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RESEARCH ARTICLE

Socio-religious strategies and perceptions of indigenous people towards the sacred groves in Kumaon region of Western Himalaya

Medha Durgapal, Kanika and Mukesh Kumar*

Abstract

Sacred groves are the forest areas, varying from few to many hectares. They are located at different elevations and act as a storehouse of numerous medicinal plants. These are conserved by local inhabitants for their religious faiths and cultural beliefs. Field visits and surveys were conducted among the local inhabitants residing in and near the scared groves of Almora, Western Himalaya to achieve the authentic information regarding the socio-religious values and perception status. Inhabitants believe that majority of the rules of the sacred groves were historic and established by their forefathers and predecessors. Observations show that faith, cultural belief and the associated taboos play an important role in the conservation of sacred groves. Indigenous communities believe that modernization and growing disbelief towards the traditional value systems among the young generation has inversely impacted the preservation of the sacred groves. Knowledge awareness and belief system is much necessary for creating fresh approaches for the conservation and proper management of the groves.

Keywords: Belief System, Conservation, Indigenous knowledge, Sacred Groves, Taboos.

Introduction

Safeguarding of nature resources has always been important to many societies in diverse ways since prehistoric times. Globally, combined *in-situ* and *ex-situ* preservation strategies have been implemented, and numerous regions have been designated as restricted and protected zones (Imarhiagbe and Ogwu, 2022). One example of this traditional practice is the preservation and management of grove areas dedicated to ancestral deities by indigenous people worldwide. These forest regions are known as sacred groves by locals. These groves are virgin forests and contain abundant biodiversity and have not been disturbed by the locals. The local community protects sacred groves because of the taboos, cultural practices, and religious faith associated with them (Barre *et al*., 2009; Durgapal and Kumar, 2024). The groves are vast and diverse areas of pristine forests that have been guarded for centuries by the inhabitants of grove by rules, restrictions and the beliefs of the deities who live there and protect the residents from various disasters. Each grove has its own stories, tales, and legends that are an essential component of these sacred places. The groves are the best example of *in-situ* conservation inhabiting several ethno-botanically significant plant species. Sacred grove provides an unbreakable link in the terms of biodiversity, ethnic heritage, culture and religion. Cultural norms, religious convictions, and customs are very crucial for the preservation of biodiversity and whole ecosystem (Singh *et al*., 2017). Sacred groves are found everywhere and present all around the world, and different cultures have discrete ways of recognising them and imprinting different codes for their protection. SGs are connected to rituals, festivals and religious ceremonies (Durgapal and Kumar, 2023; Durgapal *et al*., 2024). The traditional and socio-cultural history in sacred groves has been largely preserved by the execution of fairs and festivals. These sacred places are

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found across India, especially in areas where indigenous populations reside, such as Central and Northeast India, Western Ghats and others (Khan *et al*., 2008). These forest areas are popularly known by different names in different areas given by various ethnic groups. Sacred groves serve as an excellent hub for the conservation of biodiversity (Khan *et al*., 2008). In some sacred groves, numerous endangered and rare species of flora and fauna are still well maintained. It has been revealed that sacred groves preserve a vast number of medicinal floral species that are not present in other forest areas (Ahmed *et al*., 2023). Moreover, sacred groves frequently house an abundance of rare, endangered, threatened, and unique plant species (Durgapal and Kumar, 2025). Sacredness, belief systems, and customs all contribute significantly to the preservation and environmentally friendly use of local flora and fauna. The socio-religious survey and perception of the inhabitants is essential to understand the current management and status of these conserved sites. However, very limited studies were available towards this aspect. Hence it becomes crucial to conduct this research on the socio-religious aspects of sacred groves. It will help bridge the knowledge gap, highlighting their cultural significance, conservation role and traditional practices associated with them.

