



CHAPTER TWO

Villages of the Transboundary Region

The Joint Study

The 1996 exchange meeting held in Shigatse, TAR, recommended that a joint study be carried out in the border villages in the contiguous protected area of the greater Mount Everest ecoregion. The aim was to develop a participatory approach and facilitate sharing of experiences and priorities between people on both sides of the border, and to use this as a basis for collecting the data and information needed to further formulate priorities and activities in the transboundary programmes.

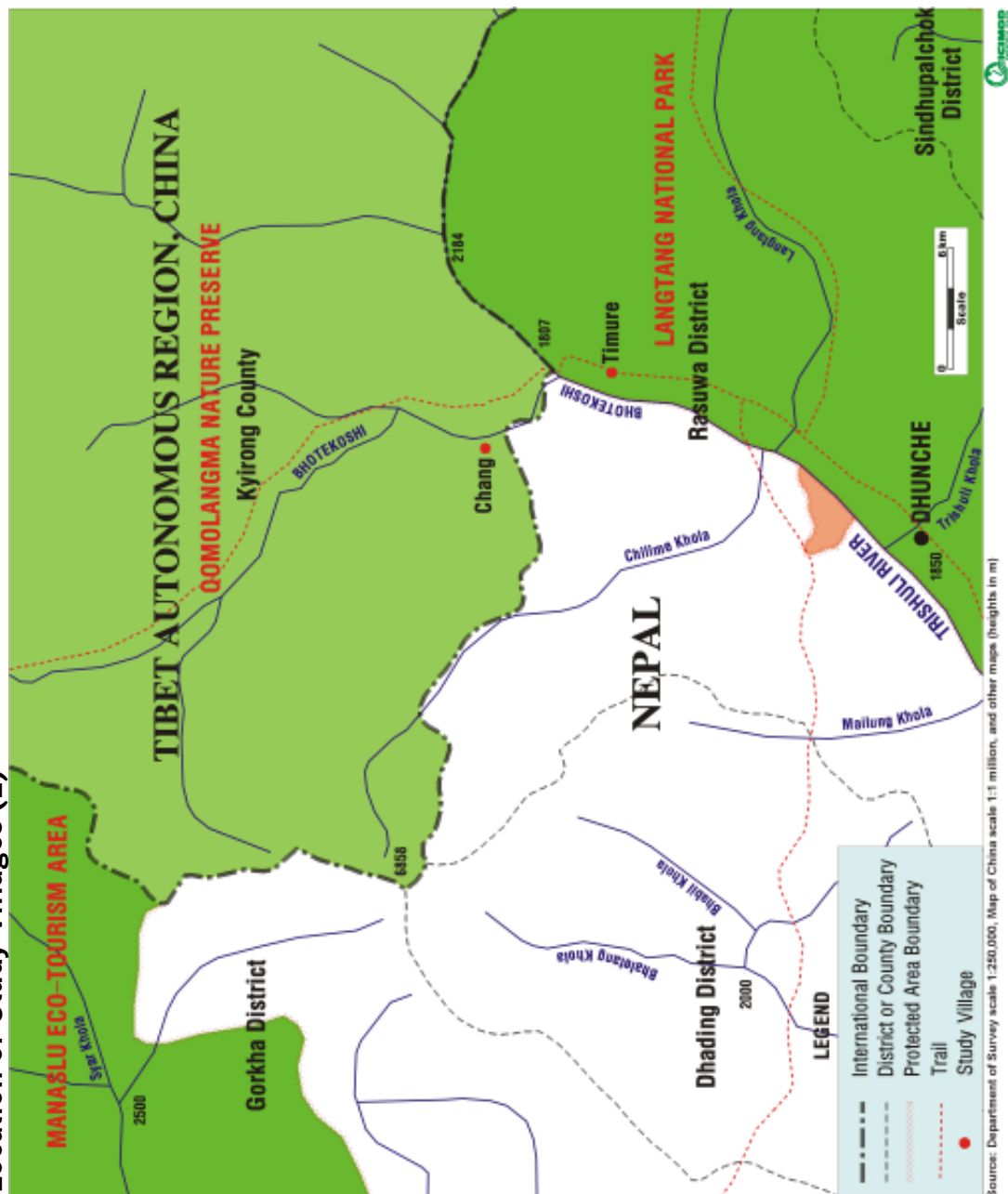
Villages were selected that were close to the border, that had a complementary village within a day's walk on the other side of the border, and that lay on the most intensively used trade routes. Five communities were chosen, one in each of the national parks in Nepal, and one in each of the two counties in Qomolangma Nature Preserve, TAR. They were, **Timure village** in Rasuwa district, Langtang National Park; **Kimathanka village** in Sankhuwasabha district, Makalu-Barun National Park buffer zone; and **Thame village** in Solukhumbu district, Sagarmatha National Park, all in Nepal; and **Chang village** in Kyirong County and **Chhentang village** in Tinkey County, both in Qomolangma Nature Preserve, Tibet Autonomous Region, China. Together they represent the different situations of all those living in the directly transboundary portion of the protected areas. The locations are shown on the maps.

