Development Perspectives in Ladakh, India

During colonial rule the high mountain region of Ladakh was at the core of one important trade and transit route from the subcontinent to Central Asia. After the partition of British India in 1947 and the Sino-Indian war in 1962, trans-Himalayan trade collapsed and Ladakh became a peripheral and contested borderland. In light of continuing geostrategic importance and significant socio-economic changes, livelihood strategies have diversified although agrarian land use remains the economic mainstay.

When the Government of India opened Ladakh for tourism in 1974, the region experienced an influx of western travellers in search of one last Shangri-La. Popular representations of a peaceful, happy and carefree mountain community, cultural highlights and an impressive high altitude desert landscape have attracted a growing number of visitors (Photo 1). Often the focus in the description of “Little Tibet” is exclusively on Buddhist Ladakhi based on the early Tibetan influence which is reflected in local language, social organisation, architecture and art. Such accounts neglect the large proportion of Muslim population in the region and mask the complexity of identity (van Beek 2006). A rapid expansion of the tourism sector has led to a debate on regional development paths and human-ecological perspectives. In 1981, Helena Norberg-Hodge published “Ancient Futures. Learning from Ladakh” which focuses on the negative impact of “the modern world”. The book takes up the image of an intact society which is exposed to the “invasion” of western tourists posing a threat to social and environmental sustainability through rapid “modernization” and “progress”. Although the publication touches upon a wide range of development issues and challenges in the region, its description of “traditional” Ladakh draws a romanticized picture lacking historical depth and neglecting difficulties in livelihoods (van Beek 2006). Moreover the debate on development paths and environmental consequences in high mountains cannot be reduced to the growing importance as an international tourist destination. Over the last decades Ladakh has experienced substantial political and socio-economic transformation which has affected local livelihoods in multiple ways (Singh 1998).

Phases of political and socio-economic transformation

The sparsely populated former kingdom of Ladakh had been ruled by the Maharaja of Jammu and Kashmir for more than a century before India’s and Pakistan’s independence in 1947 (Figure 1). The district of Ladakh – bifurcated into Leh and Kargil district in 1979 – has been incorporated into the Indian state of Jammu and Kashmir. Territorial disputes over Kashmir between the young nation states India and Pakistan had therefore direct impacts on Ladakh. Military confrontations between 1947 and 1949 led to the construction of army infrastructure in Ladakh (Leh airport) and subsequently changed the region’s position from a transit node of Chinese Asian trade to an international borderland. In 1962/1963 border tensions with China escalated into military confrontation over the uninhabited Aksai Chin region marking the beginning of a phase of expanded geostrategic significances. Sino-Indian tensions and the emergence of border wars between India and Pakistan in 1965 and 1971 resulted in massive investments in road construction (Photo 2). At the same time the deployment of armed forces opened up possibilities for off-farm employment to the local population. Additional non-agrarian income sources became available with the opening of Ladakh to international visitors, and tourism was developed as a key economic sector (Singh 1998).

The current phase is characterised by a process of decentralisation. Political leaders from the region had demanded less discrimination and greater autonomy for decades when “Scheduled Tribe” status was given to eight tribes of Ladakh in 1989. The decision formally included 93% of the population from Leh and Kargil district (van Beek 2006) granting access to a fixed percentage of government posts among other material benefits. This step has shifted a larger degree of political control to the national government while reducing the influence from Srinagar and Jammu. The government of Jammu and Kashmir has been accused of giving priority to other regions of the state which is perceived as a “step-motherly treatment” (van Beek 2006, p. 126) in Ladakh.

