in order to identify the critical resources. This will involve the carrying capacity also.
- Specifying the achievable level or resource use and the present level of use.
- Identifying institutions that are critical for the success of tourism. These will include the supply-side factors and the involvement of the community in the supply of goods and services. These institutions balance the demand and supply factors and serve other critical functions.
- Identifying the infrastructure that is critical for success and comparing it with what already exists.
- Identifying alternative opportunities and management actions and selecting the best among them.
- Identifying the existing state of development of socioeconomic indicators and determining the change in attitudes that will be needed to bring about changes in these indicators.
- Selecting indicators of:
 - change in the status of resources,
 - status of socioeconomic conditions of population,
 - employment/income from tourism,
 - status of institutions that are critical for development of tourism, and
 - community participation and involvement in the tourism activities and benefits therefrom.
- Setting up a system with a specified institution to monitor the specific indicators evolved.

Monitoring Indicators

The indicators used for monitoring need to be of two types, namely, qualitative and quantitative, which in conjunction will reflect the status of resources, the impact on local communities, and the linkages between the two.

Subsequent to the formulation of the indicators, a methodology for implementation will have to be laid out and operationalised. This may include household surveys, interview of hotel/restaurant and transport owners, travel agents, and so on to monitor the changes and measure these against the standards evolved from the baseline data.

Some of the indicators being recommended may be used to monitor the resources, the communities, and the linkages between the two.

Resources and Tourism

Although Pakistan has a large variety of tourism assets, they are concentrated on only a few sites. This may be due to the non-existence of critical infrastructure or the perceptions of tourists. The information on infrastructure should include not only the number of hotel rooms available but also the occupancy rate (over a year) of these, as well as any other accommodation used by tourists. The latter would include local houses that take in paying guests and the use of camps, tents, and so on. The monitoring indicators should thus reflect such aspects.

The indicators may be the following:

- number of visitors by season and destination,
- total number of rooms available by type and season (comprehensive),
- occupancy rate by season and destination,
- percentage of days spent by season and destination, and
- percentage of days spent by type of accommodation.

Inflationary Pressure

Inflationary pressure is a common complaint of the area and is reflected in high prices and shortages of essential commodities (luxuries are not even considered here, as they are not available in the local area). National reported data already show the cost of hotels to have increased faster in the Northern Areas compared to the rest of the country. The high prices can be termed 'scarcity rent'. Often the price of a room is lower off season, while at times hotels may be closed altogether, as the cost of keeping them open is too high. The carrying capacity can also be deduced from these indicators. The following indicators can be used to monitor inflationary conditions:

- average price of a room by season,
- number of days the rooms are closed, and the number of rooms that are closed,
- average price of meals,
- wages of servants in the hotels/restaurants,

- cost of porters and guides,
- cost of transport,
- trekking fee,
- camping and other costs (specify), and
- percentage of lodge owners, hotels, and restaurants reporting profits from tourism and the amount of such profit.

Quality of Service and Resources Provided

Another aspect that needs to be monitored is the quality of service and resources that are provided. This is also related to the price charged and the carrying capacity of the area. It is necessary to gauge the perceptions of tourists so that plans can be drawn up accordingly and efforts made to provide linkages with the community through the involvement of the community in improving the quality. Some efforts towards conservation can also be undertaken here. The indicators suggested are the following and may be graded as good, fair, or poor.

- Quality of rooms
- Quality of facilities
- Quality of service provided
- Quality of roads
- Quality of trails
- Quality of treks
- Quality of camping grounds
- Quality of water

Besides these, information on the facilities that the hotels possess and provide may also be evaluated. The indicators for these are:

- availability of electricity,
- availability of telephones,
- availability of radios and television,
- the frequency with which the bed linens etc are changed, and
- the training and behaviour of service personal.

