Chapter – 2
Tourism Infrastructure

- ACCOMMODATION
- TRANSPORTATION
- POWER SUPPLY
- COMMUNICATION
- HEALTH SERVICE
- BANKS
- TRAVEL AND TOURISM INTERMEDIARIES
- OTHERS
TOURISM INFRASTRUCTURE

Before we start to focus on the infrastructure of Uttarakashi, it is imperative to analyze the conceptual meaning of tourism infrastructure and its relevance for Mountain Tourism Promotion. Tourism Infrastructure has played a significant role in the tourism promotion. Since the last couple of years infrastructural development has been given emphasis to enhance the quality of the touristic activities. Food habits, transportation, hotel properties have changed themselves dimensionally to cope with the highly volatile competitive environment. Infact in the present age of development no activity can flourish and can pleased the tourists in the absence of good infrastructure (Belin, 2002). This chapter is aimed at the rapid infrastructural development and it is quiet evident from the below mentioned attributes of tourism infrastructural development in the Uttarkashi district. It is believed that economic activities are restricted in the protected areas, which provides an opportunity to explore avenues for generating economic activities in the protected areas through growth of tourism in the form of exploring the nature, understanding the bio diversity, study and research, adventures, entertainment, leisure and sporting activities along with the primary function of conservation and protection of environment and biodiversity.

Thus it is to be seen that the tourism activities in Uttarkashi can also generate economic development in terms of bringing precious foreign exchange to the states as well as provides means to earn the livelihood of the local communities. This can be achieved by promoting the area, addressing community benefits and presenting the sensitive environmental or social issues successfully in innovative and appropriate interpretation. Like for any other developmental activities infrastructure provision functions as the nervous system for effective sustainable development (Collins, 1999). Infrastructure development plays a major role in exploration to natural heritage, closing the gap between human beings and nature etc., from among the various benefits, on one hand and is also the major cause of environmental stress
and degradation in the protected areas leading to ecological imbalances on the other. Table - I projects the details of tourism infrastructure system.

**Figure- 2.1**

**Infrastructure System**

Source: After Devadas (2005)
Tourist satisfaction is another dimension of tourism. Without satisfying tourists, tourism may not sustain its contribution to further development. Tourist satisfaction depends largely on the quality of services, facilities and management at the destinations and as well as at the macro regional level too. More briefly, if the visitor does not feel that a place is worth satisfactory to visit then it will more prone to disappear from the tourist map. The quality tourism’s infrastructural facilities requirements include good transportation network, luxury hotels and accommodation facilities, golf courses and marinas etc in a broader sense but these facilities can only provide a strong base for the development of tourism where location specific appropriate infrastructure matters most (Josefa, 2004).

Incidentally creation of the infrastructure for the development of the tourism may not be always economically viable in terms of tangible benefits. This is also the major cause of environmental stress and degradation, resource exploitation leading to ecological imbalances and hence may act as a double-edged sword. So it is important to create appropriate infrastructure for sustainable tourism development. Hence, building optimal and appropriate infrastructure poses a major challenge considering tourism could be one of the important components of life system for the people, wild life and fragile floral and faunal wealth in mountainous and hilly regions taking sustainability into account in the early stages of infrastructure planning and building the infrastructure. In this chapter an exploratory approach has been adopted and an attempt has also been made to discuss the various issues pertaining to the development of appropriate infrastructure such as development of macro and micro level infrastructure and amenities, utilization of information technology, community involvement, risk and hazards in hilly regions, economic impacts on tourism development for sustainable tourism development in mountainous areas.

Dimensions and Attributes

A place could become a tourist destination only if it has some attractions strongly backed by an image in the minds of the prospective tourists and has necessary supporting facilities. In addition to a broad base of activities and capacity to generate interest to dwell in the destination for several days, there should be sufficient support facilities, which together can create a worth seeing destination image (James, 2004). For a good destination from the tourism point of view in general and tourism point of view in particular the various dimensions and attributes have been referred to in the table- 2.1.
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Source: After Devadas, 2005
It is generally seen that apart from the accessibility criteria, the tourists flow to a destination is determined by a host of factors, such as distance, time, cost of travel, length of stay, propensity to travel such as cultural ties, educational and learning opportunities, established reputation among travelers, security and safety etc. These factors could make a wide variation in the tourism development particularly because of their unavailability. (Lorne, 2003). A host of such dimensions have been enumerated (Table-2.1) from the tourism point of view in hilly areas in general. The dimensions have been broadly classified into two categories viz. natural resources and infrastructure. The natural resources include the attributes such as weather, floral and faunal wealth, natural environment and nature-based tourists' leisure recreation components. The infrastructure again is classified into three types such as general infrastructure, tourist infrastructure and tourism infrastructure. The general infrastructure includes physical infrastructures such as transportation, communication, commercial facilities; social environment and facilities for culture, history and art. The dimensions of tourist infrastructure, which are essential for tourism development in addition to the availability of general infrastructure are accommodation, food, information, entertain facilities in one category, atmosphere of the location and political and economic factors under the other categories. The various dimensions of infrastructure that provides impetus for tourism includes local transportation and accommodation needs, local natural environment, leisure, recreation, culture, learning and safety etc. (Kang, 2004).