Environmental setting and land use patterns

Separated from the Indian subcontinent by the Great Himalayan Range and edged by the Karakorum Range to the north, Ladakh is

![Photo 1: Glaciers, deserts and oases: the triad of Ladakh's natural and cultural landscape](Image1)

![Photo 2: Road marker symbolizing improved accessibility and Ladakh's integration into the Indian Union](Image2)
characterised by a rugged topography at an average altitude of over 3,000 m (Figure 2 and Map Insert to this edition). The western and central parts of the region are dominated by mountain ranges exceeding 3,500 m and carved valleys whereas eastern Ladakh is characterised by the high altitude plateau of Changthang. The peripheral region is only accessible by road from the Indian lowland via Srinagar or Manali, crossing some of the highest motorable passes in the world (Photo 3). Yet they remain closed for approximately six months of the year during which access is only possible by plane.

Due to its location in the rain shadow of the Himalayan Range, the region has an arid climate with an average annual precipitation of approximately 200 mm in Zanskar and less than 100 mm in the upper Indus valley (Klimel 2003). The meteorological station in Leh (3,500 m a.s.l.) indicates a long-term average annual precipitation of 92.7 mm (Archer and Fowler 2004, p. 50). Temperatures show a high seasonal variation, with mean monthly values between 17.1 °C and 23.7 °C in July and August opposed to -15.6 °C and -5.5 °C monthly average in January and February (Singh 1996).

The vegetation of this trans-Himalayan region is dominated by desert steppes which are interspersed with riverine wetlands in the main valleys and with the high altitude wetlands of Changthang. Owing to the given climatic conditions, forests and trees are virtually absent except for rare patches of juniper (Juniperus semiglobosa) and birch (Betula utilis) as well as (mostly cultivated) willow (primarily Salix sericea) and poplar (Populus spp.) trees along rivers and irrigation channels (see Map Insert).

Due to the prevailing aridity, human settlements and agricultural land use are found in oases along the watercourses (Figure 3). Among a total of 0.3% arable land (Fox et al. 1994), the majority of cultivated land depends on glacier and snow-fed irrigation (piu-thags), while river-based irrigation is only possible on the alluvial plains of the Indus River and its main tributaries (rgya-sho). Local land use systems rely on community-based institutions for water management, for an equitable, rotational distribution of water to the terraced fields during the short agricultural season between May and September (Labbal 2000). As double cropping is only possible below an altitude of 3,000 m, single cropping is dominant.

Although a decline in subsistence-oriented land use has been experienced over the last years, agro-pastoral activities persist as the central pillar of local livelihoods. Apart from nomadic groups in eastern Ladakh, the population lives in dispersed settlements subsisting to a great extent on combined mountain agriculture, barley, wheat, peas and mustard are the dominant crops (Photo 4). During the summer months horticultural products, such as cabbage, turnip, potatoes, spinach, or tomatoes, diversify food consumption patterns. Moreover, the cultivation of fruit trees (apricots, apples) and products from animal husbandry (especially dairy products) contribute essential elements to the local diet. Fruits and vegetables are dried for storage during the winter months. Additionally the collection of wild plants is an important supplement in April and May when provisions are reduced.
Animal husbandry helps to fulfill the need for manure, draught power and transportation. During the summer months high pastures (pah) are used as grazing grounds for yaks, goats and sheep. While in some villages the cattle are driven to the pastures on a daily basis, other villages maintain small summer grazing settlements. Dairy cattle – especially dzoomo, a yak and cow crossbreed – are non-seasonally kept on designated pastures and are used for cooking and heating fuel, has started to flourish. After the Kargil crisis in May/June 1999, the army initiated a number of civil society programmes, such as "Operation Sadbhavana (Goodwill)" providing education and health services to the area (Rigzin 2005). When travel restrictions for foreigners were relaxed by the Indian government, tourism started to expand in Ladakh, attracting travellers in search of trekking opportunities or a paradise, "essentially unaffected by the West" (Norberg-Hodge 1981: 1). The number of tourist arrivals rapidly rose to more than 20,000 by the end of the 1980s (Figure 4). The flare up of the Kashmir crisis and agitation between Buddhists and Muslims in Leh in 1989 resulted in a sudden drop of tourist arrivals followed by a relatively stable number of visitors during the 1990s. Since 1999 and 2002 in the aftermath of the Kargil crisis and the 11 September 2001 events respectively, the economic sector has experienced an exponential increase over the last five years. In 2007 more than 50,000 domestic and international tourists came to Ladakh. The tourism business is concentrated in a relatively short period between June and September. As income opportunities from this sector are available during the summer months, women and wage labourers take over jobs in the agricultural sector thus reducing the workforce of men who are earning additional income, e.g. as porters or horse men in the trekking business. Yet the benefits are distributed unevenly among villages with a concentration on Leh (Photo 5 and 6). Apart from Ladakh’s a large number of migrant workers from Kashmir and Nepal profits from the boom. Restaurants and souvenir shops especially in Leh are dominated by external businessmen. Future prospects assume a continuous increase in visitors. Current strategies aim at a further development of the domestic market with publicity campaigns for the Hindu Sidhu Darshan festival and the provision of low-cost airline transportation to Leh (Dutta 2008).