Materials and Methods

Study area

Almora is a hilly region located in the Kumaon Division of Uttarakhand. The Almora district is located between the latitudes 29°30′ and 30°20′N, and longitudes 79°20′ and 80°20′E. The present research study was carried out in the sacred groves located in Almora district of Uttarakhand state of India. Eleven research sites represent several sacred groves; namely Banari Devi, Dhaula Devi, Doli Danda, Gairar, Jageshwar, Jhakar Sem, Kasar Devi, Rarasem, Shyahi Devi, Vimalkot and Vriddha Jageshwar were chosen for the current research investigation (Fig.1).

The predominant species in Kumaon Himalaya's sacred groves are *Cedrus deodara*, *Myrica esculenta*, *Pinus roxburghii*, *Quercus leucotrichophora*, *Rhododendron arboreum*, etc. Forest type ranges from pure forest of Pine and Deodar to mixed forests of Pine, Deodar, *Rhododendron*, Oak and other tree species. The area of these sacred groves ranges from one to six hectares and located at an elevation range of 1600-2200 above mean sea level (Table 1).

Perception survey

Survey was done during different months of the years 2022 and 2023. Extensive field visits were carried out across all the research sites to achieve authentic information using semi-structured questionnaire survey, individual interviews, group discussions and general conversation with the inhabitants of the villages living in and around the sacred groves (Fig. 2). In the investigation sample size of 110 respondents was used. Ethical clearance for the study was acquired by Gurukula Kangri (DU), Haridwar with reference number Bot & Micro/MK/32/2023-24. Participants gave their written and informed consent after signing an agreement that protect the privacy of their data. The respondents comprised of both young and old citizens, including males and females diversified in three age groups i.e. 20-40 years, 40-60 years and above 60 years.

The semi-structured questionnaire contains the information regarding the belongingness of the locals with sacred groves. Knowledge preserved among local people about the establishment of the groves, taboos associated with them, threats to their existence and importance of sacred groves for local and indigenous inhabitants. The role of faith, belief and customs in the long term conservation,

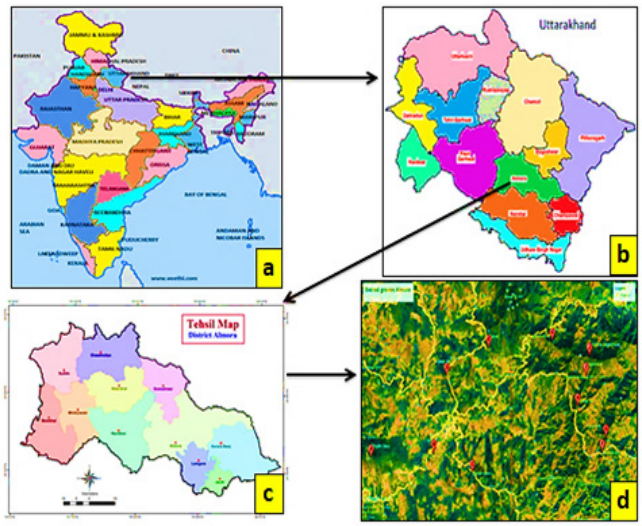

Fig. 1: a. Map of India b. Map displaying Uttarakhand's location c. Map showing location of Almora d. Google Map showing the research sites.

Fig. 2: Gallery of field survey and group discussions among the local inhabitants residing in and near the sacred groves.

