

Significances of Traditional Yak Raising for Conserving Transboundary Landscapes of Hindu Kush Himalayan Region

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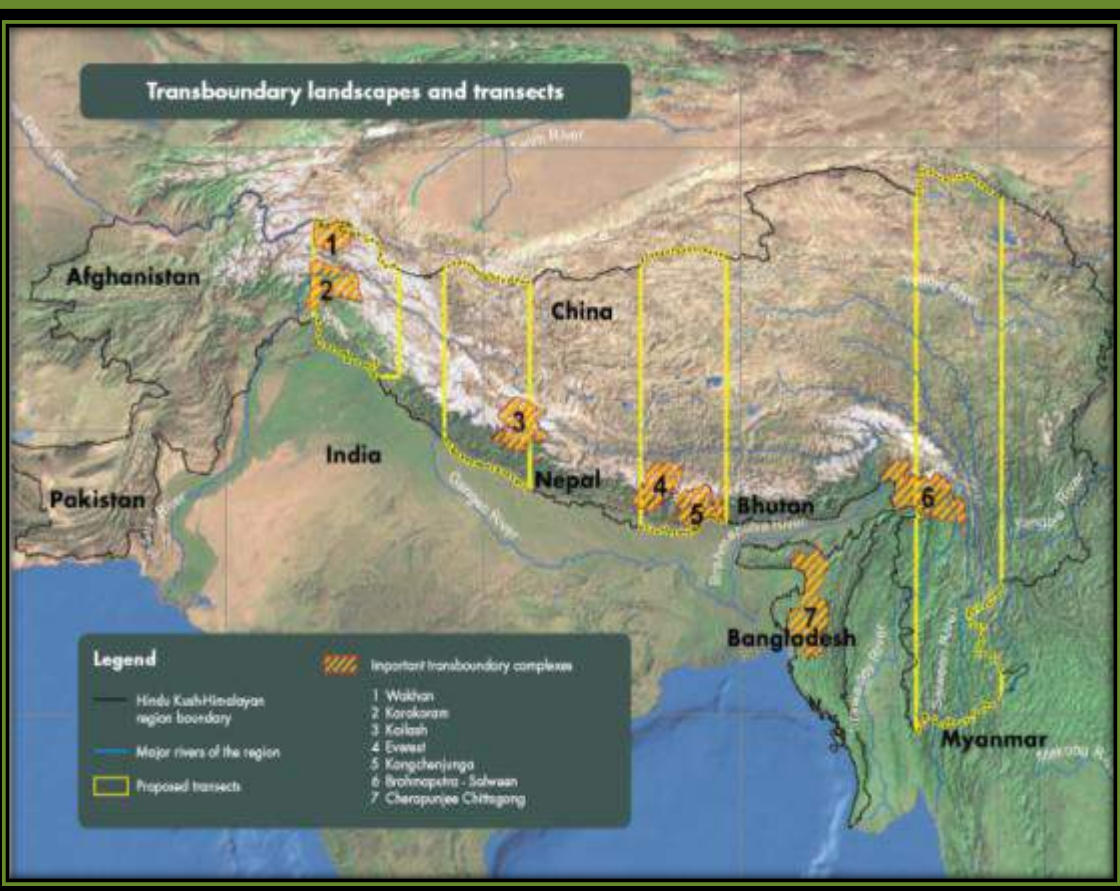
Significance of Transboundary Landscapes in the HKH region

The HKH region is the source of ten large Asian river systems which are to a large extent determined by diverse ecosystems located within the region, providing goods and services directly to a population of 210 million in mountains, and supporting the lives and livelihoods of 1.3 billion people living in the basins.



Ecosystems including rangelands in HKH can be managed sustainably only by following an integrated approach that recognizes their transboundary nature and the flow of services beyond administrative boundaries.

The HKH Transect /Transboundary Initiatives



- **Karakoram-Wakhan-Pamir** (Transboundary PAs with unique alpine biodiversity)
- **Kailash Sacred** (Sacred landscape with unique biodiversity and culture)
- **Kangchenjunga** (Corridors and Connectivity)
- **Brahmaputra-Salween** (Biodiversity hotspots- endemism)

Needs for Transboundary Approach – The rationale

- ❑ The region is home to many globally significant species and use wide range of habitats beyond the existing PAs and the political boundaries;
- ❑ Conservation effectiveness questioned as most of the PAs are scattered as ‘conservation islands’, and lack connectivity in between;
- ❑ Offer unique opportunity for an integrated approach to research, monitoring and managing interfaced ecosystems and their integral components;
- ❑ Provide basis for understanding ecosystem functions and processes leading to improved management for sustainable livelihoods.