Environmental Impact

Tourism is said to have a direct impact on the state of the resources and the environment. This impact is felt on the critical resources as well as on the

state of the environment (land, water, and air). However, the overall impact may be the result not only of tourist activities but also of the behaviour of the local communities and all the actors in the tourism sector, such as tour operators, hoteliers/catering industry and service sector, who together have a considerable impact on resources. In Kalam, grazing of cattle by nomads who come down from the mountains adversely affects the state of the forest cover. Similarly, the forest cover in Hunza is being depleted by the free grazing of animals even in the Khunjerab National Park. More recently, there has been an emphasis on the need for conservation of forest cover and on reforestation, particularly social forestry. The use of alternative sources of energy also reflects a concern for conservation and a change in habits. The following indicators are suggested to capture the environmental impact.

- Percentage of hotels/lodges using firewood, kerosene, gas, and electricity for lighting, heating, and cooking, by season
- Average consumption of fuelwood and other sources of energy per hotel/lodge per season
- Percentage of hotels/lodges reporting a decrease in the use of firewood
- Percentage of tour operators using kerosene or alternative sources of energy
- Per capita use of firewood per annum
- Percentage of households using alternative sources of energy
- Average rate of depletion of forest resources
- Average rate of reforestation undertaken by forest department
- Percentage of local population involved in social forestry programmes
- Percentage of households using fuel-efficient stoves
- Percentage of households reporting better watershed management
- Percentage of population reporting less open grazing of cattle
- Percentage of population staff-feeding cattle
- Number of cattle of nomads grazing in Kalam by season
- Number of cattle grazing in Khunjerab National Park by season

The mountain areas under study were once rich in wildlife which is fast becoming extinct. Human activity in the form of hunting and commercial activities has led to depletion of the wildlife in the area. It also needs to be monitored. The indicators recommended are as follow.

- Number of wildlife species (specify the type) presently found
- Number of hunters of wild game by seasons
- Is there any increase in the existing stock of endangered wildlife through the presence of game reserves and the national park? Specify the number.

The Swat River, which flows through Kalam, is already threatened due to the dumping of waste and other household refuse. To determine the environmental impact due to human activity, the following indicators are suggested.

- Quality of water in rivers and creeks
- Quality of glaciers
- Littering affecting campsites, treks, trails, scenic spots, hotel/lodge areas, dining areas, and villages
- Where is the solid waste deposited?
- Are there any sanitation facilities available for tourists?
- Percentage of households with sanitation facilities
- Are there any public sanitation facilities? If not, what do people use?
- Percentage of tourists reporting too many tourists by destination and trek. (This is to determine overcrowding and the existing carrying capacity.)
- Percentage of lodge owners reporting that tourists follow the code of conduct
- Percentage of tourists reporting hotel/lodge owners follow the code of conduct
- Percentage of households reporting a clean village

Community Development Indicators

If tourism is to be viewed as a vehicle for community development, then it will be necessary to first assess the existing status of socioeconomic and behavioural indicators and then look at the impact of tourism on the community and determine what has been the benefit to the local community, given the acknowledged facts that local communities bear the direct burden of tourist activities and that resources are limited. The use of forest resources - a major factor in this community-has already been discussed under the heading of environment. Development is expected to bring about changes, not only in the state of resources, institutions, and infrastructure but, more importantly, in people's lifestyles. This is reflected in time-saving opportunities provided by new technology and the expansion of infrastructure (roads, markets, etc) Some of the indicators that may be used are the following.

- Percentage of households reporting better protection of cultural sites
- Percentage of people reporting better protection of religious sites
- Percentage of households reporting more crime and theft in the community

- Percentage of households reporting changes in cultural practices
- Decreases in the rate of population growth
- Improvement in the rate of literacy by sex
- Improvement in health indicators such as female and infant mortality rates
- Percentage of households with clean drinking water
- Percentage of households reporting less time needed for:
 - water collection,
 - travelling to schools and health centres, and
 - cooking (due to improvement stoves).
- Decrease in the number of households in the poorest category

Gender Concerns

Development activity should be conducted so that women also benefit. Though women may not directly be involved in the tourism sector, they should not be excluded from the overall development of the area. The indicators of this aspect of development are:

- is there any decrease in women's work load?
- do women have more time for themselves?
- are there any training facilities available to prepare women for work similar to that performed by men?
- percentage of households where women are involved in non-traditional work,
- percentage of households where women are involved in marketing or entrepreneurship activities,
- percentage of women targeted in development work as suppliers of services,
- percentage of women who earn income for work provided in non-traditional areas,
- percentage of households where women take decisions in household affairs and other matters, and
- percentage of households where women spend their own income.