All of the villages are located in areas recognised for their diverse and unique flora, fauna, scenic beauty, and mountain cultures: the Khumbu (in SNP), Upper Arun (in MBNP), and Rasuwa (in LNP) in Nepal, and the Chhentang Chhu and Kyirong valleys in TAR. The Kama and Riwu valleys of Chhentang Chhu, and Kyirong valley, have been declared 'core zones' of Qomolangma Nature Preserve.

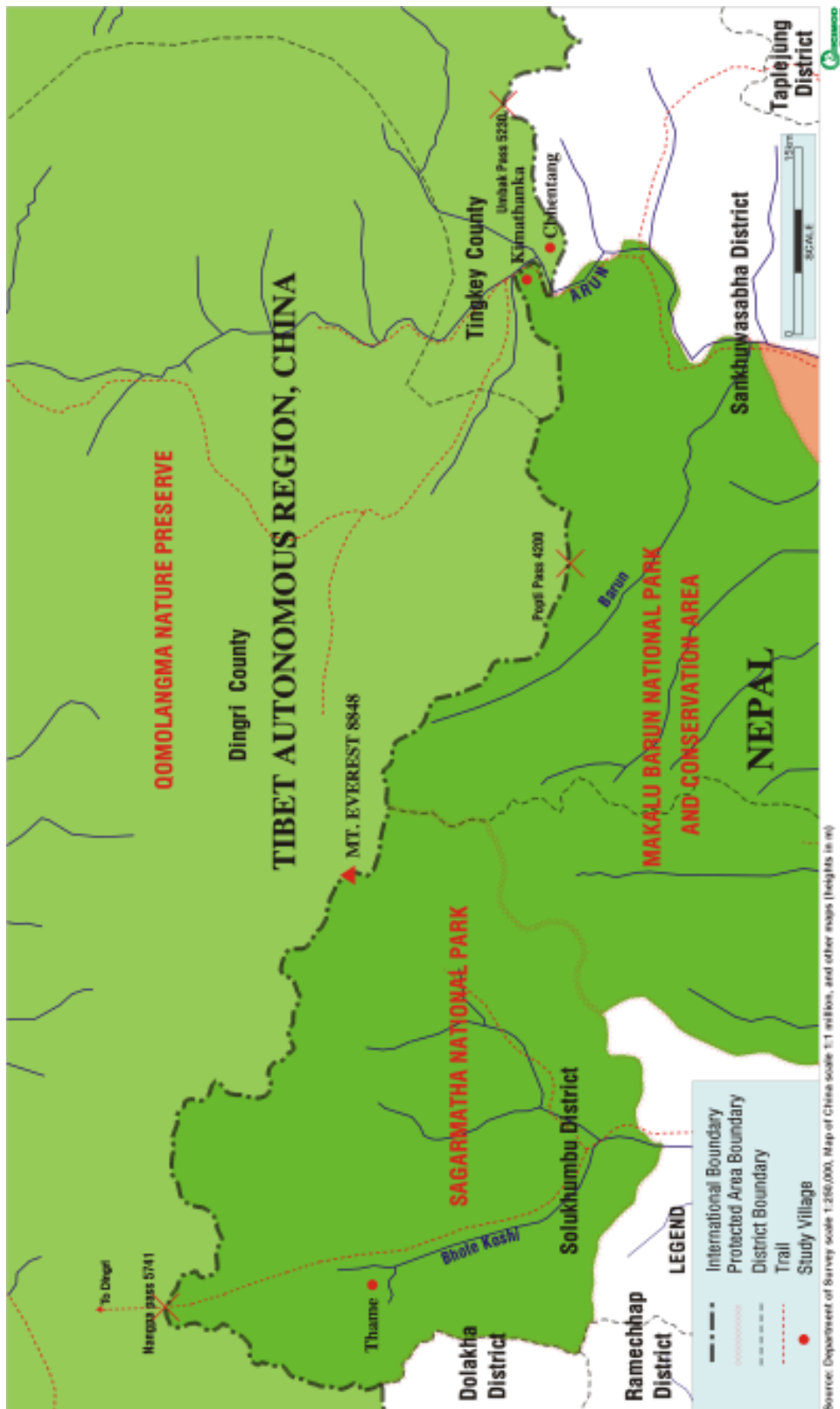
The villages are located at different altitudes and proximities to roads and airfields and each village is unique in its specific history and sociocultural characteristics, but they also have many shared characteristics including

