

SOCIOECONOMIC ISSUES RELATED TO CONSERVATION OF THE KANCHANJUNGA⁴ MOUNTAIN ECOSYSTEM

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Kanchanjunga is a unique mountain ecosystem falling into the three different national boundaries of India, Nepal, and the Tibetan Autonomous Region of the People's Republic of China. This mountain ecosystem encompasses subtropical to alpine zones housing a large number of flora and fauna, making it a 'hot-spot' of biodiversity. In this mountain ecosystem, we find great variations in elevation, climate, landscape, habitat, and vegetation types. It has rich ethno-cultural diversity and the socio-economic attributes of the people living in and around this mountain ecosystem are location-specific, variable, and unique.

This mountain ecosystem has the conservation status of a national park in the Sikkim State of India. Nepal is already in the process of declaring it a conservation area. The portion of this

mountain ecosystem in the Tibetan Autonomous Region is also expected to receive some conservation status in the near future.

Socioeconomic issues in relation to the conservation of this mountain ecosystem could be common or specific in each of the member countries. It is in this context that this presentation focusses on issues related to the Kanchanjunga National Park in Sikkim; it is specifically a status report. This will also provide grounds for discussion in finalising the common issues of transboundary importance.

Kanchanjunga National Park in Sikkim

Kanchanjunga National Park comes under conservation management Category II with a biogeographical province of 2.38.12, covering the Himalayan highlands. It was notified

4 Known as Khangchendzonga in Sikkim



Plate 14: Bhotia women weaving in Sikkim

as a National Park on 26th August, 1977, with an area of about 850sq.km. The area was originally in the Reserve Forest status prior to its notification as a National Park, and the local people have no land tenurial rights, these rest with the State Government. In 1996, the area of this National Park in Sikkim was expanded to 1,784sq.km. out of consideration for the uniqueness of vegetation, habitat, and animal diversity. The expansion of the area includes settlements (ten households) at Bakhim and Tshoka within the conservation area. Many settlements, such as those at Yuksam, Sakyong, Chungthang, Menshithang, Lachen, and Monguthang, surrounding the park depend on the natural resources for subsistence. The major settlement is at Yuksam. The state and central governments are working to include more areas in this conservation area and designate it as a biosphere reserve. Most of the areas which have access to the settlements and eco-tourism trails are placed in the buffer zone. This is expected to provide the local communities with access rights to natural resources, so that they can generate income through eco-tourism related entrepreneurship. This national park is contiguous with the Taplejung area in Nepal. The expanse, flora, fauna, and

legal issues pertaining to the Kanchanjunga National Park are separately dealt with by Mr. Gut Lepcha, Field Director of the Park.

Socioeconomic Status

Communities living in Bakhim and Tshoka are Tibetans, and those in Monguthang are also of Tibetan origin. The other ethnic groups that live in the fringe areas are mainly *Lepcha(s)*, *Bhutia(s)*, Nepalese, and *Limbu(s)*. These five ethnic groups have different cultures and traditions. Kanchanjunga is regarded as the spiritual focus and revered as the protective deity of Sikkim.

The livelihood in the area is at a subsistence level, and there are three major options, namely, traditional farming, pastoralism, and tourism. Some people are also occasionally involved in the trade in wild plants and animal parts. The major occupation of the people in the lower and mid-hills is farming. The region has a strong agroforestry base with many traditional farming practices. Farming is on a subsistence level and basic resources, such as fuel, fodder, timber, litter for livestock-bedding, and litter for mulching, come from the adjoining forests. Other natural resources, such as medicinal herbs, wild edible plants and plants of ornamental and aesthetic value, and animals, are also brought from the forests by local communities according to their culture and traditions. The second important livelihood option is pastoralism, and this is mainly concentrated in the high altitude pasture lands. Livestock grazing pressure is felt in the lower and mid-hill forests. The high altitude pastures are primarily used for yak grazing. Yaks are reared for various products such as wool, meat, milk, and milk-derived items like *chhurpi*⁵. Sterile yaks, called

5 *Chhurpi* is a hard sweet made from yak milk

djo(s), are used as pack animals. Horses are also used for this purpose but in much smaller numbers. Sheep are reared for products like wool and meat.

