



## Conserving biodiversity through traditional beliefs in sacred groves in Uttarakhand Himalaya, India

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### ABSTRACT

India's biodiversity encompasses a wide spectrum of habitats that include tropical rainforests, alpine vegetation, temperate forests, and coastal wetlands. Traditional societies have paid a great deal of attention to the study of nature conservation. Although Himalaya accounts for 18% of the total area in India, it covers more than 31.05% of India's forest cover and 40% of the species endemic to the Indian Sub-continent. Many mountain societies hence maintained a holistic view of the socio-ecological system. An expression of this relationship is represented in the form of sacred landscape which is a concept identified by many traditional societies and often protected by cultural and religious values. Many protected areas contain sites of importance to one or more faiths. These include both sacred natural sites and built monuments (such as monasteries, temples, shrines, and pilgrimage trails). Enforcement in these protected areas has created a lot of conflicts between the local people and protected area managers, due to the restrictions enforced by these managers against the traditional usufruct rights of the local people. These conflicts tend to act as major hurdles to achieving biodiversity conservation. Conservation of biological resources through religion and belief has a long history in Garhwal Himalaya. This article aims to document the different ethics enshrined within the Hindu community that have an inherent role in the conservation of biodiversity in Uttarakhand Himalaya.

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### 1. Introduction

India has a long tradition of wise conservation strategies that are useful to people and society. Biodiversity is the most valuable but least appreciated resource, and it can be a key to the maintenance of the world (Wilson, 1992). In India, biodiversity outside protected areas is rich because of close relationships between religious, socio-cultural beliefs and conservation. Rapid decline in biological diversity – species, ecosystems, and genetic diversity – is one of the critical challenges of the 21st century. There are many practical reasons for conserving biodiversity, not to mention benefits related to food, medicine, and other materials as well as the environmental services supplied by natural ecosystems. However, the driving force behind biodiversity conservation remains and will primarily remain ethical. According to surveys, most people believe that we have an obligation to avoid the extinction of species and races and

the destruction of ecosystems caused by our own actions (WWF, 2005).

A symbiotic relationship exists between biological and cultural diversity. This relationship is an important factor for ensuring sustainable human development. Nature provides light, air, food, and water through living process of creative renewal. This awareness of life in nature as a precondition for human survival led to the worship of light, air, food, and water. Indian culture evolved in the forest, first during the Vedic period and later during the times of Buddha and Mahavir. Religious beliefs and rituals (invariable parts of the cultural milieu) are very much inter-linked and intimately related to the management of ecosystems. Religion aids the conservation of natural biodiversity in several different ways. The first is by providing ethical and social models for living respectfully with nature. For most cultures, religion is a primary means of judging right and wrong. Despite certain differences, nature is included in the religious code of morality and etiquette in all religions. These ethical beliefs and religious values influence our behavior toward others, including our relationship with all creatures and plant life.

Forests in India remain central to its civilizational evolution. In India, 'Aranya Sanskriti' or a forest culture evolved during the

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ancient times as education was primarily given in the forest called “ashramas”. These were the places where most of the scientific research and cultural writings were done. In the Rig Veda, forests are described as Aranyani or mother goddess, who ensures the availability of food to humankind and takes care of wildlife. Sacred sites are probably the oldest method of habitat protection on the planet and still form a large and mainly unrecognized network of sanctuaries around the world. Some researchers believe that there may be as many sacred sites as protected areas (WWF, 2005). However, many of them are threatened due to fragmentation, habitat degradation, infrastructure development, disputes over land, and a general lack of respect for their intangible value (Khumbongmayum et al., 2004). The combined effects of such activities have led to the degradation of areas that have been held sacred by particular cultures for hundreds or even thousands of years. Links between sacred land (and water) and conservation are not confined to minority faiths, as they exist virtually in all faiths around the world. The mainstream faiths, with many millions of followers, have a huge influence on the way in which we view and interact with the natural world. This influence is reflected in large part by shaping people’s philosophy and ethics. However, this is linked to the ownership of land, investment, and political and social factor. The practice of biodiversity conservation is deeply rooted in science along with the associated secular and materialistic worldview. This can pose a threat to sacred spaces, if spiritual, cultural, and religious values are not included in the planning stage of conservation management. Although protecting a sacred site officially or through legislation prevents its traditional use, it is likely to cause a cultural split and indignation by degrading the well preserved sacred nature (WWF, 2005).