Table 1: General description and related information of the research sites

S. No.	*Name of the research site (SG)*	*Latitude (N) Longitude (E)*	*Altitude (in m)*	*Aspect*	*Area (in ha.)*	*Forest type*	*Major tree species in the grove*	*God/Deity worshipped*
1	Banari Devi	29°33′39.3″N 79°41′41.4»E	2081	NE	4-5	Mixed forest	*Quercus leucotrichophora, Myrica esculenta, Pinus roxburghii, Rhododendron arboreum, Alnus nepalensis*	Banari Devi (Vindhyavasini)
2	Dhaula Devi	29°34′27.57»N 79°52′24»E	1917	SW	1-2	Deodar forest	*Cedrus deodara*	Dhaula Devi/ Durga Maa
3	Doli Danda	29°34′40.3»N 79°38′29.2»E	1644	NE	2-3	Pine forest	*Pinus roxburghii*	Goddess Durga
4	Gairar	29°39′51″N 79°43′10″E	1769	NE	2-3	Pine forest	*Pinus roxburghii*	Golu Devata (Shiva)
5	Jageshwar	29°38′15″N 79°51′6″ E	1801	SW	3-4	Deodar forest	*Cedrus deodara*	Shiva
6	Jhakar Sem	29°36′47.2″ N 79°50′23.4″E	2014	SW	1-2	Mixed forest	*Cedrus deodara, Quercus leucotrichophora,, Pinus roxburghii, Alnus nepalensis, Rhododendron arboreum, Myrica esculenta*	Sem Devata (Shiva)
7	Kasar Devi	29°38′29″N 79°39′42″E	2116	NE	1-1.5	Mixed forest	*Pinus roxburghii, Quercus leucotrichophora, Cedrus deodara, Rhododendron arboreum*	Kasar Devi (Goddess Durga), Bhairava, Shiva
8	Rarasem	29°35′12»N 79°52′41»E	2058	SW	1-1.5	Mixed forest	*Quercus leucotrichophora, Pinus roxburghii, Myrica esculenta, Rhododendron arboreum, Cedrus deodara*	Sem Devata (Shiva)
9	Shyahi Devi	29°34′34»N 79°33′27.4»E	2192	NE	5-6	Mixed forest	*Quercus leucotrichophora, Myrica esculenta, Rhododendron arboreum, Pinus roxburgii, Alnus nepalensis*	Shama/ Shyahi Devi (Goddess Durga/ Katyayni Devi)
10	Vimalkot	29°40′03″N 79°48′24»E	2200	NW	2-3	Mixed forest	*Quercus leucotrichophora, Myrica esculenta, Rhododendron arboreum*	Vimla Mata (Vaishnav Devi)
11	Vriddha Jageshwar	29°39′14.6»N 79°51′22.5»E	2178	NE	1-2	Mixed forest	*Quercus leucotrichophora, Pinus roxburghii, Rhododendron arboreum*	Shiva in form of Vishnu

eco-development and holy grove management, were noted through the interviews of the individuals.

RESULTS

Description of the informants

The respondents were divided into three age groups i.e., 20-40 years, 40- 60 years and above 60 years. More than half of the total respondents were male. The age group of informants varied from 21 to 85 years, although most of them were between 40 and 60 years of age. Their professions were diversified varying from agriculture to service and other works like animal keeper, shopkeeper or business etc. 35% of the informants rely on agriculture for their living. Majority of the informants rely on agriculture in Rarasem sacred grove (70%) while minimum in Gairar sacred grove (20%). Elder persons (40-60 years age group) responded well (37%) in comparison to the younger generation. Meanwhile 68% of the informants are male and 32% are females. They have better knowledge and perception about the area of sacred groves.

Knowledge and Perception based study among the informants of sacred groves in the study area

According to the present study, 90% of the informants responded that they like the sacred groves as they are an essential part of their culture and associated with their religious faith and rituals. Only about 2% of the respondents know the meaning of the sacred groves as they are not much acquainted to this scientific term of sacred groves instead they believed and summarised that they have devoted their

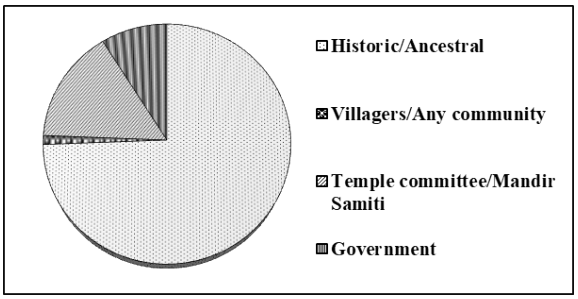

Fig. 3: Feedback/Perception to the question- Rules established by different bodies in sacred groves of the study area.

