

# Wetlands Traditional Knowledge and Cultural Heritage in the Hindu Kush Himalaya



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## The Hindu Kush Himalaya: Water Towers Shaped by Culture

Wetlands cover approximately 10% of the Hindu Kush Himalaya (HKH), a region often described as the “Water Tower of Asia” and the “Third Pole.” Stretching across eight countries, the HKH contains the largest volume of ice and snow outside the Arctic and Antarctic and gives rise to ten major Asian river systems, including the Amu Darya, Indus, Ganges, Brahmaputra, and Yangtze. These rivers sustain the food, energy, and water security of nearly 1.4 billion people downstream. Yet the importance of HKH wetlands extends far beyond hydrology. High-altitude lakes, marshes, peatlands, and floodplains located above 3,000 metres regulate seasonal water flows, store significant amounts of carbon, buffer floods and droughts, and provide habitat for globally significant biodiversity. Equally important but often overlooked are the

cultural, spiritual, and knowledge systems that have evolved around these wetlands. For centuries, mountain communities have understood wetlands not as extractive resources, but as living landscapes imbued with spiritual significance. Many wetlands are believed to be abodes of deities, ancestral spirits, or protective beings. Across the HKH, several iconic wetlands illustrate how spiritual values have long shaped conservation outcomes. Lake Manasarovar, revered in Hindu, Buddhist, Jain, and Bon traditions, is believed to be the abode of Lord Shiva and Goddess Parvati, with ritual bathing and circumambulation practices reinforcing strict norms against pollution and overuse. In Nepal, the Gokyo Lakes are considered sacred by Sherpa communities, where belief in protective deities, ritual calendars, and community taboos regulate access and resource use, contributing to the long-term protection of this fragile alpine wetland system. Through taboos, rituals, pilgrimage cycles, grazing calendars, and customary



Sacred lake Manasarovar, located in Ngari Prefecture in Tibetan Autonomous Region, China / Jitendra Bajracharya

laws, these belief systems have governed access, use, and stewardship of wetlands, often achieving conservation outcomes long before the emergence of formal environmental policies. However, such cultural dimensions remain largely overlooked in contemporary wetland governance, conservation planning, and climate adaptation strategies. As climate change accelerates glacier melt, alters hydrological regimes, and intensifies pressures from infrastructure development and tourism, these cultural frameworks offer essential lessons for resilient, inclusive, and ethical wetland stewardship.

### Wetlands as sacred landscapes

Across the HKH, wetlands are closely linked to local beliefs that guide how people should behave. Many communities see lakes as

sacred places that can reward people or punish communities depending on how respectfully they are treated. Such beliefs have translated into strong norms against pollution, overuse, and ecological disrespect. Traditional ecological knowledge (TEK) operates through practice rather than prescription. Instead of written regulations, communities rely on oral histories, seasonal observations, ritual calendars, and social sanctions. Grazing is restricted during sensitive periods, access is limited to pilgrims at specific times, and extraction is governed by restraint rather than maximisation. These systems are not static relics of the past. They are adaptive, context-specific, and deeply embedded in livelihoods particularly pastoral and agro-pastoral systems that depend on the health of alpine wetlands for fodder, water, and climate regulation.

In the Indian Himalaya, especially in Ladakh and Himachal Pradesh, high-altitude wetlands are inseparable from Buddhist and Hindu belief systems and nomadic pastoral livelihoods. Tso Moriri and Tso Kar are valued by Changpa pastoralists as sacred lakes. These wetlands are also critical breeding grounds for the black-necked crane (*Grus nigricollis*), locally known as Cha thung thung, regarded as a symbol of good fortune and spiritual purity. The bird features prominently in monastery murals and local folklore, reinforcing protective attitudes toward wetland habitats. Local belief systems strongly discourage pollution, loud behaviour, and disrespect near these lakes. Seasonal grazing calendars developed through generations of ecological observation regulate herd movements to prevent trampling and overgrazing during ecologically sensitive periods.

In practice, these customs function as de facto conservation mechanisms. Similarly, Chandra Taal, in Spiti valley, Himachal Pradesh is embedded in Hindu mythology, particularly narratives from the Mahabharata. It is believed to be the site where Yudhishtira ascended to heaven, taken by Lord Indra after the Pandavas' final journey. Local legends describe fairies visiting the lake at night, and cultural taboos strictly prohibit polluting its waters. Even as tourism increases, these beliefs continue to regulate behaviour and reinforce restraint. Deoria Tal, also called Devariya Tal, in Garhwal Himalaya is believed to be a sacred lake. In Hindu mythology, the lake is regarded as "Indra Sarovar," associating it with Indra, the god of heaven. Fishing is strictly forbidden due to a strong taboo that violators will suffer from leprosy, and such mythological beliefs, practices, and ethnomedicinal values play an important role in preserving traditional beliefs and local biodiversity. Parvati Sarovar, located at the base of Adi Kailash in India, is regarded by locals as comparable in sanctity to Manasarovar Lake in Tibet. According to Hindu mythology and local belief, Goddess Parvati, consort of Lord Shiva, is believed to have bathed in this sacred lake, giving it the name Parvati Kund or Parvati Sarovar. The water of Parvati Sarovar is believed to possess divine healing properties that purify the mind, body, and soul.