The three types of infrastructure may look to overlap each other but essentially they vary dimensionally, attribute wise and scale. For a successful development of tourism infrastructure, all the three types of infrastructure play complementary role to each other. Creation of an appropriate infrastructure in hilly region should take the proper cognizance of the natural and all three types of infrastructural dimensions and attributes together. Based on the dimensions and attributes (Beerli, Asuncion, and Josefa, 2004) the various types of physical infrastructures that influence tourism
development and create an image of the destination in protected hilly areas are
general or basic infrastructure. (Table-2.1). General infrastructure which essentially
forms a part of macro level development help in attracting and bringing the tourist to
the destinations and other functions, whereas the tourism infrastructure mostly
functions in every specialized programmes at the micro level or destination level.
Table- 2.1 shows the inter-linkage of various infrastructures for creation of
infrastructure in hilly areas. Tourism infrastructures required for the successful
fulfillment of sustainable tourism development in protected areas is as follows.

**Accommodation**

Accommodation constitutes one of the most important items in the package of
capabilities offered to the tourists. The success of tourism at a location depends to a
greater extent on the availability and quality of accommodation facilities (Richard,
2000). They include hotels, motels, holiday villages, tourist resorts, lodgings, family
hotels, private rooms, villas, houses, cabins, camping sites and tourist chalets,
catering and entertainment facilities, including restaurants, fast food restaurants,
pubs, coffee-shops, bars and in cases with self catering facilities.

**Hospitality Services**

Each accommodation unit has a different set of amenities and services
categorization separates accommodation into different grades or classes. This scheme
enables a tourist or user of the services to choose from among different units, a
particularly unit on the basis of amenities and facilities available. Technically hotels
cannot constitute an industry because they do not produce tangible goods for sale but
only render services. The hotels/accommodation units are covered by the service
sector since they satisfies the demand for accommodation, food and drinks, etc. The
hotel industry's main aim is to satisfy the needs of tourists for accommodation and
food and that is why it comes under the cognizance of service sector (Bill 2004). The
characteristics of the hotel industry is of a utility services which supplies the various
needs of the touring peoples. This industry caters to the need of all categories of tourists. So the hotel units have heterogeneous character yet all units as a group may be termed as hotel industry. Furthermore, in the absence of sufficient hotel accommodation units the tourist and travel trade cannot flourish (Cevat., 1998). Therefore it not only promotes and strengthens international understanding but also bridges the gap between the tourists in every respect. The hotel industry owes its existence to the tourist industry. A country's economy must develop hotels accommodation units if it wishes to build tourism. In fact hotel industry acts as a king-pin in the promotion of tourism with the rapid growth of industrialization. To cater to the primary needs of the accommodation and meals, adequate hotel accommodation is a immense significance (Brent, 2004). Accommodation generally offers three individual products: accommodation, food and services. These products generate activities such as:

- Letting of accommodation: The provision of sleeping accommodation distinguishes hotels from other catering establishments.
- Production and sale of food and beverages.
- Other amenities and services like entertainment facilities, arrangements for meeting, conferences, seminar, symposiums and even beauty contests etc.

**Transportation**

Tourism is about being elsewhere and a major component of any tourist activity must necessarily be an element of transportation (Burkart and Meddlik, 1974). The transport requirements of the tourism industry differ from that of the other sectors in terms of quality, nature of services and cost. It requires quick, comfortable, safe and fairly cheap transport facilities at the suitable time of the tourists. In this sector, the modes of transportation being the most important factor which is influenced by the factors such as places of travel, availability of a particular mode, time of travel, distance to be covered, cost consideration, comfort, safety and
flexibility, etc. Based on these elements the various modes of transport which play important role at macro level for tourism development in hilly areas are given as below.