- close proximity to a China-Nepal border crossing;
- partial or full restriction on international tourism;
- location within official protected areas;

Location of Study Villages (1)



Location of Study Villages (2)



- high topographic variation and rich biological diversity;
- agriculture, pastoralism, and trans-Himalayan trade as main economic activities;
- populations consisting mostly of Tibeto-Burman people of Buddhist faith;
- poverty and inadequate health and education facilities;
- polyandrous marriage as a strategy to cope with land limitations, and diverse economic activities.

The study approach

The joint study team consisted of staff from the Department of National Parks and Wildlife Conservation, Nepal, and from the Qomolangma Nature Preserve, TAR. Sixteen participants/trainees attended a four-day planning and training workshop in Kathmandu, Nepal. Their expertise included transboundary conservation issues, participatory methods, protected area management, ecotourism, rangelands, and environmental law. The aims of the meeting were

- to develop a better understanding of the key transboundary issues,
- to identify field study sites and develop common study methods, and
- to develop field procedures by integrating a number of participatory techniques such as participatory rural appraisal (PRA), rapid rural appraisal (RRA), and appreciative inquiry (AI). These techniques were complimented by field observations, formal and informal consultations, and a literature review.

The study team then held consultative meetings in the selected villages using the four steps (4-D model) prescribed by the AI methodology: discovery, dream, design, and delivery. This approach enabled the team to gain a reasonable understanding of the community within the available timeframe. It also provided a solid base of community support, awareness, and interest from which initiatives for biodiversity conservation can be linked to livelihood development and cross-border cooperation.

Discovery phase

Village community strengths and successes, resource availability, livelihood activities, institutional networks, and socioeconomic trends were uncovered through participatory discussion and mapping.

In a positive and affirming atmosphere, the participants were asked to identify the **successes and strengths** of their community and the positive features of the place where they live. This helped to identify important local assets and their potential.

Participants carried out **resource mapping** by mapping village boundaries, houses, trails, water bodies, rivers, religious sites, forests, pastures, facilities, and other information that indicated the adequacy and distribution of resources.

