

LIMI IS LIMITED: PROTECT IT

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An unnoticed treasure trove

To the north of Humla district in north-western Nepal lies the hidden valley of Limi (Figure 1). The upper reaches of this beautiful trans-Himalayan valley constitute part of the western

end of the Tibetan Plateau. An extraordinary community of highland fauna and flora call this place a home. But the rich biodiversity of the area has remained unnoticed by the rest of Nepal for a long time because its geographical remoteness kept it isolated from the outside world and the

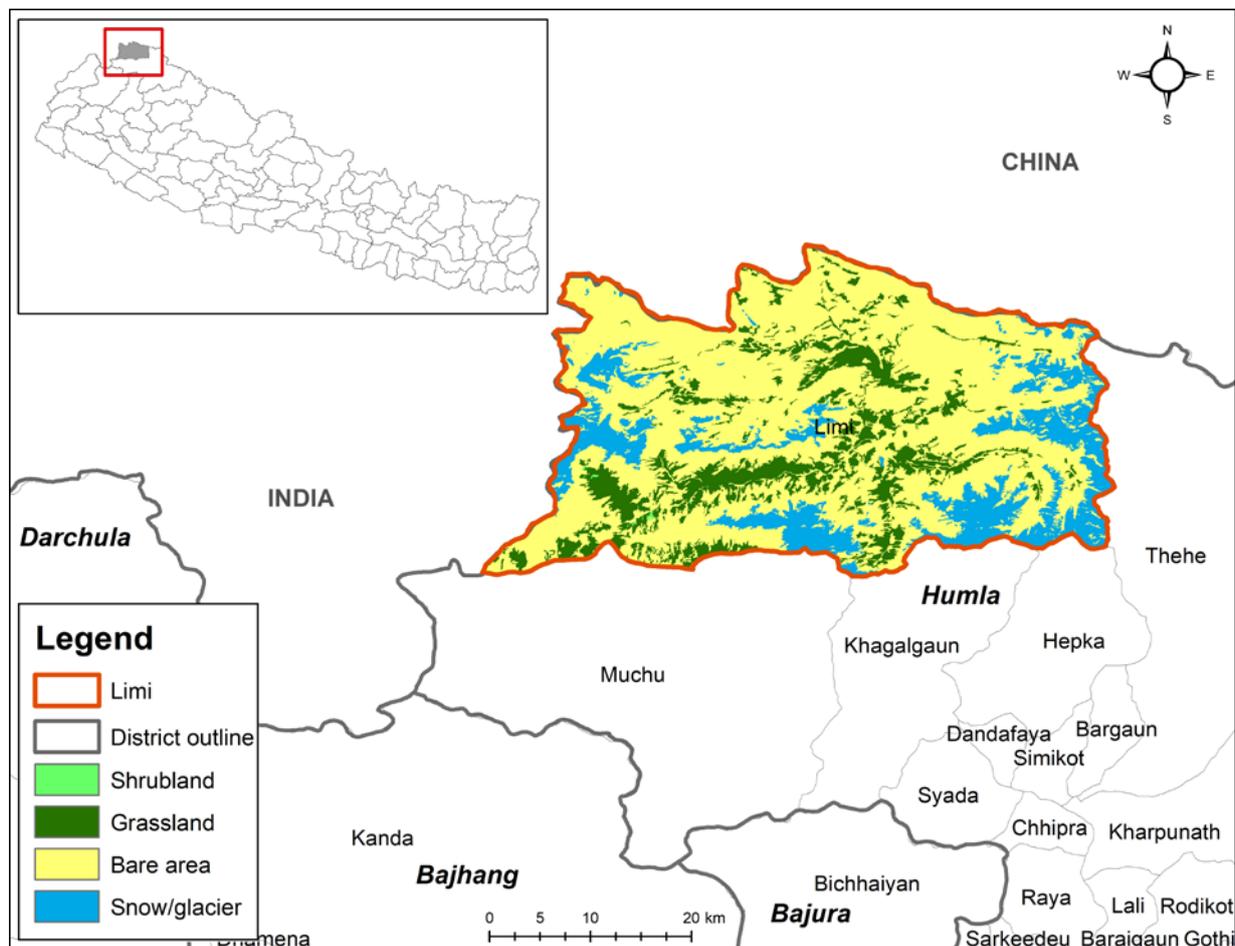


Figure 1: Location of Limi Valley within Humla district, Nepal.

challenging landscapes restricted easy access to the area.

