

Article

Folk Religion and Environmental Sustainability: Study on the Sacred Knoll of Borgidanga and the Thirteen Manasa Sisters, India

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Abstract

Sustainable management seems urgent on this globalized earth. People present themselves as modern technicians and scientists rather than creators of civilization, readily discarding the folk sciences and folk cultures that are their pillars. Sacred groves form the folk science, culture and technique for reducing all the rigidity, roughness and crises of the environment. They act as a natural 'antibiotic' to treat the environment. Oral traditions are the cellar of folk belief. Every society has some common beliefs that are not necessarily planted in the open scientific arena but are widely accepted as folk truth by the social communities. These beliefs are the hidden nano-culture of the physical and cultural environment. From the dawn of every civilization, people maintained their folk truth through oral transmission, and at the time of globalization, folk beliefs constructed the cultural value and system in every community, which primarily reflect the customs, traditions, and ethnicity of a group. Social and local identities are being fossilized within the casket of folk belief, and in recent multicultural, mixed-cultural phases of the globe, the maintenance of folk belief has a vital synoptic view. The researchers would like to stress the importance of folk belief in the recent environment through two case studies: one is on the Boga festival, and the worship of the sacred tamarind tree in Koma village, and another is on the folk culture of Nalhati Hillock near Nalhati in the Birbhum district of West Bengal.

Keywords: folk beliefs; oral traditions; environmental sustainability; thirteen Manasa sisters; West Bengal; India ethnicity.

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Халықтық дін және экологиялық тұрақтылық: Үндістандағы Боргиданга киелі төбе және Манаса құдайының он үш әпке-сіңлісі

Аңдатпа

Тұрақты басқару осы жаһанданған жерде уақыттың қажеттілігі болып көрінеді. Адамдар өркениеттің жасаушылары емес, заманауи техниктер мен ғалымдар ретінде өздерін көрсетіп, тірек болып табылатын халықтық ғылымдарымыз бен халықтық мәдениеттерімізді оңай қалдырады. Қасиетті тоғайлар қоршаған ортаның барлық қаттылығын, кедір-бұдырлығын және дағдарыстарын азайту үшін халықтық ғылымды, мәдениетті және техниканы құрайды. Ол қоршаған ортаны емдеу үшін табиғи «антибиотик» ретінде әрекет етеді. Ауызша дәстүрлер – халықтық сенімнің жертөлесі. Әрбір қоғамда міндетті түрде ашық ғылыми аренада отырғызылмайтын, бірақ әлеуметтік қауымдастықтар халықтық шындық ретінде кеңінен қабылданған кейбір ортақ сенімдер бар. Бұл сенімдер – біздің физикалық және мәдени ортамыздың жасырын наномәдениеті. Әрбір өркениеттің басынан бастап адамдар өздерінің халықтық шындығын ауызша жеткізу арқылы сақтап келді, ал жаһандану кезінде халықтық сенімдер әрбір қауымдастықта мәдени құндылық пен жүйені құрды, бұл негізінен топтың әдет-ғұрыптарын, дәстүрлерін және этникалық тегін көрсетеді. Әлеуметтік және орналасу ерекшеліктері халықтық сенімнің қоржынында қазбаға айналуға, ал әлемнің соңғы көпмәдениетті, аралас мәдени кезеңдерінде халықтық сенімнің сақталуы маңызды синоптикалық көзқарасқа ие. Зерттеушілер соңғы кездегі ортамыздағы халық сенімінің маңыздылығын екі зерттеу арқылы атап өткісі келеді: бірі – Кома ауылындағы Бога фестивалі және қасиетті тамаринд ағашына табыну, ал екіншісі – Батыс Бенгалияның Бирбхум ауданындағы Налхати маңындағы Налхати төбесінің халық мәдениеті.

Түйін сөздер: халықтық наным-сенімдер; ауызша дәстүрлер; экологиялық тұрақтылық; Манаса құдайының он үш әпке-сіңлісі; Батыс Бенгалия; Үндістан этностары.