In the Kanchanjunga National Park, tourism has been one of the major economic activities, especially in the Yuksam-Dzongri-Goechha La Trail, for the past two decades. About 1,500 trekkers visit this trail annually. These tourists need large numbers of support staff to organise the treks. This section of the national park adjoins the Nepal side. There are some trekkers' huts in the National Park and most of the tourists in larger groups along the Yuksam-Dzongri-Goechha La trekking corridor use tents. Mostly, local travel agents from Gangtok and from adjoining Darjeeling organise the trekking. Domestic tourists independently go trekking without the involvement of travel agents. However, all tourists use local porters or pack animals. The local communities involved in tourism-related activities are lodge operators, porters, cooks, nature guides, trekkers' hut managers, owners of pack animals, and those who provide indigenous food products and handicrafts.

Conservation Concerns

The local communities are using natural resources mostly from the forests in the conservation area. The population size is increasing and pressure on the natural resources is already visible in pockets. At Yusam, a hydroelectric project is being implemented on the Rathangchu River. About 1,000 labourers have migrated to the area, and this has further increased the pressure on natural resources. Management of these forests is of immediate concern with respect to their carrying capacity and biodiversity conservation.

The high altitude pastures are used for grazing yaks and sheep. In recent years grazing practices have been restricted

to certain locations, and this eventually caused increased pressure in these pastures. The carrying capacity assessment and biodiversity conservation of alpine pasture plants and animals are of great concern.

The Yuksam-Dzongri-Goechha La Trail is the most important eco-tourism destination in Sikkim. This trail is used mainly by three groups of people, namely, tourists, mountaineers, and the local community such as yak-sheep grazers. In tourism and mountaineering season, a dense volume of visitors, along with support staff and pack animals, crowds the area. The trekking corridor cleanliness, fuelwood extraction, and soil erosion, as a result of the movement of large numbers of animals and unregulated grazing by pack animals, are issues that need to be addressed. The landscape and biodiversity are the attractions for the visitors.

Several medicinal herbs and plants of aesthetic value are slowly disappearing. Steps to rehabilitate these plants *in situ* should be taken immediately. The individuals involved in generating income through such activities need to be engaged in alternative employment such as tourism.

The National Park forms the main catchment area for two important rivers, the Teesta and Rangit. The socio-economic conditions of the people living downstream totally depend on the health of the National Park. Therefore, catchment management becomes the lifeline and an integral part of the development of the people of Sikkim.

Conservation Efforts

The Kanchanjunga National Park Authority, Wildlife Division, Forest Department, and Tourism Department are involved in the development and conservation-related management of this park.

Plate 15: *Salix sikkimensis* (East Himalayan willow)



Photo: Krishna K. Shrestha

A project on Sikkimese Biodiversity and Eco-tourism (a joint effort of The Mountain Institute, G.B. Pant Institute of Himalayan Environment and Development, The Travel Agents' Association of Sikkim, and The Green Circle) was introduced a year ago within this park along the Yuksam-Dzongri-Goechha La Trail. The project is a collaborative initiative designed to conserve the biological diversity of key destinations. At the heart of the project are participatory approaches that link enterprise operations with conservation action, while merging traditional cultural practices. Working with communities, the private sector, and the government, the project builds upon their skills, interests, and knowledge to: (a) increase community and private sector conservation; (b) increase economic returns from eco-tourism services and enterprises; and (c) contribute to policies that meet eco-tourism and conservation goals. The project has now been implementing a comprehensive project monitoring and research plan.

Recently the local community at Yuksam formed a Kanchanjunga Conservation Committee which has already taken up many conservation activities. This organisation seems to have long-term conservation interests.

Transboundary Issues

People living on all three sides of the international border depend upon sustainable coexistence with nature for their subsistence livelihoods. Populations and ecosystems in these areas face similar challenges and threats. The following issues could be baseline for introducing the development of a framework for a common transboundary programme.

- a) Migratory pastoralism across the border
- b) Tourism across the boundary
- c) Protected area management strategies across the border
- d) Conservation of natural and cultural heritage
- e) Habitat preservation for trans-migratory birds
- f) Protection and rehabilitation from/after transboundary natural calamities
- g) Experience sharing/capacity building.

There have been transboundary exchanges between Nepal and the Tibetan Autonomous Region of the People's Republic of China to conserve the Mt. Everest Ecosystem. The experiences of the exchanges between Tibet's Qomolangma Nature Preserve and Nepal's Sagarmatha could also be useful.

