



Promoting Transboundary Connectedness in the Kangchenjunga Landscape through Yak Value Chain

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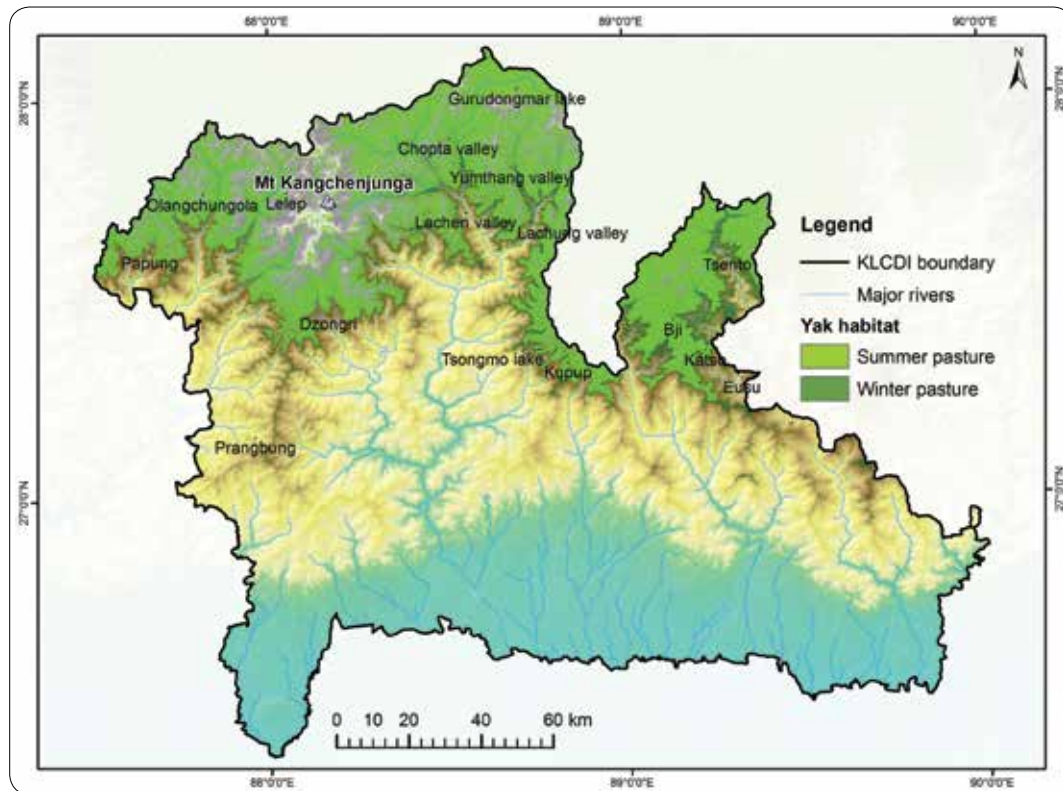
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The Kangchenjunga Landscape and Yak Farming

The Kangchenjung Landscape (KL), one of 36 global Biodiversity Hotspots, is one of the six transboundary landscapes in the HKH region. It covers 25,081 km² between Bhutan, India, and Nepal. As 20% of the KL is rangeland, animal husbandry is vital and yak rearing in particular is the main source of livelihoods for local communities in the high elevation belts of the landscape in Bhutan, Sikkim, and eastern Nepal. The yak is integral to the culture, tradition, and social life of yak herding communities. The yak is a source of milk, meat, fibers, hide, and dung in places where arable farming is impossible. Yaks are also used for riding and as pack animals for transporting goods in hilly terrain. Yak herders in the KL lead a semi-nomadic life, moving with animals to higher altitudes in the summer and to lower altitudes during winter months.



Figure 1: Yak rearing areas in the KL



Yak population distribution in KL member countries

Country	Location	Yak rearing communities	Number of households rearing yaks	Total number of yaks within KL	National yak population
Bhutan	Bji, Katso, Eusu block of Haa, and Tsentso block of Paro districts	Bjops	116	7,714	39,543
India	Lachen, Gurudongmar Lake, Chopta valley, Lachung valley and Yumthang in the north district, Tsomgu Lake, Kupup, Thegu, Nathang in the east district, and Yaksom-Dzongri in west Sikkim	Bhutias and Dokpas	520	6,220	76,662
Nepal	Taplejung, Panchthar, and Ilam districts	Limbu, Rai, Bhote, Sunuwar, Majhi and Lepchas.	c155	4,289	68,067

Dol (2016). Livestock Statistics 2016. Thimphu, Bhutan: Department of Livestock, Ministry of Agriculture and Forests

