

Biodiversity of Nubra

Nubra valley is located in the northern part of Ladakh Union Territory. It is wedged between the Ladakh and Karakoram mountain ranges. The valley is drained by the Shayok river and the Nubra, which meet at Disket town. The altitude in the valley ranges from 3,000m to around 7,000m above mean sea level. Like the rest of Ladakh, Nubra is located in the rain shadow of the main Himalayan ranges. The landscape is characterised by glaciers, perennial snow fields, rugged mountains, with lush valley systems that include wetlands, sand dunes, lush thickets of seabuckthorn, rose and other plants, agricultural fields and orchards. It experiences cold, long winters and plant production is relatively low and restricted to about four to five months each year. In an effort to conserve the unique cultural and biological diversity of the Nubra valley, it has been declared a protected area called Karakoram Wildlife Sanctuary.

Ladakh is located at the intersection of the Palearctic and Oriental biogeographic zones and is home to a unique assemblage of biodiversity adapted to the harsh conditions of this region. In this context, Nubra valley borders the Central Asian region of Sinkiang (Xinjiang) in the north, Baltistan in the west, and Tibet in the east. Historically, Nubra was an important stop on the trade route that connected Central Asia with Ladakh and the Indian sub-continental plains.

Nubra is home to large carnivores such as snow leopard (*Panthera uncia*), Himalayan grey wolf (*Canis lupus laniger*), and lynx (*Lynx lynx isabellina*). It is also home to prey species such as ibex (*Capra ibex sibirica*), Ladakh urial (*Ovis vignei vignei*), blue sheep (*Pseudois nayaur*), marmot (*Marmota* spp), and pika (*Ochotona* spp). The vegetation of Nubra is dominated by seabuckthorn (*Hippophae* spp) and wild rose (*Rosa* spp). The valley is also well-endowed with a diversity of medicinal herbs. Nubra valley is an important staging point for migratory birds travelling between their breeding grounds in Central Asia and Siberia and their wintering grounds in the Indian subcontinent. In addition, many birds are also resident in Nubra and breed here.

A significant number of the species found in Nubra are recognised as being globally and nationally threatened or endangered. The region has faced the added stress of anthropogenic use primarily in the context of material poverty and lack of sustainable alternative livelihoods for local communities.

The unique biological assemblage of Nubra valley is influenced by ecological processes, climatic patterns and anthropogenic factors. Nubra has a long history of agriculture, horticulture, animal husbandry, and trade between Central Asia and Ladakh. These activities have played a crucial role in shaping the ecological history of the region. For instance, there is a herd of feral double humped (Bactrian) camel in Nubra, which is a remnant of the Central Asian trade that passed through this region.

Nubra shares linguistic and cultural links with neighbouring regions of Sinkiang (Xinjiang) and Baltistan, and Tibet. It is home to significant diversity of cultural, religious, ethnic, and linguistic especially dialects of Tibetan. The influences of Nubra's historical links with Central Asia, the Indian Sub-continental plains, West Asia, and Tibetan are still evident in the dress, architecture, art, nomenclature, language, technology, culture, beliefs and lifestyle of the communities that live in Nubra today.

Nubra represents a unique model where modern development coexists with traditional cultural practices in harsh ecological conditions owing to its geography and altitude. Moreover, awareness of biodiversity conservation is deeply embedded in the Ladakhi culture of which Nubra is an integral part. This awareness has been augmented by various interventions initiated by the Department of Wildlife Protection. Furthermore, given the complexity of the Nubra landscape and patterns of anthropogenic land use, it requires a landscape-level model that allows humans and biodiversity to coexist. This model is currently being practised in Ladakh as a whole and Nubra in particular.