Plate- 2.1: Interacting with foreign tourist about Touristic Facilities in the Study Area

(a) Road Network

Few of the regions suitable for tourism such as the mountains and semi-mountains, border and rural areas are always having a lower average density of roads. The roads are mostly of lower order in the hierarchy of road categories. These lower order roads usually act as the link between the hilly areas and the region by joining the roads of higher order at regional, sub national or national level. The road network also provides access at intra-regional level joining various locations and communities in addition to the creation of the transport corridor at regional level. Of
the various modes, road network is the most flexible one providing easy and acceptable means of transport to any tourist locations. In this case the condition of the inter-settlement transport is of particular importance for tourism catering to the large number of unorganized domestic tourists and small groups. Restricted local routes and the dependence on poor road infrastructure is an impediment to tourism development (Stefan 2002).

(b) Railway Transport

Railways are largely responsible for the development of tourism within the national and sub national level by providing a fast, economical and comfortable mode of transport. In very rare cases and locations the railways caters to the tourism

Plate 2.2: Transport Facilities Enroute Yamunotri
at interiors or at sub regional level. Yet, this is a preferable mode of transportation for all kinds of tourists on considerations of comfort, speed, cost and flexibility (Belinda, 2004). In Garhwal Himalaya a single mode of transportation such as road transport without railway transport or vice versa may not help in sustainable tourism and need to act complementary to each other. Also in the case of tourism development the regular cut offs of trains and stations, primarily in the semi-mountain and mountain regions or hilly areas has a negative impact both on the general accessibility and the use of railway transport by tourists.

(c) Airports And Air Transport

Air transport is the most significant contributor in tourism development at national level while catering to the needs of foreign tourists. The role of air transportation as the fastest mode of transport reaching the destinations at the quickest possible time need not be over emphasized. But in addition to this role the air transport plays another major role while traversing to the destinations located or need to be passed through inaccessible areas by other modes. The air transportation is particularly beneficial to the tourism development through the wide network of airstrips connecting these inaccessible areas by lessening the distance from cities (Stefan, 2004). Uttarkashi is likely to come up in air transport map very soon as the airport near Uttarkashi is on completion.

(d) Water Transport

Water transport could be a successful substitution for the road and railway transportation particularly areas surrounded by water bodies and even water courses through difficult terrains, where there is a plethora of opportunities for such transportation facilities at a cheaper cost and safe movement. However there is least scope of the mountainous terrain of study area.
(e) Power Supply

Of all engineered infrastructure that influences tourism development, the power supply and its condition causes the fewest problems. The lack of heating and energy infrastructure in small settlements where tourism services are offered does not have a direct negative impact on tourism because of the low level of power requirement. As the strong need is continuously felt, prices of conventional power such as electricity are relatively high and even increasing rapidly (UNEP, 2002). Solid fuel causes severe environmental problems. So there is a dire need to search for environmental-friendly power supply in hilly areas or the provision of alternative power sources for the perspective of tourism development.

(f) Communications and Telecommunication

The telecommunication network has relatively well developed infrastructure and services. It is observed over last few years all across the world that there is a satisfactory pace of digitalization and the availability of modern communication and information services though concentrated in the metros and urban settlement, has also penetrated to the hinterlands (Barbara, 2004). The cellular phone network is concentrated in and around the cities and also making a dent in the hinterlands and is increasingly becoming the live ware of the life system everywhere. Yet, the development of local telecommunication networks in hilly mountainous areas and sparsely populated regions like Har-ki-Dun sanctuary is insufficient. Sometimes in these areas the quality of telecommunication services is by and large very poor and lacks advanced telephonic systems, internet and e-mail services. Though the postal network is widely developed at many places but it is not effective if mountain tourism is to be promoted at an alarming rate. For a sustainable tourism development
in protected areas the communications and telecommunication infrastructure would play a major role in the years to come (Handberg, 2002).

(g) **Public Health and Medical Services**

Public health and medical services form an integrated part of any sustainable development and tourism development in hilly areas is no exception. The presence of good health care services may not be a deciding factor for wooing the tourists to such areas but certainly the lack of it can negatively affect tourism development particularly if proper care is not taken at the time of exigencies (Cevat, 1998).

![Plate 2.3: Research Scholar interacting with Private medical practitioner](image)

(h) **Bank Services**

There are branches of nationalized, cooperative and scheduled banks in the study area almost evenly distributed. All the destinations and transit places connected with state and national highways have the branches of one or the other banks which entertain travelers cheques or bank drafts etc (David, 2000). Incidentally, banks at most of the places do not have currency exchange facility. Likewise, at many places
neither the banks nor any other services outlets entertain the credit cards, which create severe constraints for the travelers particularly the foreign tourists. Therefore requisite provisions need to be made at major tourist destinations.

