



FROM THE DG'S DESK

Warmest Greetings to all our Esteemed Readers!!

It gives me immense pleasure to present this edition of the NAM S&T Centre's Fact File titled “**Life and Livelihoods in the Himalayas: Perspectives from Nepal**”. This document highlights the evolving livelihood systems in the Himalayan region and examines how communities in Nepal have adapted to changing socio-economic, environmental and demographic conditions. It also highlights the unique mountain conditions that influence livelihood opportunities and challenges in the region.

Traditionally, livelihoods in Nepal's mountainous regions were rooted in crop-livestock agriculture, forest based activities and local trade systems. Over time, these livelihood strategies have diversified in response to migration, tourism development, market integration, infrastructural expansion and changing climatic conditions. This Fact File discusses the growing importance of sectors such as cultivation of high-value crops, livestock production, non-timber forest products, tourism, labour migration, community based tourism and niche agricultural products in strengthening local economies and rural livelihoods.

The Fact File further examines demographic transitions and emerging challenges affecting mountain communities, including labour shortages in agriculture, human-wildlife conflict, climate change impacts and increasing dependence on migration based income. At the same time, it reflects the resilience and adaptive capacities of Himalayan communities in sustaining their livelihoods under changing circumstances.

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I am confident that this Fact File will serve as a valuable resource for policymakers, researchers, academicians, development practitioners and students interested in mountain livelihoods and sustainable development. Although this Fact File primarily focuses on Nepal, we believe that many of the livelihood patterns, challenges and adaptive strategies discussed herein are also relevant and applicable to other Himalayan and hilly regions across the developing world.

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1. Introduction

Nepal, being a mountainous country, its development and livelihood practices are conditioned by distinct characteristics termed as “mountain specificities” which include features like inaccessibility, fragility, and marginality, biological diversity, and ecological niches. Livelihood strategies of the people have been evolving over the years and new issues and challenges have emerged.

2. Understanding the Concept

In general terms, a livelihood refers to the means by which people secure the necessities of life. The idea of sustainable livelihood was first introduced by the Brundtland Commission on Environment and Development, and later expanded by the United Nations Conference on Environment and Development (UNCED), especially in the context of Agenda 21.

The concept of sustainable livelihood encompasses the integration of factors aimed at addressing development, sustainable resource management and poverty eradication simultaneously. Initially, Robert Chambers and Gordon Conway (1992) defined a Sustainable Livelihood as follows: *A livelihood comprises the capabilities, assets and activities required for a means of living.* Scoones (2015) further simplified the concept as: *A livelihood comprises the capabilities, assets, (including both material and social resources) and activities required for a means of living. A livelihood is considered sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.* The livelihood approach was inspired by the work of Amartya Sen (1981) on entitlements and Robert Chambers (1983) on Sustainable Livelihoods.

3. Patterns of Livelihoods Evolution

Mountain specificities shape the livelihood options that people pursue. Some of these specificities such as inaccessibility, fragility and marginality, pose challenges to livelihood options. While other specificities such as rich biological diversity and ecological niches, offer opportunities for mountain communities to enhance their well-being. Livelihood practices in the mountainous region are shaped by: (i) Remoteness and limited access to markets and basic facilities, (ii) Access to natural resources and high dependence on them; (iii) Demographic factors (trend or adaptation); (iv) Social and Cultural Factors; and (v) Socio-economic and political marginalization. Livelihood practices also have spatial and temporal dimensions and are deeply embedded in cultural practices.

For the majority of the population, crop-livestock agriculture has long been a source of livelihood. According to the census of 2021, 57.3% of the population is engaged in agricultural production as a major occupation. However, over the past several decades, livelihood options have changed dramatically across all physiographic regions of the country. Households increasingly rely on diversified livelihoods that combine farm work with non-farm activities, such as wage labour, circular labour migration and tourism services. The livelihood options in the high mountainous regions have evolved in response to regional geopolitical shifts and the development of Nepal as a tourism destination. Until the 1950s, the northern communities were actively involved in the trans-Himalayan trade of Tibetan salt, wool and medicinal plants for rice and Indian clothes. They were engaged in livestock herding and practiced transhumance (Haimendorf, 1975). They would also access pasturelands in the Tibetan Autonomous Region. However, practices such as barter



Figure 1: Crop production (predominantly cereal production) integrated with animal husbandry has been the mainstay of livelihood options.