These answers will help determine any change in the status of women within the household and the community.

Economic Impact

Economic benefits are an important part of development impact. The mountain areas suffer from high unemployment and out-migration of labour due to lack of income-earning facilities. Tourism is seen to benefit the national economy through its generation of foreign exchange and contribution to GNP and GDP. However, it is important to determine the economic benefits that accrue to local communities and the income and employment generated therein. The indicators to assess these aspects are as follow.

- List of major sources of income and means of livelihood of the population
- Per capita income and distribution of income
- Share of income from crops, livestock, services (government and private), tourism, and other activities (specify)
- Percentage of households with members employed in the tourism industry
- Wages of porters, guides, and others in the tourism industry
- Percentage of households reporting sale of home goods to the tourist and non-tourist market
- Average days worked for tourism by season
- Ratio of income from tourism to total income
- Ratio of local labour to non-local labour employed in the tourism industry
- Percentage of local owners to non-local owners of hotels/lodges, restaurants, and transport used by tourists
- Percentage of the local population involved in the retail trade sector catering to tourists
- Percentage of households reporting tourism is good for the community
- Percentage of households reporting tourism has led to increases in income
- Percentage of households reporting food deficits due to tourists by season
- Percentage of households reporting labour shortages due to migration
- Percentage of households reporting reinvestment of income within the community

Linkages between Tourism and Community

Sustainability of any activity depends on the support and linkages that exist with the community. Tourism is seen to possess linkages with the hotel, transport, industry, and service sectors at the macro-level. However, the linkages with the local community needs to be determined so that plans can be evolved to strengthen these linkages where possible. In this area, linkages

can be established with the hotel, transport, service trade, and cottage industry sectors. But benefits to the community cannot be guaranteed, due to the lack of ownership of assets in some cases and the lack of trained personnel in other cases. However, in the service sector, porters and guides are in most cases locals, as are transport drivers in the inaccessible parts. In Hunza, ownership of lodges and accommodation is, in most cases, in local hands. Land is not sold to non-locals for these purposes. Linkages can be made with the trade in the retail sector where the items for consumption may be supplied by the locals. These include those items that can be grown or developed in the area. Besides these forms, linkages may also be seen in the level of participation of the community in environmental regeneration activities and in raising awareness of environmental impact. This is where partnerships can be forged between the communities and the government departments or projects in order to conserve and utilise resources, particularly forest resources, and save the mountain, glacier, and river wealth of the area. Some of these have been covered by the indicators of economic activity, and others are suggested below.

- Percentage of households supplying products to tourists by season and type of product
- Value of the products supplied to tourists
- Percentage of food and other goods bought by hotels/lodges from local communities
- Ratio of local supplies to total needs of hotels/lodges and restaurants,
- Percentage of the population of locals involved in hotels/lodges, restaurants, and transport sector as labour
- Share of local food and other items used by tourists bought by tour operators from local communities by type of product and season
- Percentage of households involved in a cottage or other type of industry catering to the needs of tourists
- Percentage of households reporting occupational linkages with tourism
- Percentage of the population involved in reforestation to meet needs of hotels/lodges for firewood
- Percentage of the population made aware of environmental impact through tourism and activities of the Alpine Club or others involved in clean-up operation
- Percentage of porters/guides and local people aware of environmental codes in mountain areas

Operationalising the Process

In order to operationalise the process, institutions, personnel, and infrastructure will be required. The personnel will have to be trained to evolve and implement the indicators identified and then monitor them regularly. This will have to be an on-going process; to ensure the sustainability of such an activity, the community will have to be involved as active participants.