Discussion

Professor Pei of ICIMOD mentioned that he had been working on a paper called 'Policy Action Collaboration on Transboundary Conservation'. He further said that the common problems identified in the lower parts of the eastern Himalayas in Nepal, Myanmar, China, and India were the following.

- a) Land tenure and resource rights of local people
- b) Deforestation and shifting agriculture
- c) Ethnic conflicts

- d) Transboundary issues - illegal cutting, illegal harvesting, illegal trading, and smuggling (socioeconomic problems)
- e) Poor communications and a low level of information, misunderstandings

The transboundary issues of the high Himalayas were quite different from those of the eastern Himalayas.

It was further discussed that development projects were among the most important things affecting socioeconomics. Conservation and cultural conservation were often mentioned but development projects set everything out of context, and one project could do a lot of different kinds of development. Dr. E. Sharma from Sikkim was questioned about how these things were happening in the Lithongchi Project and how it affected the community.

Dr. Sharma mentioned that there was a 30 MW Hydel Project coming up in Yuksam, which had led to 1,000 labourers settling in Yuksam, and this had put a lot of pressure on the area in terms of natural resources. Therefore, there was pressure in the Kanchanjunga National Park which needed to be handled. One thing was very important in transboundary issues. Many people from Nepal came to Sikkim, e.g., many Nepalese people were working on the Hydel Project. People from Nepal also came and worked as porters in the tourist area of the Yuksam Region. These issues needed to be tackled. It was a very complicated issue when migration of people had taken place. The whole lifestyle changed after migration. For example, there was no local 'Haat System' (open market) in Yuksam. After the arrival of 1,000 people who did not own land or cultivated areas but only had cash, people started raising plenty of vegetables in the area and, at

present, there was a weekly (*Haat*) market. So the lifestyle of the area had completely changed within six to seven months. This was just one example. There was other damage, through blasting and water diversion, which was an ecological issue. Apart from that, the migratory population was imposing a lot of pressure on the respective areas. This was the main concern they were facing, and they had formed a committee. They were also working with the community.

Mr. Mingma N. Sherpa, WWF Nepal Programme, mentioned that Dr. Sharma had come up with interesting transboundary issues and that this issue needed separate time for discussion. Many lessons were learned about transboundary issues through migratory problems, ethnicity, area management, strategies in conservation, protection, and rehabilitation. Fortunately or unfortunately, many NGOs had been established in Nepal recently. There was a committee on the Kanchanjunga side which was known as the 'Kanchanjunga Conservation Development Committee'. One of the positive aspects of lessons learned in Nepal was that the conservation area or the protected area had been managed efficiently by NGOs with the government in the background, e.g., the Annapurna

Plate 16: *Rhododendron fulgens*



Photo: Krishna K. Shrestha

Conservation Area. On the Sikkim side, it seemed that there was quite a mix of management. There was pure government management of the park, and then they had NGOs, conservation committees, institutes, and other groups working in that area. Was that the kind of policy or approach that China and Nepal should be adopting, with the government playing the jurisdictional role and most of the development approaches being handed down to the community level for the local NGOs and the conservation committees to actually implement?

Dr. E. Sharma pointed out that Sikkim was a unique example. The land tenure was entirely held by the government in the Kanchanjunga National Park. The Yaksum to Dzongri Trail was the only trail that was internationally famous- so most people went there. Until that time, the benefits were taken by travel agents from outside who catered to tourists. The local community was not getting any benefit, so their feelings were that tourists came and went, but they did not receive any benefits from saving the biodiversity. When work started there, they had found that the people were keen on conservation, provided they were given incentives in terms of skill development. For example, there was a training course for porters in which 200 porters were getting trained. There were only 70 locals and more than 100 were from Nepal, all operating on the Sikkim side. There were some problems but they somehow worked with the group and found a solution. There was a naturalist guide training course conducted and, in the beginning, only one or two local people participated, but in the second session six to seven people joined in. This was one of the immediate examples in which people realised that they had to work themselves if they wanted outsiders to help them. So they formed a