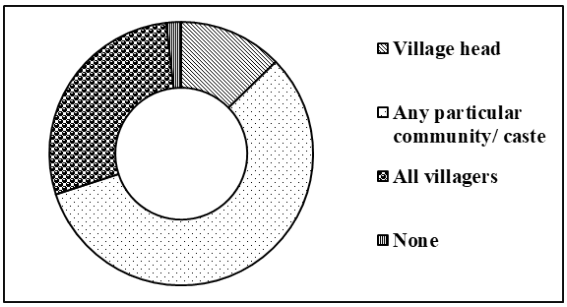

Fig. 4: Feedback/Perception to the question- Rules enforced by different bodies in sacred groves of the study area.

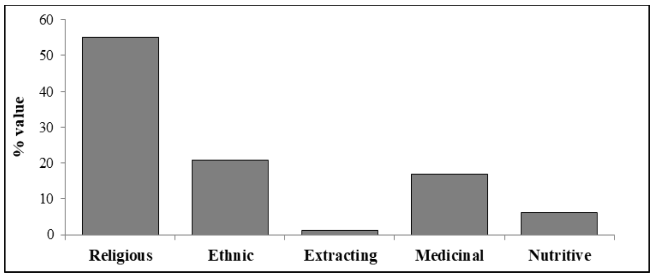

Fig. 5: Feedback/Perception to the question- Benefits of sacred groves in the study area.

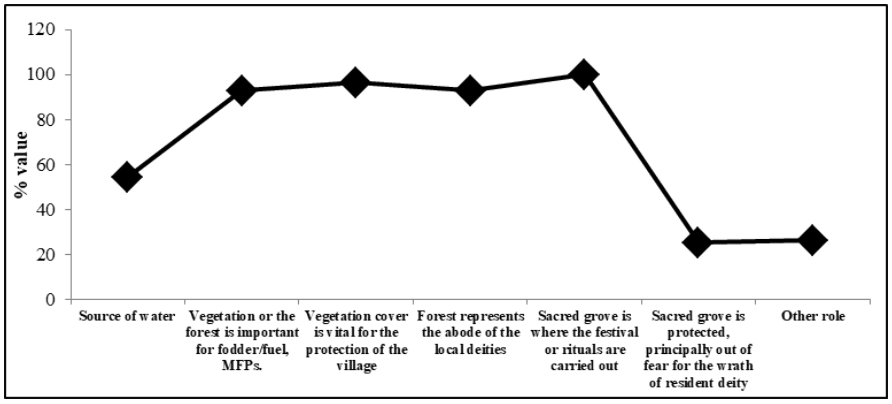

Fig. 6: Feedback/Perception to the question- Role played by sacred groves in the study area.

forests to the local God. Around 22% of the population know the full creation story of the sacred groves while, 55% know a little about it.

The majority of those surveyed expressed concern over the sacred grove's continued existence. More than 70% informants retorted that there are specific instructions and rules regarding the sacred groves that had been established by their ancestors in addition to mandir samiti (temple committee) and villagers/any community with 15% and 1%. The rules governing the survival and upkeep of the SGs are set by the government i.e. 9% (Fig. 3). The informants have a common view that a particular community or caste (57%) is responsible for enforcing the rules within the sacred area in combination with all the villagers and inhabitants (28%), the head of the village (13%). Whereas, few (2%) responded that no one enforced the rules of these sites (Fig. 4).

Perception of benefits, threats and problems

Majority of the respondents believed that the locals are benefitted from the sacred groves. Of all the most significant benefits are religious benefits (55%), followed by the ethnic/ aesthetic values (21%), medicinal values (17%), nutritive benefit (6%) and extracting purposes i.e. 1% (Fig. 5).

Respondents told that sacred groves are important as it is a place of source of water, conserve vegetation/ forest cover that stores fodder/fuel/minor forests products (MFPs), vegetation cover is important for the biodiversity safeguarding of the village. Sacred forests represent the place of abode of local deity/God also it is a place to celebrate the festivals/rituals and protected principally out of fear for the wrath of resident deity. Other roles of sacred groves to the local inhabitants include place of aesthetic values that attract tourists, place to visit for morning/evening walks, store of greenery and fresh air, a place where the wishes comes true (Fig. 6).