Source: Photo by Gobinda Basnet

trade of Tibetan salt and grain, *Alpwirtschaft* (a form of transhumance) in the high mountain regions, and slash and burn agriculture in the middle mountain regions have greatly declined or ceased over time. In the mid-hills, livelihood strategies that once focused predominantly on sedentary agriculture, supplemented by localized trade and occasional army service in the British, Indian and Nepali forces, have shifted towards increasing reliance on remittances generated through labor migration, both within and outside Nepal. In the Tarai region as well, the livelihood base increasingly relies on remittances. The share of agriculture in the economy has dropped from 47.7 percent (1990/91) to 25.6 percent (2024/25), reflecting a gradual structural transformation of the national economy.

4. Demographic Trends

Demographic trends in the country affect the resource use patterns and the adoption of livelihood strategies. The average annual population growth rate was 2.08 percent during the 1981–1991 census period, which increased to 2.25 percent in 1991–2001, but then fell to 1.35 percent during 2001–2011. Between 2011 and 2021 the annual growth rate further declined to 0.92 percent. During this period, out of the 77 districts in the country 34 districts recorded negative population growth rates, while 15 districts had positive growth rates but below the national average of 0.92 percent. A further 25 districts experienced growth rates between 0.93 and 2 percent, and only 3 districts recorded growth rates above 2 percent. The population growth rate in the mountain region has already turned negative. In the hill region, the population is projected to grow annually by 0.30 percent. In contrast, the Tarai experienced an annual population growth rate of 1.54 percent during the 2011–2021 period. This declining and uneven population growth has significant implications for the availability of labour for resource management and agricultural activities.

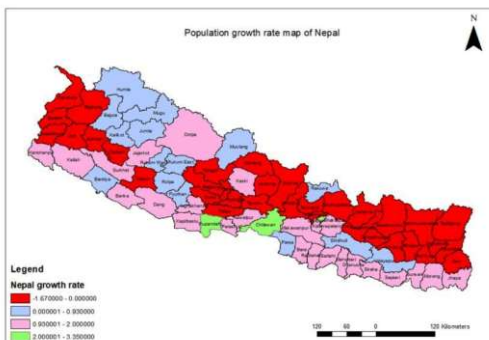


Figure 2: Population growth rate in different districts in the last one decade

Between 1991 and 2021, the share of young people (aged 0–14) dropped sharply from 42.4 percent to 27.8 percent, with their growth rate steadily declining and turning negative (-1.25 percent per year) after 2011. The average number of children per woman (Total Fertility Rate) also decreased from 5.1 in 1991 to 1.9 in 2021. The sex ratio, defined as the number of males per 100 females, according to the 2021 census is 95.59, a slight increase from 94.16 in 2011. However, 18 districts still have a sex ratio of less than 90, reflecting high levels of male out-migration for foreign employment. This has implications on increased burden on women in agriculture and resource management.

5. Livelihood Strategies

Over the years, livelihood strategies have increasingly focused on agriculture intensification, diversification and migration depending on the potential of agro-ecological regions and access to markets and other infrastructure.

5.1 Cultivation of High Value Crops

Cultivation of high value crops like fruits, vegetables and cash crops has become an important livelihood strategy. These crops are specific to geographic areas. For example, apples are grown in Mustang, Jumla and Dolpa districts; mandarin oranges in Gorkha, Syanja, Bhojpur and Dhankuta, large cardamom (*Amomum subulatum*) in the eastern hills (Taplejung, Sankhuwasabha, Tehathum and Bhojpur); coffee in Gulmi, Palpa, Arghakhanchi, Syanja and Kabhrepalanchok; ginger in Salyan, Pyuthan, Palpa, Syanja, Jhapa and Ilam; and vegetables are grown near major cities. *Akbare*, round pepper, is mostly cultivated in mid-hills



Figure 3: Cultivation of high value crops like large cardamom has transformed the economy of several districts in the eastern hill.

Source: Photo by Gobinda Basnet

such as Panchthar, Ilam, Dhankuta, Bhojpur and Makwanpur. These high value crops are sold in both local and international markets. For example, products like apples, oranges and vegetables are mainly sold in national markets whereas large cardamom, coffee, tea and ginger are exported to international markets, mainly to India. The shift toward high-value crops has been facilitated by improved road networks providing market access to previously isolated communities, growth in remittance inflows, expansion of cooperatives, increased presence of NGOs and targeted government activities.

One of the most significant high value crops contributing to the national economy is large cardamom. Nepal is the largest producer of large cardamom in the world and accounts for 52% of global production. Around 16,000 hectares of land, mostly in the eastern hills are under cardamom cultivation. The estimated annual production is 9,600 tons. Cardamom has high export potential, particularly to India. Production of large cardamom has transformed the local economy in districts such as Taplejung, Panchthar and Sankhuwasabha. Its cultivation is also rapidly spreading to mid-hill districts in central and western Nepal.