strong committee amongst themselves which was registered as the 'Kanchanjunga Conservation Committee'. Currently there were several tourism-related issues which they wanted to handle themselves. As far as conservation was concerned in the area, the Forest Department and Wildlife Department had excellent management systems inside, but, along the trail, due to the support people for tourists and pack animals, there were a lot of problems. The local community had realised this and they were getting involved. If this level of degradation went on along the trail, the tourists would stop coming. The government could not handle each and everything so the community had to be active. Mr. Sharma gave the following example. After the porters' training, six tourists went to Dzongri and wanted to gather rhododendrons, which had taken about 20 years to reach one foot in height, and fuelwood to keep warm at night. The porters did not agree, no matter what amount they were offered, because they realised that people came to look at the flowers. The tourist group went to Calcutta and wrote to the President, the Prime Minister of India, and the Chief Minister of Sikkim about what had happened. There was a newspaper column which mentioned that real eco-tourism in which the community was involved could be seen in Sikkim. Tourism was just starting in Sikkim so this was the right time for the project. The Government of Sikkim is making a master plan, and the Tourism Department is actively supported by the WWF, G.B. Pant Institute, and various other sectors to come up with a master plan which will really safeguard the protected area.

Mr. Javed Hussain of WWF, Thailand, commented that 100 tourists might directly or indirectly have had more resource impact than 1,000 porters or

construction workers. On the one hand, they were saying that tourism itself was a development activity and, on the other hand, they were saying that tourism might be the root of the problem. Mr. Hussain suggested that, since different countries had different legal systems, they should come up with at least a common functional definition at the workshop. If they could come up with a legislative legal definition then they might run into problems in different countries. With a functional definition there would be a larger area and it would increase the capacity to functionalise boundaries. Therefore, they should push towards a functional definition. They should start thinking of conservation as development. A concrete example of this was Costa Rica. One of the main development activities that had taken place in Costa Rica had been the use of local people to document and monitor an inventory of biological resources. You could not have 30,000 PhDs hanging around the Kanchanjunga National Park. Employment generation should be local and it should not be externally driven because tourism, eco-tourism, was externally driven. Tourism should be internally driven, since they did not really know how much diversity there was in the area. There should be documentation of diversity, documentation of indigenous systems, documentation of indigenous medicinal uses, and capacity building. The presentation by the Chinese guest from the TAR had been excellent. In that area there was a golden opportunity to combine development, education, resource inventory, biodiversity inventory, and the use of conservation as development. Mr. Hussain thought they should go beyond conservation and development and think of a functional definition which would make it easier to work without hassles at different legislative levels.

Dr. Bijaya Kattel of the Department of National Parks and Wildlife Conservation (DNPWC) mentioned that, if there was no legal base in the Programme, it was very hard to think of its sustainability and said that the idea of a functional definition was very important. The legislation should incorporate this for the same or at least similar functions as well as activities and long-term impacts in such a way that all three countries would be managing the area with similar transactions and for the same goal.

Mr. Brian Penniston of the Mountain Institute commented on Dr. Sharma's presentation by stating that since there were 100,000 domestic tourists visiting the National Park, and since it was an issue which was very intriguing and interesting and presented a management challenge that had not really been discussed in detail. Yet, when compared to a fairly limited number of foreign trekkers, even with a lot of support staff of four to one porter, you would still have a major environmental impact and possible economical impacts from those 100,000 domestic visitors. As Nepal progressed, domestic tourism, whether from the Indian subcontinent or elsewhere, was going to be more and more of an issue as well. If you started to look carefully at tourism numbers, you would notice more visitors from India, and this con-

Plate 17: Discussion with local inhabitants about conserving the Kanchanjunga area: Pholay (3,200m)



Photo: Krishna K. Shrestha

stituted both environmental and economic opportunities as well as constraints.

In reply to this comment, Dr. Sharma mentioned that in 1980 there were only about 20,000 tourists visiting Sikkim, and it had now gone up to more than 100,000 tourists. Ninety per cent of the tourists were domestic tourists and that was the force that had to be reckoned with in the long run, otherwise, tourism was really going to be detrimental in terms of protected ar-

reas as far as management was concerned.

Dr. R.K. Rai from India also suggested that a carrying capacity assessment study should be carried out before making arrangements for increasing tourists.

Dr. Sharma highlighted the problem of avoiding the negative impacts from tourism flow with one destination only. He further added that many new destinations had already been opened up in Sikkim.