From upper Mustang to upper Humla

The latest edition of 'Mammals of Nepal: The national red list series' (Jnawali *et al.* 2011) presents upper Mustang in the Annapurna Conservation Area, western Nepal, as the only home to Tibetan Plateau mammals like the Tibetan wild ass/kiang *Equus kiang*, Tibetan gazelle *Procapra picticaudata*, and Tibetan argali *Ovis ammon hodgsoni*, in Nepal. But a wildlife exploration in the Tibetan Plateau habitat of Limi Valley in 2013 revealed the area as the second home to these wild mammals in Nepal (Werhahn *et al.* 2015; Kusi *et al.* 2018). During 2014, the area was identified as the new stronghold of kiang in Nepal because around 800 individuals of these animals were counted here (Werhahn *et al.* 2015) providing an exciting update to their national population that was estimated to consist of <100 individuals (Jnawali *et al.* 2011).

The diversity of wild mammals in Limi is fascinating. It represents six (Himalayan wolf *Canis lupus chanco* (Werhahn *et al.* 2017, 2018), (mentioned as grey wolf), snow leopard *Panthera uncia*, Eurasian lynx *Lynx lynx*, Tibetan argali, musk deer *Moschus* sp., and Himalayan brown bear *Ursus arctos*) of the 27 protected priority species in Nepal (GoN 1973). The area remains vibrant throughout the year due to the presence of several other important mammals including the Tibetan fox *Vulpes ferrilata*, red fox *Vulpes vulpes*, Altai weasel *Mustela altaica*, stone marten *Martes foina*, and their prey species like blue sheep *Pseudois nayaur*, Himalayan marmot *Marmota himalayana*, woolly hare *Lepus oiostolus*, Plateau pika *Ochotona curzoniae* and Tibetan dwarf hamster *Crietulus alticola* (Kusi and Werhahn 2016).

Where new findings abound

If there is one thing that brought Limi to limelight in the recent time, it's the rediscovery of the wild yak *Bos mutus*, a species that was suspected to have gone regionally extinct from Nepal a long time ago (Acharya *et al.* 2015). The discovery of the Tibetan Lark *Melanocorypha maxima* as a new species of bird for Nepal (Kusi and Werhahn 2016a), the first breeding records in Nepal for seven species of birds (Goosander *Mergus merganser*, Black-necked Crane *Grus nigricollis*, Lesser Sandplover *Charadrius mongolus*, Common Tern *Sterna hirundo*, Brown-headed Gull *Larus brunnicephalus*, Black-throated Thrush *Turdus atrogularis* and Common Redshank *Tringa tetanus*) (Acharya and Ghimirey 2016; Kusi and Werhahn 2018) and new highest elevation records (for South Asia) for six species (Intermediate Egret *Ardea intermedia*, Lesser Sandplover, Common Tern, Brown Fish Owl *Ketupa zeylonensis*, Common Cuckoo *Cuculus canorus* and Ashy Drongo *Dicrurus leucophaeus*) (Acharya and Ghimirey 2016) have uplifted its profile. These outstanding records make the basis for Birdlife International to include Limi Valley as a new Important Bird and Biodiversity Area in Nepal (BCN and DNPWC in preparation). The recent addition to this charming list is the first record of the genus *Triplophysa* (it also represents the new highest elevation record of fish fauna) for Nepal (Kusi *et al.* in preparation). The chances are high that other unrecorded facts relating the highland fauna of Nepal remain hidden in the remoter corners of Limi.