Another high value crop whose cultivation is increasing rapidly is *Akbare* or round pepper. It is famous for its hotness (measured in Scoville Heat Units) and flavour. Increase in instant noodle production in the country has also contributed to the rising demand for Akbare pepper.

Other high value crops whose production has increased in recent years are kiwi, dragon fruits, mushrooms and sweet oranges.



Figure 4: Production of Akbare pepper and ginger in specific areas has contributed to the local economy

Source: Photo by Sangram Karki

5.2 Local Breeds of Livestock

Livestock production has always been an integral part of livelihood strategies in Nepal. Dairy farming has been commercialized in areas near major cities. However, local breeds of livestock such as Chyangra (Himalayan goat) for meat and fleece, and Chaunri (a cross breed of yak and cow) for cheese and butter have gained economic importance and means for livelihoods. These breeds have long been important to the local economy but demand for these niche products in the national market has increased in recent years, contributing to local livelihoods.



Figure 5: Niche products from local livestock breeds have become an important means of livelihood specific to the area

Source: Photo by Gobinda Basnet

5.3 Neglected and underutilized species

Crop production is largely dominated by production of major crops like paddy, maize and wheat. Crops like different types of millets, amaranth and buckwheat collectively termed as neglected and underutilized species (NUS) have contributed in ensuring food and nutritional security in specific areas. In recent years, with increased access to markets and growing awareness of their nutritional value, NUS have been gaining economic importance and supporting livelihoods.

5.4 Non Timber Forest Products

Forest-dependent communities across the mountainous region derive their sustenance from non-timber forest products (NTFPs), either as a supplement to household income or as a fallback resource during times of financial stress. About 80% of the rural population



Figure 6: Crops like finger millet and amaranth, important NUS, support nutritional security and contribute to livelihood options

Source: Photo by Gobinda Basnet

in Nepal depends on the NTFPs for their livelihoods. Nepal is estimated to export around 33,000 mt of medicinal and aromatic plant (MAP) products with annual revenue amounting to around USD 19-60 million (MoFSC, 2009). The export value increased from USD 27.49 million in 2005 to USD 60.09 million in 2014. On average, Nepal exported 13,230 mt worth USD 39.34 million per year of MAP products over the last ten years (Kalauni and Joshi, 2018) to more than 50 countries. The contribution of NTFPs in the household economy varies across regions. For example, NTFPs provide 35-50% total household income in the Karnali zone.

One of the most important NTFPs with high economic value is Yartsagunbu or caterpillar fungus, (*Ophiocordyceps sinensis*), collected from alpine pastures. It is an important source of livelihoods in districts such as Dolpa, Darchula, Bajhang and Manang. According to a report by The Washington Post, Grade 1 Cordyceps weighing 500 grams was sold for as much as USD 40,000 in a high-end shop in the north-central city of Xining, although lower-grade specimens fetched about one-third of that price in 2016. Yartsagunbu collection can earn between USD 1,000–2,000 per season per household. Income from caterpillar fungus accounted for more than 65% of the total household cash income on average, and its contribution was highest among the poorest households in many villages of Nepal (Shrestha et al., 2014). In Nepal, it is often traded in informal markets and is not fully reflected in national accounts, except for nominal revenue collected through permits issued by the Division Forest Office.



Figure 7: Yartsagunbu (caterpillar fungus) collection in Darchula

Source: Photo by Prakash Mishra

Property rights for pasturelands for collecting Yartsagunbu are strongly held and often contested. Sometimes, fatal conflicts have erupted over resource claims, as in Manang in 2009, where seven people from Gorkha were killed. In some cases, social relations override ecological and administrative boundaries in determining access to resources. In Byas Palika of Darchula district, people from



Figure 8: Handmade Paper and Allo Fiber Extraction

Source: Photo by Madhu Chhetri

Chhyangru village have restricted outsider Cordyceps-collectors from accessing two areas- Api and Kuntisang but have allowed collectors from Garbayng, a village in India, due to longstanding social ties between the villages.

Besides products like Yartsagunbu and MAPs, other processed products such as handmade paper from Argeli (*Edgeworthia gardneri*) and Lokta (*Daphne papyracea*), as well as clothes made from Himalayan nettle (*Girardinia diversifolia*) are important sources of livelihoods for local communities. These products are exported as well as sold within the country.

5.5 Tourism

Tourism has become one of the important livelihood strategies in Nepal. It contributes over 7 percent to the gross domestic product and provides jobs to more than 400,000 people. In 1990-91, Nepal recorded approximately 255,000 tourist arrivals and earned USD 63.7 million in foreign exchange from the tourism sector. By 2024, tourist arrivals had surged to over 1.14 million, with foreign exchange earnings reaching USD 623.4 million.