## 2. Background of the area

Uttarakhand is divided into two administrative divisions, Garhwal and Kumaon. The Garhwal region extends from 29°26’ to 30°28’ North latitude and 77°49’ to 80°06’ East longitude. It is situated between the tributaries of Ganges- Alaknanda and Mandakini and was designated by Aryans as the celestial land or “Dev Bhoomi”. In fact, heaven (Swarg) in those days was sought to be identified with the region of Garhwal Himalaya, where the mountains (like ‘Meru’, ‘Kailash’, ‘Gandhmadan’) and blessed habitat (like ‘Kuvera’, ‘Shiva’, and ‘Vishnu’ (Mahabharata)) were found. After the ‘Vedic Age’, this tract had been known as ‘Brahmarishi Deha’ (Manu:11. 1919). During the epic period, it was known as ‘Panchala Desha’. Afterward, the region was known as Garhwal which stemmed from two words Garh (territory) and wal (the name of the king in that period).

The Kumaon region extends from 28°44’ to 30°49’N (latitude) and 78°45’ to 81°1’E (longitude). The word Kumaon can be traced back to the 5th century BC. The Kassite Assyrians left their homeland ‘Kummah’, on the banks of river Euphrates and settled in the northern part of India. These inhabitants formed Koliyan tribes, as they settled newly in ‘Kumaon’. Lord Buddha’s mother, Mayabati belonged to this clan. As another version of the origin, the word Kumaon has been believed to derive from “Kurmanchal” a hill near Champawat which was the old capital of the Chand kings. Kurmanchal was the land of the Kurmavata (the tortoise incarnation of Lord Vishnu, the preserver according to Hindu mythology) (Gajrani, 2004).

The earliest historical references to the region are found in the Vedas. The existence of the mountains was specifically addressed in the Mahabharata, dated back to about 1000 BC, when the protagonists of the epic, the Pandavas, are said to have ended their life on earth by ascending the slopes of a peak in Western Garhwal called Swargarohini – literally, the ‘Ascent to Heaven’.

## 3. Physiography of Uttarakhand

Uttarakhand is the youngest mountain state of the Republic of India and was carved out of Uttar Pradesh on the 9th of November 2000. It consists of two words “uttar” meaning north and “khand” meaning “part”. It occupies 17.3% of India’s total land area with 53,566 km<sup>2</sup> of which 92.57% is under hills and 7.43% under plains. Uttarakhand is located between 77°34’27’’ to 81°02’22’’E longitude and 28°53’24’’ to 31°27’50’’N latitude (Fig. 1). The state has diverse habitats ranging from the snow bound peaks of the Himalayas with the highest Nanda Devi (7817 m) to the sub-tropical Terai region. It has a population of about 8.48 million at 159 persons per sq. km (Forest Survey of India, 2005). The border of Uttarakhand touches with Nepal in the East and China in the North.

## 4. Traditional knowledge and environmental conservation

Traditional societies are characterized by their close interconnection with nature and its resources. They depend upon natural resources and biodiversity for their livelihood (Ramakrishnan, 1996). This bond with nature and natural resources extends beyond the economic realm, as social, cultural and spiritual dimensions also play a significant role (Ramakrishnan et al., 1998). Ecosystems sustain themselves in a dynamic balance based on cycles and fluctuations, which are nonlinear processes. The theme of traditional ecological knowledge is important in the consideration of a broad range of questions related to nature–human relationships. Different groups of people in various parts of the world perceive and interact with nature differently by sharing different traditions of environmental knowledge. Their perceptions and knowledge are in part shaped by their values, worldviews, environmental ethics, and religion. In the exploration of environmental ethics and religion to an ecologically sustainable society, indigenous peoples and traditional ecological knowledge have attracted considerable attention from both scholars and popular movements. Traditional ecological knowledge includes worldview and religious traditions of a society. Every cultural group shares a range of environmental values and ethics along with their practices. Environmental relations of a group are not uniform, but they are shaped by the day-to-day interactions as well as their worldview and ethics.

The Hindus in India accept nature as divinity, manifestation of God; as such, natural elements like plants, animals, water, earth and fire all become part of ceremonies and worship. Traditional knowledge can range from what are called “old wives’ tales” to extremely complex, formal and codified systems, e.g., the Indian medical knowledge system of Ayurveda (Nadkarni and Chauhan, 2004). Plant conservation is often presented based on scientific contexts of reality and truth as well as related themes of individual to ecological renewal. For many visitors, their fundamental spiritual or religious perspectives frame their beliefs, values, and actions, including all aspects of plant conservation, education, and renewal. In Garhwal Himalaya, there are communities that are the repositories of vast accumulations of traditional knowledge and experiences that link humanity with its ancient origins. The local communities and their wealth of local knowledge are seen as “the heroes of resource conservation, rather than villains of resource depletion as known earlier.” (page 9, Agrawal, 1997). Traditional knowledge of water management in Uttarakhand was reported by a few authors (Rawat and Sah, 2009; Sharma et al., 2008). The Brundtland Report on Our Common Future says, “The disappearance of these indigenous communities is a loss for the larger society which could learn a great deal from their traditional skills in sustainably managing very complex ecological systems” (WCED, 1987).

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