

Doksa: the traditional system of livestock farming in Zanskar, Jammu and Kashmir, India

Lying in the altitudinal range 3350–6478 m amsl, Zanskar is among the coldest inhabited highlands of the world. Temperature here varies from around 30°C in summers to –30°C during winter. Annual precipitation is around 250 mm, received mostly in the form of winter snowfall. During summer, the Indian monsoon hits the Greater Himalaya Range contributing to snow accumulation on the glaciers surrounding the valley. However, the valley being on leeward side receives little rainfall.

Winters in Zanskar are very cold and extended; summers are short and nearly without rainfall. Due to severe climatic conditions, practising agriculture is extremely difficult. The region is characterized by short growing season, aridity in the soil as well as ambient climate, and very poorly developed soil. Moreover, accessibility to modern farming technologies is limited due to remoteness of the region. Thus, agricultural productivity remains below average. Nonetheless, vast alpine rangelands abutting the valley bases are in abundance and widely used for grazing during summer.

As is the case in such arid highland ecosystems, livestock farming is the

main livelihood of the people of Zanskar. All the cattle (mostly zhomo, a cross-breed between cow and yak) along with horses are taken to high summer grazing camps called doksas in the first or second week of June. These temporary shelters are located between altitudes 4000 and 4500 m (Figure 1). The stone-wall enclosures (called pulus) are maintained permanently. However, the roof is made of twigs and branches, collected from the bushes growing nearby, laid every year at start of the season. As the locals wind up their activities in early autumn, they take these twigs and branches for use as fuelwood to their homes.

The system is a close equivalent of Alpwirtschaft that is practised in the Alps, especially in France and Switzerland. Donkey, sheep and goat are maintained in the villages because they can thrive on poor grazing land available on the fringes. Each doksa has 4–8 pulus for individual herders, generally women who are experts in every aspect of dairying like milking, milk processing, packaging of butter, etc. Size of a herd varies from 20 to 30, which includes animals of others besides one's own. Animals of others are maintained with butter-sharing agree-

ment (she-mar), whereby the owner gets 3 kg of butter/month for each milking cattle.

Butter, the primary tangible product of this system, is essential not only for bodily nourishment but also for spiritual fulfilment. It is a religious obligation to offer handmade butter to Gonpas for lamps and to lamas. Zanskari butter is popular in Ladakh for its unique colour, flavour and consistency. According to a rough estimate, export of butter from Zanskar generates about Rs 5 crores annually.

Another product, chhurpey (dried protein cakes) is one of the essential ingredients of thukpa, a soupy food. Chhurpey is also exported to Leh and other Buddhist settlements outside Ladakh, especially to Dharamshala, Dehradun and Bengaluru. Doksas also serve as the local 'power-house' as they generate energy in the form of dung-cakes used for various purposes.

Harsh climate, threat due to wild animals, excessive work load and pathetic living conditions are some of the problems faced by the herders. In case minimum amenities are not provided in the doksas, this tradition is bound to perish. If this trend continues, the farming community and Gonpas need to search for alternatives. And, as is true for social changes in general, the transition phase will be the most painful.

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Figure 1. A doksa at Shamkashi near Penzila, Zanskar, J&K, India.

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