Nepal's high-altitude wetlands are among the most culturally valued in the HKH, holding profound significance for Hindu, Buddhist, and Bon traditions. Gosaikunda is sacred to Lord Shiva and deeply embedded in Hindu cosmology. Ancient scriptures such as the Bhagawat Purana and Vishnu Purana, as well as epics like the Ramayana and Mahabharata, link the lake's origin to the myth of Samudra Manthan (the churning of the cosmic ocean). Thousands of pilgrims visit Gosaikunda during Janai Purnima and Gangadashahara, following strict ritual calendars that limit access to specific periods and reinforce water purity norms. Parbatikunda is believed to be a creation of Shiva (God) for the Parvati (Goddess) and considered a sacred place where a large number of Hindu and Buddhists of nearby places visit and take a holy bath and rituals during Janai Purnima (Full Moon) festival. Panch Pokhari in Sindhupalchowk district is a spiritually important site for local communities and visitors, drawing thousands of pilgrims each year during the Janai Purnima festival in mid-August for ritual bathing and worship of Lord Shiva, as well as many devotees during the Dasahara celebration in March or April. The area's rich cultural heritage is shaped by the Tamang community, whose traditional dances, weaving practices, and distinctive way of life add to the unique cultural identity of Panch Pokhari. Dudhpokhari pond, is a site of religious significance in the



Parvati Kunda in Rasuwa district of Nepal - people visit during Janai Purnima (Full Moon) festival for holy bath / Srijana Joshi

western part of Lamjung district, it attracts hundreds of visitors on the day of Janai Purnima. It is believed that taking a dip in the ponds will relieve one of all his/her sins. The Gokyo lakes are believed to be the abode of Naag Devata (serpent deities). Sherpa and Tibetan Buddhist communities speak of powerful Lake Gods and a guardian goddess, Gokyo Ma, who rewards respectful travellers and punishes those who harm the land. Shamans and Lamas perform rituals here before major festivals, and the freezing waters are believed to have healing powers. Shey Phoksundo Lake in Dolpa is protected by Bon and Buddhist taboos that prohibit fishing and pollution, while Rara Lake remains central to local spiritual geography. Across Nepal, social sanctions

against contamination continue to shape stewardship, even where formal enforcement is limited.

Across the Tibetan Plateau, lakes play a central role in cosmology and spiritual life. They are not seen simply as bodies of water, but as sacred places inhabited by deities and shaped by centuries of belief, ritual, and reverence. Namtso, often called the “Heavenly Lake,” and Yamdrok Yumtso are closely linked to protective deities. Pilgrims walk around these lakes in a ritual known as kora, a form of circumambulation believed to bring spiritual merit and protection. Lhamo La-tso is especially sacred, known as an oracle lake where spiritual visions are sought. Access to these lakes is carefully regulated through strict

ritual rules. These protocols guide how and when people may visit, helping to reduce disturbance while preserving the spiritual purity and sanctity of the sites. Further west, Lake Mansarovar holds deep importance for pilgrims from several faiths. Its waters are believed to cleanse sins and purify the soul, making the lake a strong moral and spiritual anchor in the region. In contrast, Rakshastal, also known as the “Lake of the Demon,” is surrounded by very different meanings. The lake is salty, with barren and lifeless shores, and is linked to myths of darkness and evil. Unlike the pure stories associated with Mansarovar, Rakshastal represents a symbolic opposite, highlighting how spiritual beliefs shape the

understanding of landscapes across the Tibetan Plateau.