Participants prepared **seasonal calendars**, showing the timing and duration of different activities, to identify the patterns of the main livelihood events (agricultural, pastoral, festivals, travel, trade, and tourism).

Institutional diagrams were prepared to help identify institutions and organisations that local people perceive as having an impact on their community. They were also useful for identifying potential collaborators in programmes and projects.

The participants identified a number of socio-economic and environmental variables (hunting and poaching of wildlife, forest fire events, livestock diseases, human population, economy, trade, tourism, sanitation, crime rate, education, and cultural change). They were then asked to chart the **past trends** for each of these variables by drawing lines from past to present on a two-dimensional axis.

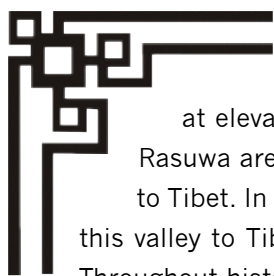
Dream phase

Participants were asked to extend the trend lines of each variable into the future to indicate their **desired future trends**. Once the line was extended, the strategies and activities necessary to achieve the trend were solicited and discussed. For example, if the villagers wish to see the forest area increase, the actions necessary to achieve that dream were identified and listed.

Design and delivery phase

The activities that evolved out of the participatory village consultative process were developed as recommendations and included in the future project planning process.

The study villages



Timure and Khamjing - the ancient gateway

Timure and its neighbour village, Khamjing, are located in the upper Rasuwa Valley of Nepal in Langtang National Park in Nepal at elevations of around 1,700 and 2,200, respectively. The headwaters of Rasuwa are in Kyirong County of TAR, and this corridor was the historic route to Tibet. In the seventh century, Bhrikuti, a princess of Nepal, travelled through this valley to Tibet when she married the famous Tibetan king, Songtsen Gampo. Throughout history, Buddhist monks from China and Nepal have travelled this way for religious exchanges. Several Nepal-Tibet wars have ravaged the area and old forts in both Nepal and TAR are now historical monuments.

The valley was an important trading route between Nepal and Tibet until the opening of the Lhasa-Kathmandu highway through Nyalam diminished its importance. The limited



Khamjing

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trade that still takes place through the valley helps sustain the local economy. At present, the nearest road head on the Nepal side is located about 17 km down from Timure, but the government plans to extend this road to the border to connect with Kyirong county and beyond. Timure is linked to Chang village in TAR across the border Rasuwagadhi.

The community of 237 households and 1,128 people mostly consists of ethnic Tamangs. Subsistence agriculture and livestock are the main economic activities, which families complement with income from migratory work elsewhere in Nepal and India. The economic conditions are marginal. Rasuwa district ranks as the 23rd poorest district in Nepal (out of 75, ICIMOD 1977), and Khamjing and Timure are the poorest villages in the area. The literacy rate in these villages is about 30%.

The settlements are in forests scattered up the slopes. Most houses are built in the traditional style with rock, wooden shingle, or slate roofing. Agricultural land is limited by the steep topography, but the relatively warm climate supports crops of maize, millet, potato, and a variety of vegetables. The two most common cash crops are apple and chilli. The 3,187 head of livestock include lowland cattle, goats, and cattle-yak crossbreeds. The area has adequate forests and pastures, from which the local people extract a variety of resources including firewood, roofing slates, construction timber, and medicinal and

Village dreams – Timure area

Improved bulls
Improved education
Trading post at the border
Increased tourist numbers
Better availability of food and clothing
Better forest conservation and reforestation
Improved sanitation and drinking water
Wild boar population control
Telephone connections
Helicopter services
Skills development
Improved trails



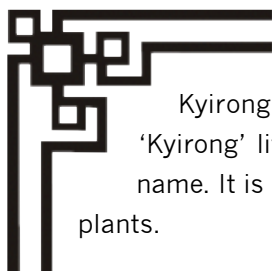
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People of Timure

aromatic plants. Pine, oak, fir, birch, and rhododendron are the dominant tree species. Fire-tolerant *Pinus roxburghii* forest dominates the dry slopes below 2,000 m. Denser forests of *Pinus excelsa*, *Abies spectabilis*, *Rhododendron*, and *Betula* are found at higher elevations, where fire and human disturbances are less frequent.