The wild yaks: rediscovered but 'Critically Endangered'

Research expeditions conducted during 2016-2017, aimed at retracing the historical evidences of the presence of wild yak in upper Dolpa and upper



Figure 2: A wild yak in Limi Valley, July 2015. (Photo by the author)

Mustang, resulted no recent records of the species. This suggests that wild yaks are very likely to have gone regionally extinct from these historical areas. It is thus evident that Limi Valley in upper Humla is the last refuge of wild yaks in Nepal at present (Figure 2). Recent observations indicate that the wild yak population in Limi is very small. In this light, Amin *et al.* (2018) have made a timely reassessment of the species as ‘Critically Endangered’ in Nepal (formerly put as ‘Data Deficient’ in Jnawali *et al.* (2011)).

A formal protection of the area is imperative to protect the wild yaks. Both in China and India, wild yaks are confined to the boundaries of nature reserves (Shi *et al.* 2016), indicating the importance of protected areas in their conservation. The last remaining wild yaks of Nepal are under serious

risk of becoming truly extinct if immediate steps are not taken to formally protect the area (Kusi *et al.* in preparation (a)).

New important plant area?

The alpine meadows of Limi Valley get transformed into a wonderland during the summer months as the landscape becomes beautifully adorned by many species of flowering plants. Wild flowers from various genera such as *Anemone*, *Aster*, *Anaphalis*, *Androsace*, *Epilobium*, *Euphorbia*, *Gentiana*, *Geranium*, *Leontopodium*, *Meconopsis*, *Primula*, *Potentilla*, *Rhododendron*, *Saussurea*, *Saxifraga*, *Waldheimia* etc. bloom together forming multi-coloured natural carpets.

Unlike the fauna, the flora of Limi Valley remain poorly studied. The rich and diverse floral

assemblage and the relative absence of detail floral investigations in the area hints that the area can merit being included as a new 'Important Plant Area'.

A living museum of Tibetan culture

Limiwas (the people of Limi) are culturally very close to Tibet; they speak the Tibetan language, and follow the religion and costumes of the Digung-Kagyuk sect of Tibetan Buddhism. The 11th century Rinchen Ling monastery in Waltse village represents the centre of their cultural identity and their daily life is dictated by the monastic system which they follow strictly.

The active practice of fraternal polyandry (where all brothers of a family are married to a single wife) and of sky burial ritual (in which the dead bodies of humans are fed to vultures) add to the cultural uniqueness of Limi. The traditional three-storeyed houses made of mud and stone communicate the knowledge about how human communities cope with the harsh environmental conditions while protecting their culture.

Tibetan culture in the Tibetan Autonomous Region (TAR) of China has been influenced by modernization following the Chinese occupation of Tibet. But the Tibetan culture in Limi remains well preserved, due to its secluded location within Nepal. Thus the area has a good potential of attracting cultural tourists, who are interested in understanding and observing Tibetan culture. The fact that Rinchen Ling monastery is considered the oldest Buddhist monastery in Nepal also substantiates the importance of protecting the cultural wealth of Limi.

Mount Kailash and lake Mansarovar

For many people within Nepal and the neighbouring countries, a journey to Mount Kailash and lake Mansarovar in the TAR of China is a pilgrimage of a lifetime. Very few people know that these sacred natural monuments can be seen up close from Limi *lapcha* and Lalung *lapcha* in Limi Valley (Kusi and Werhahn 2016). A well-thought promotion of these viewpoints can lead to the attraction of significant numbers of religious (domestic) tourists because the need of a visa to go on the trip has been depriving remarkable numbers of Nepalese from the holy pilgrimage.

Act before it's too late

The various accounts outlined above bring forth a straight-forward message that Limi Valley deserves a formal designation as a protected area in Nepal to protect its outstanding biodiversity and unique cultural treasures. As a favourable consequence of an absence of permanent human settlements in the biodiversity rich trans-Himalayan valleys and a very low human population density in the three villages, the pressure on natural resources, to date, is low. There are species like wild yak, Black-necked Crane, Tibetan Lark and *Triplophysa sp.* that are found only in this part of Nepal. In this regard, it's certainly wise to take steps for ensuring that the pristine wilderness of the area gets formal protection in time. Government-level initiative is vital for this.