Народная религия и экологическая устойчивость: священный холм Боргиданга и тринадцать сестер богини Манаса (Индия)

Аннотация

В условиях глобализации устойчивое управление кажется насущной потребностью. Люди выставляют себя современными техниками и учеными, а не создателями цивилизации, легко отбрасывая наши народные науки и культуры, которые являются ее опорой. Священные рощи представляют собой народную науку, культуру и технику для смягчения всех жестких ограничений, грубостей и кризисов окружающей среды. Они действуют как природный «антибиотик» для лечения окружающей среды. Устные традиции – это хранилище народных верований. В каждом обществе существуют общие верования, которые не обязательно вынесены на открытую научную арену, но широко приняты социальными сообществами как народная истина. Эти верования представляют собой скрытую нанокультуру нашей физической и культурной среды. С зарождения каждой цивилизации люди сохраняли свои народные истины посредством устной передачи, а во времена глобализации народные верования сформировали культурные ценности и систему в каждом сообществе, которые в первую очередь отражают обычаи, традиции и этническую принадлежность группы. Социальная и территориальная идентичность окаменевают в гробнице народных верований, и в условиях современной мультикультурной и смешанной культуры мира сохранение народных верований приобретает жизненно важное значение. Исследователи хотели бы подчеркнуть важность народных верований в нашей современной среде на примере двух тематических исследований: одно посвящено фестивалю Бога и поклонению священной тамариндовой дереву в деревне Кома, а другое – народной культуре холма Налхати недалеко от Налхати в округе Бирбхум штата Западная Бенгалия.

Ключевые слова: народные религиозные верования; устные традиции; экологическая устойчивость; тринадцать сестер богини Манаса; Западная Бенгалия; этносы Индии.

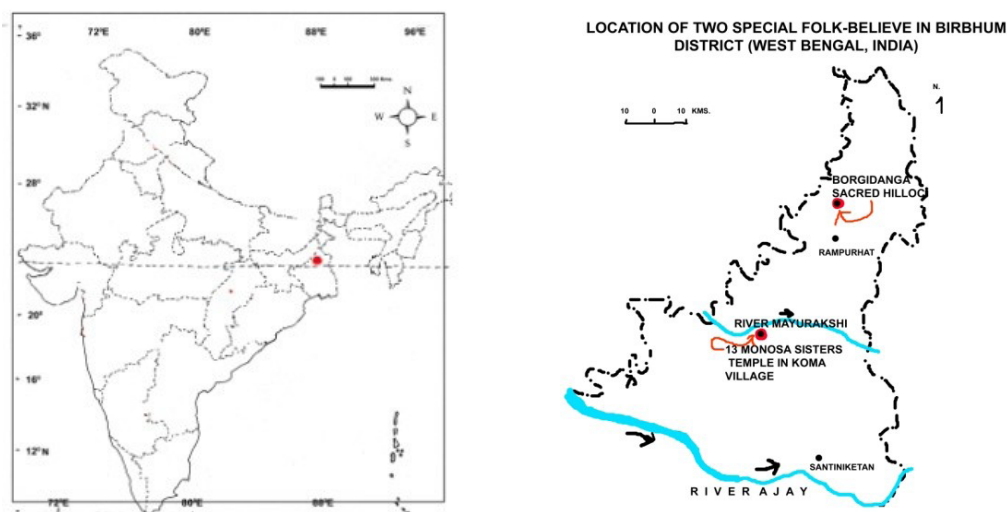
Introduction

Modern civilisation considers us good managers to oversee everything in the surrounding nature with the application of modern science and techniques. Actually, our nature and traditional practices form the chief management of the civilisation since its advent. Nature, however, can play its role up to a certain extent because human interferences play a vital role in maintaining the nature-oriented traditions in society. In the Vedic-Ramayana-Mahabharata-Bible-Koran period, society was framed on a 'religious and nature-based environment', and on this pillar, people shaped their 'nature-based culture and environment', and one of them is the Sacred Groves culture. Unfortunately, people's perception of their environment has changed to it being an economic bank. There are more than a dozen international conventions related to the management of the environment, but little emphasis is given to its renewal through the supervision of age-old cultures, for example, the nourishment of sacred groves (Vipat & Bharucha, 2014). The 'Sacred Grove' is an age-old culture of the society that conserves the sacred trees on the basis of people's sacred beliefs in relation to the environment (Bhagwat & Rutte, 2006). In ancient India, people's strong religious perception gave a believed shadow, under which sacred grove culture was protected within a large territory (Devi Khumbongmayum et al., 2005), which has a great impact on the prolific environment. Today, however, we lost age-old nature-based socio-culture and are moving towards technology-based civilisation to fulfil the demands of economic life. Thus, at the age of destruction, the nature-oriented traditional culture is too important to cope with the problems of the environment (Kochurov et al., 2022). The key objective of this paper is to manage the physical, social, economic, and cultural environment through the supervision of Sacred Grove and to prove diagrammatically how these aforesaid dimensions of environment could be managed through the nourishment of age-old traditions.