Major threats faced by the sacred groves include the expansion of human settlements (15%), tourism (6%), over grazing (22%), forest fire (29%) and lopping and cutting

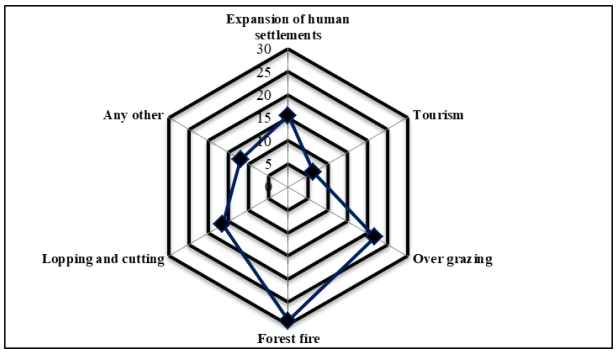

Fig. 7: Feedback/Perception to the question- Major threats to the sacred groves in the study area.

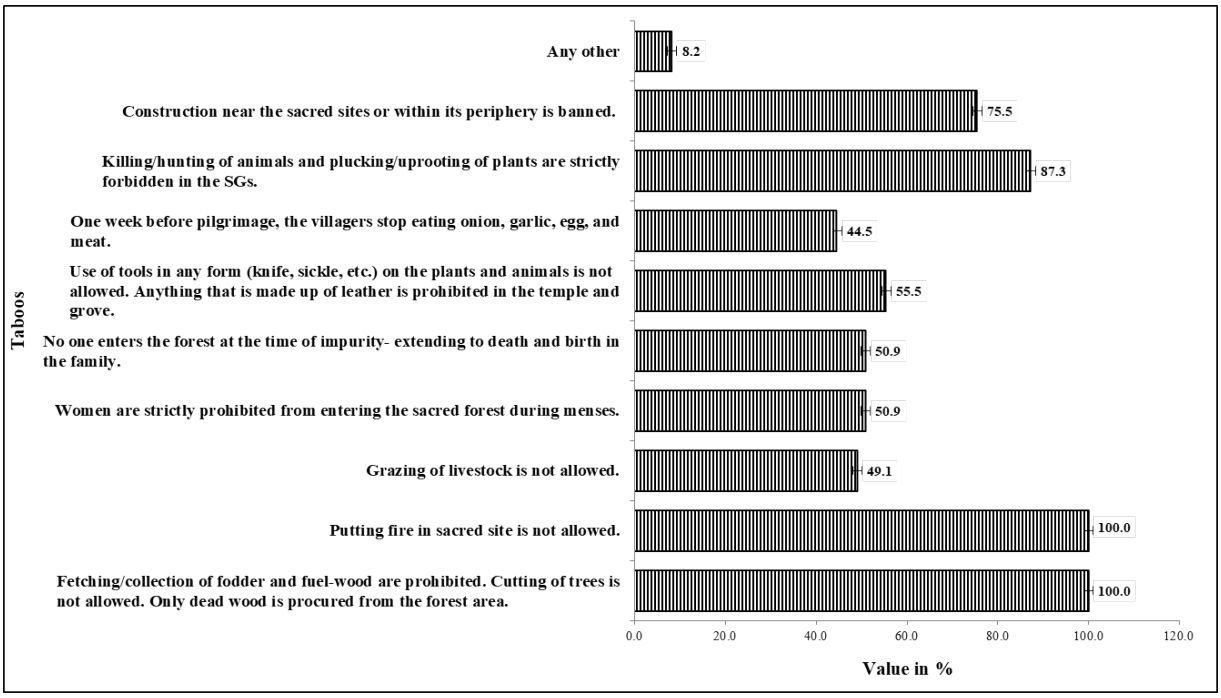

Fig. 8: Feedback/Perception to the question: Taboos in various sacred groves of Kumaon Himalaya.

(16%). Other threats to these sites include excessive growth of the invasive species, too much interference/involvement of the locals that can destroy much of the vegetation with 12%. As per the people perception the major threat to the sacred groves is forest fire (Fig. 7).