Which model?

A feasibility study of the biodiversity and livelihood of Limi Valley and adjoining areas

was conducted in 2016. A report of the same (FON 2016) submitted to Ministry of Forests and Soil Conservation (MoFSC, currently Ministry of Forests and Environment (MoFE)), WWF Nepal program and National Trust for Nature Conservation (NTNC) recommends that Limi Valley should be developed into a new protected area in Nepal and that the 'Conservation Area (CA)' model can be appropriate for the area. The report also mentions that the 'National Park' and 'Wildlife Reserve' models are inappropriate in case of Limi because they do not involve direct participation of the local communities and do not allow resource exploitation in the core areas. The 'Hunting Reserve' model is clearly not suitable here because people in the area do not favour the killing of wildlife. Although the CA model seems the most appropriate, inferences from Annapurna Conservation Area and Kanchenjunga Conservation Area, two of the exemplary CAs in Nepal, deserve special attention. The on-going conflict between the Annapurna Conservation Area Project and the local communities demand the establishment of a proper mechanism of benefit sharing for the local communities while designing a CA. Similarly, the recent departure of WWF Nepal program from funding the Kanchenjunga Conservation Area Project hints that a CA needs to be self-sufficient to ensure its sustainability. The sustainability issue is even more relevant for Limi Valley due to its geographical remoteness.

Indigenous and Community Conserved Area: A new paradigm

Looking at the intactness of the indigenous communities of Limi that are governed by a traditional system with 'monasteries' at the core of their identity, recognizing the area as an

'Indigenous and Community Conserved Area (ICCA)', in an attempt to protect its natural and cultural uniqueness, may be worth considering (Gautam 2018). The International Union for Conservation of Nature (IUCN) mentions the following three features as defining characters of an ICCA:

- i) A community is closely connected to a well-defined ecosystem (or to a species and its habitat) culturally and/or because of survival and dependence for livelihood.
- ii) The community management decisions and efforts lead to the conservation of the ecosystem's habitats, species, ecological services and associated cultural values.
- iii) The community is the major player in decision-making (governance) and implementation regarding the management of the site, implying that community institutions have the capacity to enforce regulations; in many situations there may be other stakeholders in collaboration of partnership, but primary decision-making rests with the concerned community.

The Rinchen Ling monastery and its allies (other monasteries) have been functioning as the community institutions that foster a faith-based conservation of nature and wildlife in Limi Valley. But there are numerous loopholes which lead people (both outsiders and locals) to become involved in the illegal wildlife trade in the nearby markets of TAR. This is where conservation

practitioners can help as important stakeholders or partners. A proper blend of the on-going faith-based conservation and modern conservation can open new avenues of conservation in Limi. As such ICCAs represent either category V (Protected landscape/seascape) or VI (Protected area with sustainable use of natural resources) of IUCN protected area categories.

Additional concerns

Many people discuss that ecological (wildlife-based) and cultural tourism can act as good sources of income for the local people of Limi. It is certainly a true argument but care must be given that only a limited number of tourists explore the region each year with strict enforcement so that the biodiversity and culture of the area remains protected for a sustainable period of time. At the same time, appropriate mitigations to human-wildlife conflicts (mostly among the herders and the predators) need to be implemented to increase local support for wildlife conservation (Werhahn *et al.* 2017a; Kusi *et al.* 2019).

Construction of motor roads in the Tibetan Plateau of Limi has certainly degraded the natural habitats. However, the existing road networks, to date, spare the secluded valleys inhabited by important fauna and flora. In this light, it is very crucial to ensure that any future developmental activities do not encroach on these important habitat refuges.

Above all, one thing is undeniable, participatory discussion with the local communities and the relevant experts will prove instrumental in deciding an appropriate conservation model for Limi.

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