(i) **Water Supply, Sewage and Waste Management**

Water supply networks and water use regimes are the main problems in the communities that provide tourism services particularly in hilly regions. Sewage problems are even more serious. Waste management remains one of the most difficult environmental problems in small settlements of hilly regions. In most cases, finding solutions to water supply, sewage problems and waste management problems are left to the local authorities, which lacks financial resources and knowledge to correct their problems. They can act as a deterrent for sustainable tourism development in the hilly areas (Selvam, 1989).

Plate 2.4: Toilet Condition Enroute Uttarkashi
Travel and Tourism Intermediaries

(a) Entertainment

For escaping from the day-to-day rigorous and routine life, pleasure and entertainment are factors having high ranks. They are prime motivators and influence a large number of tourists for any kind of tourism development. Hence the infrastructure facilities for recreation, entertainment and pleasure are of prime importance in tourism development. In case of tourism development in hilly areas there are enumerable possibilities of creating appropriate facilities for all categories of tourists which may range from safari visits to exploration fishing and even playing golf (Tosun, 1998). But the improvement of such tourist facilities in recent years looks palpable and is not often accomplished by many investors including public authorities due the apprehension of low return thus creating a barrier for tourism growth in such locations.

(b) Organized Tours

Tourism is an amalgamation of a number of independent activities such as tourist attractions, accommodation, transportation etc., but needs a coordinated effort for successful and unforgettable experience for the tourists (Selvam. M., 1989). The intermediary agencies in the form of tour operators are needed to combine these independent elements and offer a basket of tourism products and services required by tourists within the stipulated time limit and cost, thereby making the life of tourist easy (Cevat, 1998). In case of tourism development in hilly areas organized tours are considered as low return investment and not much profitable highly essential element. Provision of such progarammes should be considered seriously and efforts are needed to strengthen them. The tour operators can act as a vehicle for tourism development especially the tourism in lesser-known inaccessible areas by creating awareness, encouraging tourists to visit the areas and well placed to make them
commercially viable (Handberg, 2002). Furthermore there is lack of proper signage and visitors usually stranded on highways on account of poor and vague information.

Plate- 2.5: The Road condition and Poor Signage

(c) Guide Services

Tourist guides are one of the most essential elements of the tourism activities in particular for their knowledge of the local conditions, environment, customs, cuisine, culture and physical terrain of the location along with the key activity of reducing the language barrier and mobilizing the local help in case of exigencies (Sharple, 2000). Incidentally there is a serious dearth of skilled tourist guides in regions. Efforts are underway to find out suitable solution to deploy trained Guides at major cultural and natural tourist places in the years to come.

Infrastructure in Accordance to Tourists Activities

There are three categories of tourists within the tourism industry umbrella, and each has its followers and practitioners. They are:
1. An enthusiastic tourist with an interest in nature, local customs and traditions, who chooses to experience these on foot, in modest accommodations, and within modern set up.

2. The tourist in search of adventure, extreme conditions, or sports associated with unusual or special destinations in nature. Often there is a personal physical challenge to the activity. This is the tourist who practices alternative forms of travel sports, including paragliding, bungee jumping, mountain biking, long-distance trekking with backpacks, horseback trips of multiple days, cave exploration, rock climbing, and/or rafting. Such tourist needs only essential services like water, information, guide services and other essential services (Lan 2001).

3. The third type of tourist is particularly interested in special aspects of their visit. They take their holidays to add to their semi-professional or professional knowledge. They focus mainly on a subject, and are in pursuit of very specific circumstances or experiences. This type of tourist takes special trips for culinary purposes, wine production, wood carving, textiles, ethereal oils, natural history studies, including bird watching, botany, insects, mammals, geology, and/or specific music or musical instruments.

The special infrastructure requirements of these types of tourists still require definition. But apart from basic services for accommodation, health, emergencies, communication and transport, the tourism infrastructure requirements are no more sophisticated or demanding than any other aspect of the tourism industry. They just need to be available in the locations. Key to tourism infrastructure is planning and development conducted with due respect for the nature, landscapes, local customs and traditions. Rather than creating or adding to environmental problems, these forms of tourism are aimed at mitigating the negative impacts and stress the positives. Consequently the infrastructure to support tourism does not require major investment. A few of the important infrastructure facilities required for development of sustainable tourism in mountain region like Uttarkashi are discussed below before
discussing the issues involved in the planning and creation of appropriate infrastructure.