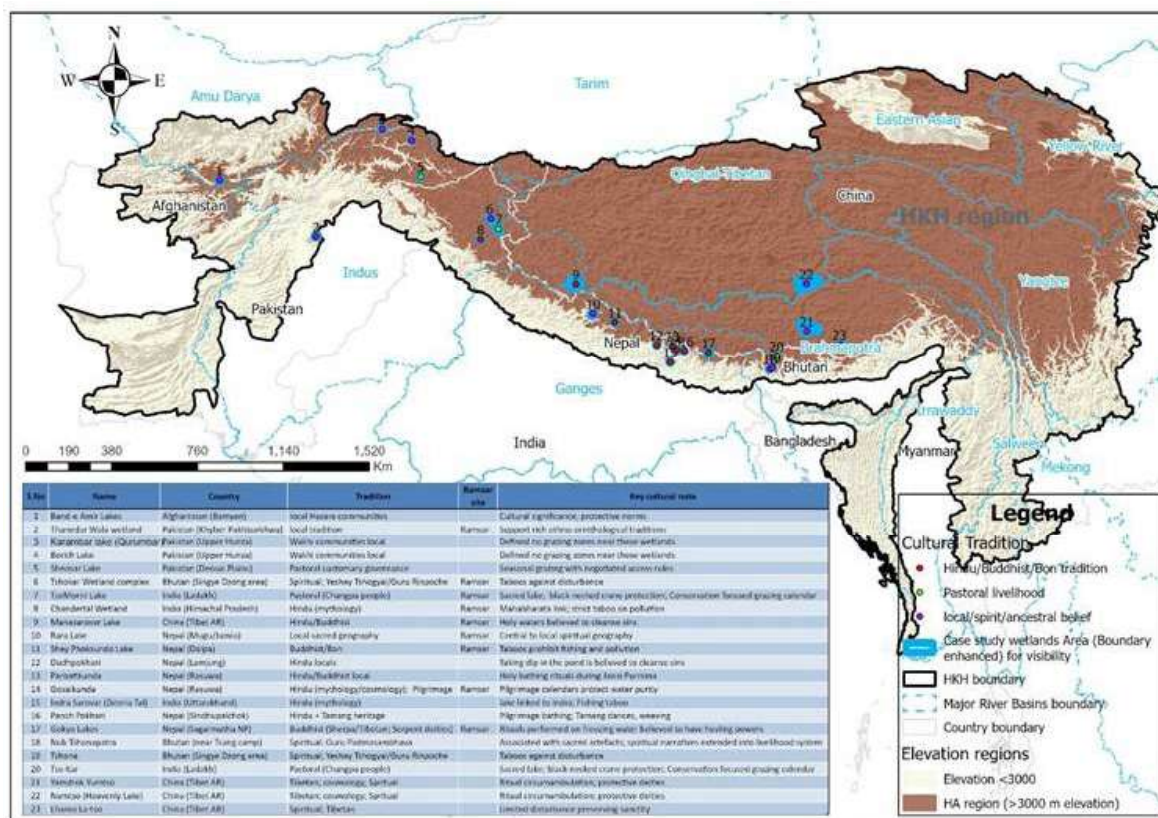
In Bhutan, high-altitude wetlands are widely considered sacred and closely aligned with the national philosophy of Gross National Happiness, which emphasises harmony between spiritual wellbeing and nature. Tshokar and Tshona are believed to be offerings made by Dakini Yeshey Tshogyal to Guru Rinpoche during meditation at Singye Dzong. These lakes are thought to contain hidden spiritual treasures (rinchen terma), reinforcing strong taboos against disturbance. Nub Tshonapatra is associated with

Guru Padmasambhava and the revelation of sacred artefacts. Local legends link the lake to the origin of Nublang cattle, illustrating how spiritual narratives extend into livelihood systems.

In northern Pakistan, particularly in Gilgit-Baltistan, high-altitude wetlands are closely linked to transhumant pastoral systems. The Deosai Plains, including Sheosar Lake, support seasonal grazing governed by customary rules and negotiated access rights. Wakhi communities in Upper Hunza maintain community defined no grazing zones near sensitive wetlands like the

Borith Lake and Karambar lake, demonstrating adaptive local governance that balances biodiversity conservation with livelihoods. In Khyber Pakhtunkhwa, wetlands also support rich ethno-ornithological traditions, where waterbirds are used in cultural practices and traditional medicine highlighting both knowledge richness and emerging conservation challenges.

The Band-e-Amir Lakes are the series of six deep blue lake wetland in Afghanistan's first National Park. They are considered sacred by local Hazara





The Gokyo lake in Everest region is believed to be the abode of Naag Devata / Shashish Maharjan

communities. Legend holds that they were created by the Prophet Muhammad's son-in-law, Ali, striking the ground with his sword to bring water to a parched land (hence the name "Band-e-Amir" or "Dam of the Leader,"). This sacred status has historically fostered protective norms. These lakes are a crucial water source in an arid region and support local tourism.

### Revitalising traditional knowledge for the future

Across the Hindu Kush Himalaya, high-altitude wetlands are shaped by belief systems, customary institutions, and traditional

ecological knowledge that function as invisible conservation frameworks. These systems regulate access, moderate use, and foster stewardship rooted in respect rather than enforcement. As seen in sacred lakes and pastoral landscapes across the region, cultural values often act as everyday rules that discourage pollution, limit disturbance, and guide sustainable use. As climate change reshapes mountain hydrology and socio-economic pressures intensify, safeguarding wetlands will require more than technical interventions. A practical way forward is to integrate these values into wetland management through co-designed stewardship plans with local communities,

culturally sensitive tourism and pilgrimage guidelines, and intergenerational transmission of knowledge through schools, monasteries, and community institutions. When combined with science, these living traditions can strengthen resilience and legitimacy of conservation efforts. Recognising, respecting, and revitalising traditional knowledge and cultural values is essential for effective, inclusive, and durable conservation ensuring that the sacred waters of the high mountains continue to sustain both nature and culture for generations to come.