The forests and wildlife of the area are protected by Langtang National Park. Common wildlife includes musk deer, black bear, jungle leopard, monkey, langur, red panda, yellow-throated marten, and other small mammals. According to local residents, the wild boar population has grown since the establishment of the park and it has become a major pest in damaging agricultural crops.

Timure and surrounding VDC's are located within the area restricted to tourism until 2002, and have thus far been deprived of revenue from this source. Tourism has brought significant prosperity to the adjacent Langtang Valley. The local people propose alpine lakes, views, vegetation, and wildlife as potential tourist attractions. The traditional villages, historical sites, culture, and architecture of the local people are also unique. Given the option, the people of Timure would prefer to have foot trekking in the area, rather than a road.



Chang - a hamlet in the valley of happiness

Chang is a hamlet near the border in the southern part of the Kyirong valley of TAR, and now within the Qomolangma Nature Preserve. 'Kyirong' literally means 'the pleasant country', and the valley lives up to its name. It is rich in forests, great mountain views, plentiful water, and medicinal plants.

The valley is deeply rooted in the history and culture of Buddhism. Taga Taso, the ancient hermitage of Milarepa, can still be seen high on a cliff face. The historic Phagpa temple, believed to have been commissioned by Songtsen Gampo in honour of his Nepali wife, stands graciously in Kyirong village.

There are many large and small settlements scattered throughout the Kyirong valley. Chang is the lowest village near the Nepal-TAR border, and is linked by this route to Timure village in Langtang National Park. Located at an elevation of 2,400 m and exposed to monsoon rains, Chang has a moist temperate climate suitable for growing barley, wheat, corn, millet, potatoes, beans, pumpkin, turnips, and a variety of other vegetables. Locally grown fruits include apples, walnuts, and pears. The total cultivated area is limited by the hilly topography to 1,550 ha.

The people of Chang have excellent access to forest resources, especially the temperate and sub-alpine species of *Pinus*, *Quercus*, *Tsuga*, *Abies*, and *Betula*. Forests and grasslands



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Travelling to Chang

are rich in wildlife. The wildlife species are similar to those in the nearby Timure area of Nepal, due to their similar environments. The rich biodiversity of Kyirong valley includes medicinal plants such as *Delphinium*, *Picrorhiza*, and *Nordotachys*. Bamboo is a valuable forest product used by the villagers to manufacture a wide range of products for domestic and export uses. Local people are concerned that the recent flowering of bamboo and subsequent dieback may cause a shortage of this resource for a number of years.

Animal husbandry is one of the main activities. The villagers own a total livestock population of 108 animals - mainly 'dzomo', 'dzo', cows, and yaks. They crossbreed cows and yaks to produce dzo (males) for export, and dzomo (females) for local milk production. The Chang people do not raise sheep and goats but keep chickens to produce eggs for sale. Despite its close proximity to the Nepal-TAR border, Chang village does not appear to engage in trans-border trade.

Chang village has only nine households with 54 people. The population has been declining, because many members of the community migrate out in search of educational and business opportunities. Population centres such as the Kyirong township are attractive, especially to young people, because of educational, health, and work opportunities. A number of families from Chang have been relocated closer to the township of Kyirong by

Village dreams – Chang

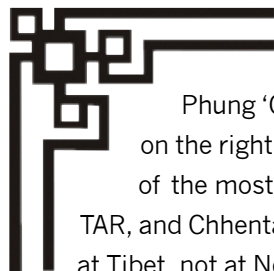
Vigilant forestry staff
Shelters for travellers
Supply of chemical fertiliser
Veterinary supplies and a technician
Improved sanitation and drinking water
Mobilisation of women to educate children
Training for the local population in fire control and wildlife conservation
Protection from damage to crops by wildlife and compensation for losses
Local participation in forest and wildlife protection
Improved water-supply system, Management of hot spring
Improved trails, Extension of road to border
Skills development, Mechanised barley thresher
Training for locals in animal husbandry
Migration to bigger centres



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People of Chang

the government. More families aspire to move, given similar opportunities, and it appears that the community of Chang has become too small to be viable. Chang village may become more attractive in the near future if the planned road connection between Kyirong and Rasuwa district of Nepal is built.