Distribution of Yak

- ❑ Yak (*Bos grunniens*) are found extensively on the Tibetan Plateau and its neighboring areas at altitudes from 2 000 - 5 000 m with a cold, semi-humid climate.
- ❑ It is found in the region extending from the southern slopes of the Himalayas in the south to the Altai in the north and from the Pamir in the west to the Minshan mountains in the east.
- ❑ At present, the total yak population is estimated to number around 14.2 million, of which 13.3 million are in Chinese territories, making up 93.7% of the world total.
- ❑ There are about 15 percent are hybrids with (mostly) *Bos taurus* cattle of local types.



Yak Raising in HKH region

Afghanistan¹: 2,500, in Wakhan, Little and Big Pamirs;

Pakistan^{1,2}: 42,000, in eastern Hindu-Kush, Karakoram, west Himalaya;

India³: 40,000-51,000, in mid-Himalayan zone of 5 states;

Nepal⁴: 70,200, in 28 northern districts of Nepal;

Bhutan⁵: 48,400, in high-altitude areas of 9 districts (Dzongkhag) .

Sources: ¹ Kreuzmann 2002;

³ Pal 2003; ⁴ Ministry

Department of Livestock

203,000 –
214,000

^{2, 5}

- ❑ The extensive rangeland occupying over 50% of total land surface are available for livestock grazing, which have attracted pastoral societies for thousands of years.
- ❑ Since most of rangelands in this region are distributed on high-altitude areas, people always associate the high-cold production landscapes with yaks.
- ❑ The yak is integrally associated with the culture, religion and social life of its herders, their families and communities.

Yak Raising in HKH Region



- ❑ In these harsh areas breeding and raising yaks associated with small ruminants becomes the only one approach to utilize rangelands, where other land-uses do not exist without external inputs.
- ❑ From ancient times, the tranboundary regions in HKH have been the meeting places of different military, political and cultural forces that have left multi-dimensional impacts on the yak-raising communities and rangeland resources they rely on.
- ❑ The yak is integrally associated with the culture, religion and social life of its herders, their families and communities. However, with outside pressures influencing the life of the people and with technical developments impinging on yak husbandry, it seems likely that the nature of yak keeping has entered a period of change.

Yak Raising in HKH Region

As a flagship species of the HKH region specially adapted to high altitude environment, yaks are inextricably linked to the landscape, local livelihood and socio-culture, playing key roles in not only agri-biodiversity conservation but also cultural heritage, livelihood strategy, and even all aspects of the socio-economic development of the high mountain areas.

Crop cultivation

- Tillage (plowing, ridging, weeding)
- Provision of manure
- Transport (of inputs and produce; also wood, water etc.)

Consumption and Marketing

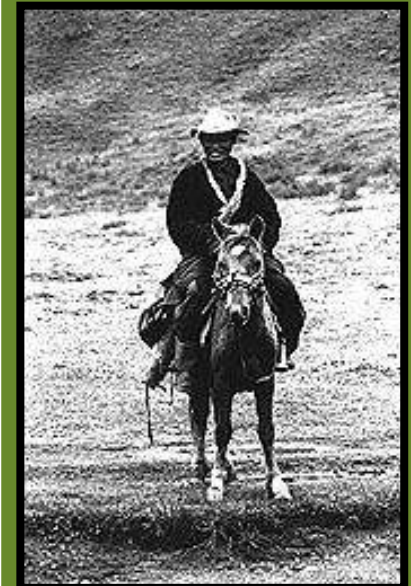
- Milk for domestic consumption (and local sale)
- Meat, hides, horns and other by-products for domestic consumption (and local sale)

Household finance

- Investment and income generating (capital growth through herd growth)
- Savings (capital storage: for school fees, bridewealth)

Socio-culture

- Ritual purposes (e.g., installation of ancestral spirits, ritual slaughter, bridewealth)
- Social status and pleasure in ownership