Govermental and non-governmental development programmes

In contrast to the images of Ladakh as a self-reliant economy and harmonious society, the national government has primarily seen the region as a borderland in need of economic support. After his first visit in 1949, then Prime Minister Jawaharlal Nehru introduced a "terrible economic backwardness" as a main feature of the peripheral mountain region (Aggarwal 2004, p 36). Relations between Ladakh and the central state have been characterized by an orientation towards Delhi and large investments in development programmes. The state government of Jammu and Kashmir, however, has been confronted with resentments based on a perceived lack of political engagement in Ladakh. Since practically all administrative duties have been granted to the LAHDC, the influence of the state government has diminished (van Beek 1999).

Today policies at district, state and national level as well as initiatives from non-governmental organisations decide development programmes and strategies.
costs. These subsidised basic commodities undermine the local market for food grains. According to Ladakhi farmers fodder gives better returns than grains. The phenomenon that rice is increasingly replacing barley as a main staple of the local diet has evoked debates over the PDS as well as also over food preferences and western influence. Moreover issues of sustai

able economic development and new dependencies from lowland food imports are of concern (Dame 1999).

Despite a weakened necessity for a self-sufficient land use system, the agriculture and horticulture sector is one focus of government schemes. Here the example of irrigation schemes is chosen to illustrate changes and challenges in the implementation of co-funded development programmes. Enhanced irrigation has been a central target of rural development policies. After a period of a primarily technical approach with the goal of “modernizing” irrigation infrastructure, reforms towards participatory approaches have been introduced by the Ministry of Rural Development in 1995. The resulting Watershed Development Programme, co-funded by the national and state governments, aimed at enhancing ownership and sustainable improvement of economic conditions. Non-governmental organisations received responsibility as project implementing agencies (Dame 2003). After the opening of the region to foreigners, Ladakh has experienced a mushrooming of non-governmental organisations. NGOs based and working in Ladakh are channels for significant flows of international funds into the region (van Beek 2006, p. 134). In the case of the Watershed Development Programme, struggles between all involved stakeholders in combination with the subsidised nature of the programme have created a situation lacking accountabil

ity and trust (Marshell 2003). Within the recently introduced Harish (‘Greening’) Programme, the responsibility for project implementation has shifted from NGOs to the LAHDC departments—presumably strengthening the functions of the Hill Council. This case shows how numerous stakeholders make a commitment to national and international level shape development strategies for Ladakh.

Discussion and outlook

Over the last decades, Ladakh has faced significant transformations in the political, economic, social, and cultural sphere. These changes have affected local livelihoods and raised debates on sustainable development. Among the multitude of impact factors, border disputes and military presence, governmental programmes and subsidies, and off-farm income sources especially in the tourism sector are most prominent. Such influences have created opportunities for a region which had been noted for its economic backwardness on the one hand and its self-reliant economy on the other. At the same time a fragile web of dependencies has evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved. The case of the Kargil crisis in 1999 illustrated the impact of political erosion. The Kashmir conflict remains an unsolved issue while military presence, diplomatic appeasement and military presence, created opportunities for a region that finally evolved.