Kimathanka - a village on a fern-covered flat

Kimathanka is located at the upper end of the Arun valley, where the Phung 'Chhu' (river) enters Nepal from TAR and becomes the Arun River. Poised on the right bank of the Arun River on a northeast-facing slope, Kimathanka is one of the most isolated villages in Nepal. Across the Arun lies the Chhentang Chhu of TAR, and Chhentang village so it is said that the children of Kimathanka grow up looking at Tibet, not at Nepal. The village lies in the buffer zone of Makalu-Barun National Park.

The people of Kimathanka village are mostly Sherpas. In their oral tradition, their forefathers came from 'Sakyiding', meaning 'pleasant land surface' – an ancient settlement at the headwaters of Kama Chhu. When migrants came searching for an alternative place to settle, they found a small flat area overgrown with ferns. They settled there and named it 'Kimathanka', meaning 'the flat area covered by ferns'. It is difficult to determine precisely when the migration took place. It is reported that ruins of a former settlement of considerable

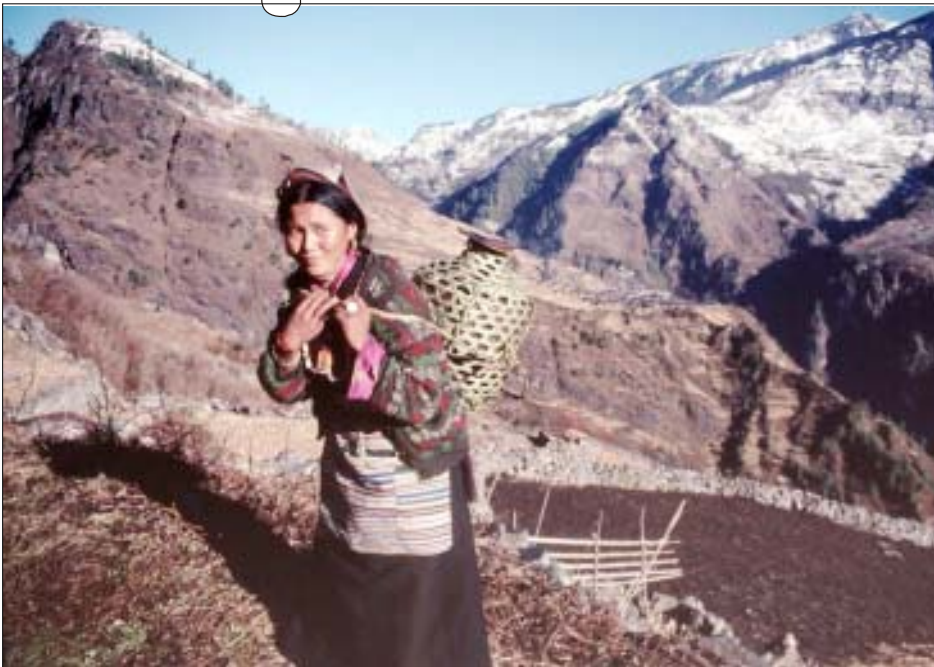


Ang Rita Sherpa

People from Kimathanka sitting on rocks

Village dreams – Kimathanka

Agricultural improvement
Cultural conservation and awareness
Scholarships for students, especially girls
Removal of tourism restricted area status
Involvement of local groups in poaching prevention
Facilities for local language lessons in school
Forest fire protection and reforestation
Skills training in bamboo crafts
Credit facilities for small traders
Veterinary training and services
Production of medicinal herbs



Ang Rita Sherpa

size still exist in Sakyiding. Legend has it that a pestilence caused by local demons wiped out many of the area's inhabitants, and no one dared to resettle there (Howard-Bury 1991).