Taboos of the sacred groves include collection/ fetching of fodder and fuel-wood are prohibited, cutting of trees is not allowed, only dead wood can be procured from these forest areas; putting fire in sacred sites is not allowed; grazing of livestock is not allowed; entry of women is strictly prohibited in sacred forests during menses; no one enters the forest at the time of impurity i.e. extending to death and birth in the family; it is forbidden to use sharp tools on plants or animals; in some groves it is forbidden to wear leather clothing temples and groves; in some groves villagers abstain from eating garlic, egg, onion and meat one week before pilgrimage; hunting/ killing and uprooting/ plucking is strictly banned and construction near the sacred sites or within its periphery is banned. The most important taboo common among all groves are collection of fodder species and fuel-wood species (Fig. 8). It is evident from the survey that tourism and invasive species have an antagonistic impact on the regeneration of floral diversity present in the groves of Kumaon Himalaya.

Discussion

One of the best examples of informal institution is the social taboos surrounding sacred forests (Charnov, 1976). According to North (1994), these organisations are founded on cultural norms that are not subject to governmental regulation. Rules related to the sacred groves had been established by the ancestors of the villagers. The establishment of sacred groves/forests as well as the rules and taboos are always related to the sustainable resource management followed by the indigenous people, where resource use rarely surpasses the capacity for regeneration of the sacred sites (Negi, 2010). According to Colding and Folke (1997), many social mechanisms, including social taboos, may actually be extremely adapted from an ecological standpoint and aid in the conservation of biodiversity. Analogous research has been conducted in different parts by Ntiamoa-Baidu, 2008, Allendrof *et al*., 2014 and Plieninger *et al*., 2020. Similar socio-religious survey was conducted by Pruthi and Burch, 2009. Likewise the present study the local inhabitants, temple committee (mandir samiti members), any particular community/caste, sacred groves owner and/or forest department are the major stakeholders in managing the sacred groves (Chandrashekara and Sankar, 1998). Likewise the present study various taboos were enlisted from sacred groves of Central Himalaya (Negi, 2010). Present study showed that only 2% of the informants are familiar to the term sacred groves. Very few inhabitants know the history/ story associated behind the creation of the sacred grove. It can be a problem in near future as the knowledge and culture of sacred grove had not been passed from one generation to another generation and young generation is not much interested towards these sites. It can bring these natural conserved areas towards danger as the religious faith, cultural belief and the taboos associated contribute significantly to the preservation of sacred groves (Singh *et*

al., 2011). Similar to the current study Malhotra *et al*., 2001 documented the biological and ecological value of the sacred groves. Impact of modernization, education and growing disbelief in the traditional value systems among the young generation has inversely impacted the preservation of the groves (Bisht *et al*., 2011; Kandari *et al*., 2014; Chettri and Sharma, 2023). Similar to the study grazing, encroachment, invasion and cutting of trees are major threats to the sacred groves (Upadhyay *et al*., 2019). The main key challenge for the future is how to protect sacred groves which are often influenced by strong belief system, associated with rituals and the myths, and deities worshipped here.

Conclusion

Almost all the taboos and rules in the groves have been established by their ancestors many years ago. Forest fire, overgrazing, lopping and cutting are the biggest threats faced by the sacred groves. It is an alarming fact that the due to modernization, growing disbelief and no involvement of young generation the inhabitants are not now following the rules of sacred groves which may be the main reasons behind the poor regeneration of species growing in groves. In majority of the cases no punishment is imposed on the person breaking the rules of scared groves. This is the foremost cause behind the exploitation of resources of the groves. Major benefits of the groves to the local inhabitants are religious benefits. It can be concluded that the groves are associated with the faith and religious beliefs of local inhabitants. Disturbance index concluded that Gairar and Doli Danda are the two most degraded sacred groves facing adverse effects of fire, animal grazing, cutting of trees, invasive species, few to many footpaths that damages the floral diversity, tourism and encroachment. The next generation needs to be made aware of the importance of sacred groves, their ethno-botanical values, and the need to protect them. Knowledge and awareness about the groves is much significant for developing new and effective strategies for the conservation and proper management of degraded sacred groves.

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