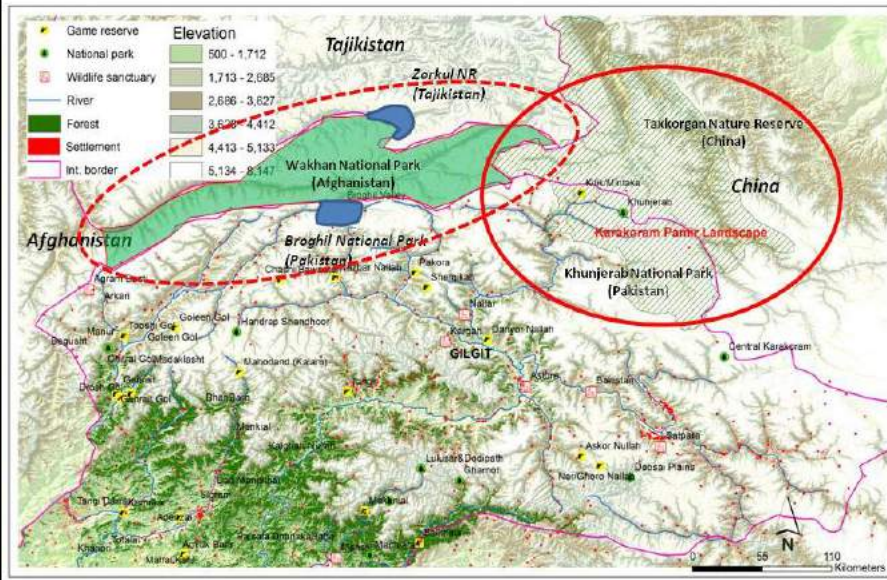
Yak Raising in Karakoram- Wakhan-Pamir Landscape

Number of yak in landscape: 37,200

- ❑ China: 15,000 in Taxkurgan;
- ❑ Pakistan: 5,700 in Khunjerab NP;
- ❑ Afghanistan: 2,500 in Wakhan;
- ❑ Tajikistan: 14,000 in Murgab

- ❑ Contiguous mountain ranges provide substantial grazing grounds for yaks.
- ❑ Traditional exchange lines have been interrupted due to adverse political conditions.