Tourism is concentrated in five clusters: Kathmandu Valley, Pokhara, the Annapurna Conservation Area, the Sagarmatha (Mt. Everest) and Chitwan National Park. However, areas outside these major tourism hubs have also witnessed increased tourism activities. Initially, Nepal became a popular destination for adventure tourism. The community-based tourism, initiated through the piloting of the Annapurna Conservation Area in Ghandruk and nearby areas in Kaski district, has become an important livelihood strategy. Buffer zones of national parks and conservation areas, which promote tourism while conserving biodiversity, have become a mainstay of both conservation and livelihood improvement. Natural and cultural heritage sites provide the infrastructure for tourism attraction.



Natural heritage like, Gokyo lake in the Everest region, are natural infrastructure for tourism



Community settlements like Phorche village in the Everest region

Figure 9: Natural and Social Infrastructure for Promoting Tourism

Source: Photo by Gobinda Basnet

In addition to natural heritage, Nepal's rich and diverse cultural heritage has also played a pivotal role in promoting tourism. Tourist arrivals and associated income, however, fluctuate due to both internal and external factors creating uncertainty for communities dependent on this sector. For example, tourist arrivals sharply declined during the Maoist insurgency, the post-Gorkha earthquake and the COVID-19 pandemic.

Community-based eco-tourism has created opportunities for broader community participation and more equitable benefit-sharing compared to traditional tourism models. Community homestays have become a major tourism activity over the last two decades, beginning with the homestay in Sirubari, Syanja. Today, there are 1,345 registered community homestays showcasing Nepal's geographic and ethnic diversity. The community based approach of the homestay was derived from another successful community forest user group that has grabbed many international awards and recognition for the conservation of forest resources by the local communities.



Figure 10: Monasteries (more than six centuries old Jhampa Lakhang) and the Tenchi festival in Lomonthang, Upper Mustang are examples of cultural infrastructure for tourism

Source: Photo by Gobinda Basnet

5.6 Migration

Migration for employment has become one of the major livelihood strategies adopted by people. The scale of migration and remittances is large and widespread.

According to the Nepal Living Standards Survey Report 2022-23, the percentage of households receiving remittances has steadily increased from 23.4 percent in 1995-96 to 31.9 percent in 2003-04, then to 55.8 percent in 2010-11, and further to 76.8 percent in 2022-23. In 2020-21, Nepal received remittances of NPR 961.05 billion from different countries, constituting 22.5 percent of the Gross Domestic Product (NPC, 2020-21). Remittances received through informal channels, commonly known as *Hundi*, are not reflected in official records. If remittances through *Hundi* were estimated, the contribution of labour migration in national economy would be even more significant.

The percentage of households with absentee members (migrating abroad) has also increased over the years. The 2021 census shows that a total of 2,190,592 people from 1,555,961 households (23.4%) are absent and living abroad. Out of the total absentees, 1,799,675 (82.2 %) are male and 390,917 (17.8 %) are female. In 2011, 1,921,494 people from 1,378,678 (25.4%) households were absent abroad, of whom 87.6% were male and 12.4% were female. Compared to the 2011 Census, this indicates a more than two-fold increase in the number of Nepalis living abroad between 2001 and 2011. While migration contributes significantly to national income and GDP, it has also seriously affected the availability of labour in the agricultural sector.

While formal migration contributes to the national economy in measurable ways, seasonal migration mainly to different cities in India is not accounted. However, such migration significantly supports household economies. For example, many youths from Western Nepal and the southern parts travel to India for seasonal works such as apple harvesting in Himachal Pradesh, mango harvesting in Maharashtra and general construction work in various cities. These youths typically return to Nepal during the rice planting season and festival periods and migrate again for work during the remaining months. Seasonal migration is not limited to India, people from Limi valley in Humla district also work in Taklakot in Tibet.

6. Challenges

While livelihood options have diversified and per capita income has increased over the decades, several persistent and emerging challenges continue to affect communities across Nepal. In the agriculture sector, increasing human-wildlife conflict has become a major problem in several places. Crop raiding by monkeys, wild boar, deer and porcupines, mostly in the mid-hills has severely affected agricultural production. The rapid decline in labour availability in the agriculture sector, largely due to youth migration, has seriously impacted the agriculture sector. Several factors have combined to create conditions leading to the abandonment of agricultural land. Increased incidences of drought and declining water availability are linked to climate change. Over the years, the frequency of natural hazards such as glacial lake outburst floods and floods has also increased, severely affecting the livelihoods of large populations. As livelihoods and the national economy become increasingly reliant on foreign employment, broader international political and economic forces also create an environment of uncertainty.

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