Kimathanka is the smallest village development committee area (VDC) in Nepal, with only 48 households and 336 people. The village has a primary school, a health post, a post office, and a monastery. The main sources of income are the production and sale of live 'chauri' (yak-cow crossbreeds) and butter to neighbouring villages in Nepal and TAR. There are approximately 725 head of livestock in the village, mainly yaks and yak-cow crossbreeds, which herders take to higher pastures in summer and bring down to the village in winter. Kimathanka VDC has limited access to forest and pastureland because it is tightly enclosed between Chepuwa VDC of Nepal and TAR. Much of its traditional summer rangeland fell within TAR following the demarcation of the China-Nepal border in 1969. The pasture shortage is now addressed through transboundary grazing agreements with Chhentang 'Shang' (village administration) of TAR and the payment of grazing fees. The people of Kimathanka also make bamboo craft pieces that are exchanged in Riwu, TAR, for a variety of consumer goods and food items. The relatively mild climate of Kimathanka supports the production of a variety of agricultural crops, but cultivable land is limited by the steep and rocky terrain.



Chhentang - a village on a desolate flat

According to a local official, the name 'Chhentang' means 'desolate or remote flat'. Located in the southern part of Tinkey county, TAR, near the Nepal border, Chhentang is one of the most isolated villages in TAR. The Chhentang Chhu watershed covers two 'shangs' (village administrations) - Chhentang and Chanka. Kimathanka in Nepal lies directly across the Arun and Kama rivers, opposite Chhentang and Chanka villages.

Located on the south slope of the main Himalayan range, Chhentang 'Chhu' (river) valley is directly impacted by summer monsoons. As a result, its climate differs greatly from the upper plateau of TAR. This unusual climate has led to the development of an ecosystem and culture that is unique in TAR.

Chhentang village has 280 families with a total of 1,523 people spread over six settlements. The two main economic activities are raising livestock and subsistence agriculture. Chhentang has a cultivable land area of about 12,000 ha, on which corn, potatoes, barley, millet, wheat, turnips, cucumbers, pumpkins, beans, peas, and amaranths are grown. Apples, apricots, and walnuts are also grown in limited quantities.

Local people claim that the moist environment creates grain-storage difficulties. In the past, people depended heavily on wild foods, such as 'tho' (*Arisaema sp.*), mushrooms, vegetables, and wild meat. In fact, Chhentang people are renowned for hunting skills and knowledge. Now, however, much of the food deficit is met by importing subsidised grain

Village dreams - Chhentang

Forest fire control
Improved livestock breeds
Improved school infrastructure
Reduced wildlife poaching activities
Horticultural improvement activities
Opportunity for relocation elsewhere
Training for locals in livestock disease
Road extension from Riwu to Chhentang
Government-assigned trained veterinarians
Trained health workers and medicine
Crosscut saw to reduce timber wastage
Hydropower supply for villages
Better bridges across rivers
Improved local livelihoods
Improved water supply



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Discussion in Chhentang

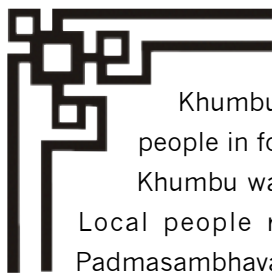


Kimanthanka (left) and Chhentang (right) separated by the Karma Chha

from Riwu, a township located about 40-50 km north at the nearest road head to Chhentang. Trading trips to Riwu can take eight to ten days. Chhentang residents interact closely with the adjacent community of Kimathanka but conduct very little trade with them.