ICIMOD Transboundary Landscape Programmes: KPL & Wakhan NP

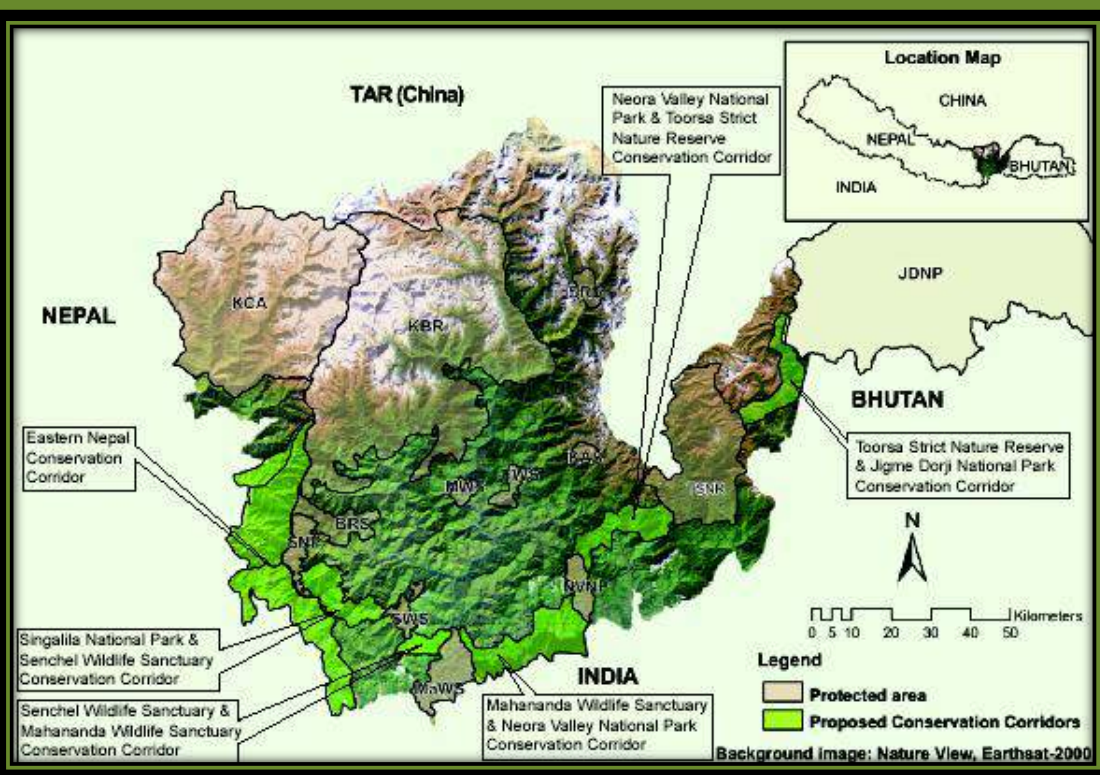


- ❑ 1890s: Badakhshan divided into two by Russia and GB and Kyrgyz people in Little Pamir were separated;
- ❑ 1930s: Border with USSR further restricted;
- ❑ 1950s: Border with China closed;
- ❑ 1990s: USSR left and border with Tajikistan further restricted;
- ❑ 2000s: Border with Pakistan closed due to terrorism concerns.

Yak Raising in Kanchenjunga Landscape

Number of yak in landscape: 29,200

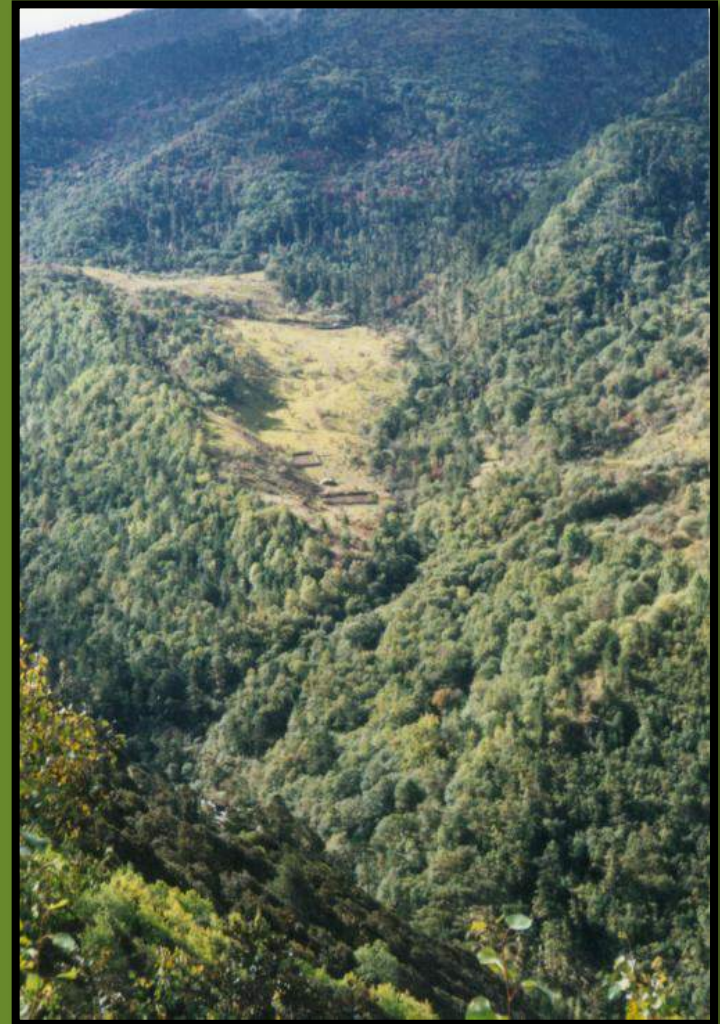
- ❑ Bhutan: 19,600 in western Bhutan
- ❑ Nepal: 4,100 in Taplejung, Panchthar and Illam;
- ❑ Indian: 5,500 in Sikkim and Darjeeling;



- ❑ Government restrictions on livestock numbers and movement in national parks;
- ❑ Development of community forestry;
- ❑ Inbreeding due to fragmentation of landscape;
- ❑ Traditional trading routes closed.

Yak grazing impacts on alpine vegetation in eastern Himalaya

- ❑ Long-term grazing on sunny or flat slopes in winter and spring
- ❑ Secondary timberline on south facing slopes
- ❑ Alternative distribution of forests



Why transboundary approach?



- ❑ Taking into account the successful implementation of transboundary approach based ecosystem management proposed by UNEP and IUCN, transboundary issues related to yak husbandry such as genetic exchange, products sharing, value chain sustaining and culture conserving should be discussed on the similar platform shared by member countries in the HKH region.
- ❑ High altitude rangeland ecosystem and the dependent yak grazing distributed along the transboundary landscapes suggested that these ecosystems can be managed sustainably only by following an integrated approach that recognizes their transboundary nature and the flow of services beyond administrative boundaries.

Thank you

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