**Infrastructure for Mountain Region**

Access to mountains is a major part of tourism development. Most accesses to mountain destinations are restricted to road heads from where access to the attractions is mainly by foot. Chair lifts, animals, and roads however, make high mountain attractions more accessible. There are environmental impacts associated with types of access in these regions. Developing new access points with minimal environmental impacts must be addressed in mountain attraction planning. Nature parks allow easier access as their territories tend to be a combination of state forest enterprise road networks, municipal territories, and private lands. Road access is often difficult but available. Elsewhere mountain access is feasible, but not advised for people who do not know the area and are not familiar with the roads. Road markings in mountain areas need to be up-to-date and accurate, while most other road access may be without signage.

Plate 2.6: Depleted road leading to Gangotri
Special Visitor Infrastructure for Tourism in Hilly Areas

Various infrastructure bases that are of paramount importance and are of prime needs in the hilly areas for development of tourism could be hiking trails, shelter and emergency facilities, wild animal viewpoints etc. The criteria in constructing these infrastructures should be safety, easy accessibility, and easy access to communication and information system within the area. Some of the attractions for which appropriate infrastructure is required are as follows:

(a) Hiking Trails: This system is significant not only because hiking is a common tourist activity, but because a trail system is necessary to develop inter-regional and intra-regional within and outside hilly areas. This should include special treks, such as botanical and ornithological trails and trails for disabled people. Sports and activities in natural surroundings may become the focus for developing tracks/trails for biking, mountain biking, and horse riding. The trails should be such as to give a panoramic view usually sought by the tourists and provide access even in extreme conditions with lesser degree of difficulty. Adventure trails are also important aspects in several locations in the hilly areas (Heike, 2004). These trails include elements of the natural environment and cultural and historical heritage, and aim at giving visitors a chance to experience a walking adventure.
(b) **Shelters and Emergency Facilities:** The rescue service system and emergency facilities always form an integral element of any infrastructure development. In the case of hilly regions, their involvement and utilization is more pronounced because of the terrain and climatic conditions, the high degree of risk attached to the tourism activity and natural troubles small or big alike. This facility needs to include highly equipped rescue teams, shelters at judicious locations, emergency medical facilities and quick transportation facilities.

(c) **Viewpoints:** There is a diversity of well-developed hunting and safari and night watching of wild animals’ facilities in areas of high conservation value that could be included in tourism. They should have the necessary infrastructures such as towers, shelters, observation points, and points for photo shooting. Most of the facilities are to be risk-free and safe in the average or high-quality category (Bill, 2004).

(d) **Multipurpose Visitor Centers**

One of the major scopes of tourism industry is to popularize nature conservation and bring human beings closer to the nature. Hence apart from the above-discussed individual units of infrastructure development in the mountain areas, another concept of single units called Visitor centers catering to many functions, can
become an alternative or an integral part of the tourism infrastructure. The main activities of visitor centers’ include conservation education programs, information tourist services, marketing and advertising, analysis of tourist demand, data base development and reservation services etc (Dogan, 2004). In order to have the smooth functioning of the visitor’s centers and contribute realistically in tourism efforts, there is a need of a proper and organized network, which would allow them to exchange information and share clients effectively. They are also need the support of the public authorities for implementing economic activities and developing as self-sustaining institutions.

(e) Infrastructure for Local Traditions, Crafts and Folklore

Local traditions, crafts and folklore can be important focal elements in the tourism through the incorporation of the historical features of the regions, the ethnographic crafts and cultural exhibit etc.; and development of modernized programs for inter-active presentations of themes. The integration of culture folklore and crafts have a high potential for tourism development and can also help in nature conservation education in partnership with protected areas adding another dimension to the tourism development. So necessary infrastructure at community settlements inhabiting aboriginals in or around the hilly areas may be built with due consideration and participation of the communities.

Issues in Creation of Appropriate Infrastructure

The development of the appropriate infrastructure for tourism development at the macro level or regional level and micro destination level of hilly areas are dependent on a various exogenous and endogenous issues. The macro infrastructure are based on the issues like national and state policies, priorities, incentives, tourist flow, revenue earning and cost benefit factors which are basically of exogenous in nature for development of tourism in hilly areas. On the other hand the appropriateness of infrastructure at destination level are influenced by endogenous issues such as community development, local information, multiplicity of functions, simplicity, respect to other stakeholders, and exogenous issues such as knowledge and technology, risk, safety, security, visitors fatigue, design considerations, constructional implications, maintenance and economic impacts of the tourism as projected in (Fig-2.2).
Appropriate infrastructure for tourism in protected hilly areas

- Simplicity
- Risk
- Safety and Security
- Visitors’ fatigue
- Economic impact and Environmental impact
- Knowledge and appropriate technology
- Community involvement
- Other stakeholders’ participation
- Design consideration
- Constructional implications
- Sustainable maintenance

Source: After Devadas (2005)
REFERENCES