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Traditional rangeland management systems in KL member countries

- In Nepal, rangelands are mostly state-owned. The kipat system is an ancient communal land tenure system in which members had rights to use but not sell community land and pastures. Historically, this system was used by ethnic groups such as Limbu, Rai, Bhote, Sunuwar, Majhi, and Lepchas, and is considered an effective traditional conservation measure that addresses the sustainability of biological resources. The government has revoked the kipat system, but it is still prevalent today in high altitude regions.
- In Bhutan, most of the Tsamdro (rangeland) falls under the administrative jurisdiction of national protected areas. It is registered in the name of individuals, communities, religious groups, and government institutions. Local rangeland management practices are in place, such as rtsarin churin (forage charge water charge) or through payment of cash or payment in kind of goods such as dairy, and the “the contract herdsman,” wherein the management of a herd of animals is handed over along with the registered rangeland for grazing by another family. Other traditional rangeland management systems include the Haa Gyechukha model (twinning of summer and winter pastures), skyesmed chimed (no birth, no mortality), skyesyod

chiyod (birth and mortality present), and pu-yog.

- In Sikkim, most rangeland belongs to the government and grazing is restricted in the protected area. However, a traditional, self-governance institution in the north known as the Dzumsa continues to thrive. This system regulates and manages the grazing regimes of the greater Himalaya and transition zones, and in trans-Himalayan meadows, over several centuries, adapting to harsh climate conditions.

Yak value chain in KL member countries

- The yak value chain in KL member countries is at its infancy. Yak products are limited to local dairy (butter, hard cheese, yogurt, creamy cheese, butter milk or whey), meat (fresh, dried or fermented), and woolen goods, as well as fur and skin. Nepal is the first country to develop Swiss cheese from yak milk and profit from the export of yak cheese. Hair products such as ropes, mats, bags, warm shoes and boots are made from yak skin.

Yak festivals and tourism in the KL

- In Sikkim, important festivals include panglapseol (lion and yak dance), yak race (annual festival in August), and Dzongri yak festival.
- In Nepal, the yak is the main resource for pack and meat, catering to the growing demand for transportation and food in the tourism and trekking sector. Also, the yak festival has been instituted in the Panchathar district of Eastern Nepal.
- In Bhutan, the government, in collaboration with the Tourism Council of Bhutan, has instituted several annual festivals: Nomad festivals, Masutake festival, Jumolhari mountain festival, Takin festival, Haa summer festival, and highland festival to link yak farming with the tourism sector.



Common challenges faced by the yak farming communities in the KL

- The ban on transborder use of rangelands, which has led to increased grazing competition, mainly due to restricted movement, localization, and high stocking rate
- The replacement of traditional, sustainable systems of rangeland resources management by new statutory governance systems
- Genetic erosion of yaks due to inbreeding
- Depletion of feed and fodder resources severely affecting the yak population
- Limited local products and markets in the yak value chain

Ongoing efforts on yak research and development in the KL

- Bhutan's Department of Livestock, Ministry of Agriculture and Forests has recently established a National Highland Research and Development Centre in Bumthang district. The government of Bhutan is also in the process of establishing another yak research farm in the Haa district. The highland development is one of the priority flagship programmes in Bhutan's twelfth Five Year Plan (2018–2023).
- The Department of Animal Husbandry, Livestock, Veterinary and Fishery, Sikkim has established a yak breeding station in chotpa (summer) and zema (winter). The government of Sikkim plans to develop high quality yak products both for national and international markets.
- In Nepal, Yak Development Farm at Syangboche, Solukhumbu maintains more than 80 good quality yaks for breed improvement.

- The governments of KL member countries are promoting yak tourism linkages by popularizing existing yak festivals and by instituting new festivals wherever possible and feasible.

Envisaged actions for regional cooperation for yak development in the KL

- Transboundary facilitation for genetic improvement of yaks
- Regional rangeland, fodder and nutrition management
- Transboundary yak value chain development
- Managing transboundary yak diseases
- Awareness and profiling of yak farming
- Long term socio-ecological monitoring
- Monitoring and evaluation

Partner institutions for yak research and development in the KL member countries

- Department of Livestock, Ministry of Agriculture and Forests, Thimphu, Bhutan
- G.B. Pant National Institute of Himalayan Environment and Sustainable Development, India (collaborating with the Department of Animal Husbandry, Livestock, Veterinary and Fishery, Sikkim and ICAR–National Research Centre on Yak, Dirang)
- Ministry of Forests and Soil Conservation, Nepal (collaborating with the Ministry of Livestock Development and the Nepal Agriculture Research Council)



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