Chhentang has very rich forest resources. Although the condition of the forest has been altered by centuries of grazing and agriculture, there are rare pockets of old growth forest. Timber cutting and medicinal plant collection are major local economic activities. These products are either sold for cash, or traded for other goods and services. Chhentang forests and rangelands are some of the richest for medicinal plants. Plants commonly harvested include species of *Leontopodium*, *Delphinium*, *Swertia*, *Nardotachys*, *Picrorhiza*, *Zanthoxylum*, and *Cordyceps*.

Animal husbandry is an important component of the Chhentang economy. Once the people of Chhentang have sown the crops in the lower villages, they move their animals to summer settlements for eight or nine months. Chhentang villagers keep cows, goats, chickens, dzo, and dzomo, but not pigs or sheep. The forested environment of Chhentang is an ideal habitat for many species of wildlife. Species sighted in the area by local residents include Assamese macaque, clouded leopard, leopard cat, marbled cat, snow leopard, leopard, Himalayan black bear, blue sheep, Himalayan tahr, serow, goral, musk deer, muntjac, red panda, common otter, Indian otter, beech marten, and the Himalayan yellow-throated marten.



Thame - a hidden sanctuary

About 500 years ago, the Sherpa people discovered and settled in Khumbu, Nepal. This region now has a population of approximately 3,500 people in four distinct communities in different river valleys. It is believed that Khumbu was an uninhabited area before the arrival of the Sherpa ancestors.

Local people regard the Khumbu as one of the hidden sanctuaries that Padmasambhava ('Ugyen Beyul') set aside to be discovered by people in times of trouble. The sacred status of Khumbu shaped the attitude of the Sherpas towards nature and people. They regard forests, wildlife, and landscapes as sacred; they refrain from hunting, cutting green trees, and even slaughtering their own domestic livestock.

The Thame valley is said to be one of the earliest settlements in the Khumbu region, it now lies within the Sagarmatha National Park. At 3,300 m elevation, Thame village is located in the sub-alpine zone. Forests cover only about 20% of the watershed, with shrubs, grass, rock, ice, and snow covering the remaining 80%. There are about 1,000 head of large livestock in the village and 200 small animals, mainly sheep.

The Khumbu was closed to foreigners before the 1950s but is now one of the most visited mountain destinations in Nepal. From the 60 people who visited Khumbu in 1960, the



Frances Klatzel

Thame

Village dreams - Thame

Improved household sanitation
Controlled human population growth
Promotion of cultural conservation
Growth of balanced cross-border trade
Increased number of educated young people, especially girls
Improved quality and flow of tourists into Thame valley
Improved forest growth and coverage
Improved agriculture and livestock production
Veterinary training and services
Agricultural improvement
Reduced crime rate



People of Thame

Frances Klatzel

number of visitors increased to 25,000 in 1999. Thame valley itself, however, remains hidden from this phenomenal growth in international tourism, because it is located away from the main route to Everest. More importantly, much of the valley is restricted to international tourism due to its proximity to the international border.

The community, therefore, maintains much of its traditional culture, way of life, and conservation values. Potato cultivation, yak farming, and trans-Himalayan trade are the three main economic activities. The villagers have always been well positioned to participate in trans-Himalayan trade, because the 5,716m Nagpa Pass beyond Thame links Solukhumbu district with Dingri County, TAR. Commodities traditionally exchanged include salt, wool, meat, barley, blankets, and yaks from Tibet, and medicinal or aromatic plants, 'lokta' paper, iron ore, 'dzo' (male offspring of bull-female yak crosses), and grain from Nepal. Limited trading continues, and the potential exists to improve trade and transboundary tourism across this pass. Since this survey was made, development in the Thame valley has been supported by a four-year project (1999-2002) set up by the Austrian organisation Eco-Himal, and the infrastructure may have improved significantly (for details see EH 2003).



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Ritual dancers at Thame monastery, cultural exchange is an important part of transboundary cooperation