Materials and Methods

It is a qualitative case study to relate folk beliefs, oral traditions, and environmental sustainability. Authors completed two case studies here, i.e., the Boga Sacred Festival ('Thirteen Manasa sisters') of Koma Village and Hindu-Muslim folk culture in the sacred hillock, or 'tila', near Nalhati in the Birbhum District of West Bengal, India (Figure 1). Data collected from participatory field observation, geo-tagged photography, narrative study, documentation of in-depth historical oral traditions, face-to-face interviews with residents and priests, documentation of oral traditions of folk people, online databases, environmental features, and documented cultural-environmental practices.

Figure 1. Location of 'Thirteen Manasa sisters' in Koma village and Nalateswari tila in Birbhum district.



Results and Discussion

Rationale to rejuvenate folk beliefs and oral traditions

Surface air temperature is rising alarmingly at a rate of 0.4 degrees Celsius per century, and the most worrying part of the prediction is the estimated increase in winter and summer temperatures by 3.2 degrees and 2.2 degrees Celsius, respectively, by 2050 (Intergovernmental Panel on Climate Change, 2001). If a one-metre sea level rise were to take place today, it would displace 7 million persons in India (Down To Earth, 2015). If one metre of seawater rises, then 35% of the land of Bangladesh would be submerged under seawater (Kumar & Parikh, 2001), which ultimately generates refugees, and many of them could spill over into interior India. So, a thought about security has become more important, and we searched for different ways through which we can sustain ourselves on a healthy Earth.

Conceptual overview of folk beliefs

'Folk' is derived from a Germanic noun, 'fulka', meaning 'people' or 'common people'. The modern English word 'folk' is derived from the Old English 'folc', meaning 'common people' (Wright, 1898–1905). This term was popularised with the application of the term 'folklore' by W. J. Thoms (1996). All cultures maintain their beliefs that can be classified as folk beliefs, or common beliefs that are not necessarily grounded in scientific facts but are widely accepted as truth by most. Folk beliefs appear in many different ways within a culture. Public folk beliefs appear in the form of proverbs. For example, beliefs related to weather, like when rain falls while the sun shines. Folk beliefs are associated with different games, the gestation period of the mother, different cultural practices, occupations, crop cultivations, human birth, death, luck, and love in all sectors (Dundes, 1980). Though technology and science are important parts of life, people could never do away with these folk beliefs. Every folk belief has a historical backdrop and related myth, like the sound of the 'tik-tik' of lizards (Frembgen, 1996), which is related to the tale of Khona (wife of Mihir) of Purana. The tale was that the tongue of Khona was chopped off by her husband under the instruction of her father-in-law because the popularity of Khona was too high in respect of future prediction, and she was invited to the royal court of King Chandragupta (Chowdhury, 2023). The then male-dominated society, however, prohibited the female counterpart from participating in the royal assemblage and restricted her from public speech, for which Khona had to sacrifice her greatest resource (Nath, 2008), which was her power to speak. This chopped-off tongue was later gulped in by a lizard, which was then blessed by Baraha (father-in-law) with the ability to suggest and support truth as his daughter-in-law did (Roy, 2025). Another example of folk belief is that people of the Appalachian Mountains have always been full of superstition, dreams, and creativity and have created lots of different folk beliefs (Milnes, 2007). They believe that sunshine on a wedding day means a happy marriage; if your lips itch, it means you want to be kissed; a red sky at sunrise means rain within twenty-four hours; and dew on the grass means a dry day. These beliefs are often deeply embedded, and although the actual practice relating to the belief may have declined, its verbalisation remains (Visit My Smokies, 2026). Folk beliefs, otherwise known as "superstitious beliefs", form a part of people's value system and culture. They reflect customs, traditions, and more of a group, which may be based on religious beliefs, opinions, or old or popular practices. They also tell of how people view the unknown and make a means to appease the gods that control the future. Folk religions consist of ethnic or regional religious customs under the umbrella of an organised religion but outside the official doctrine and practices (Bowman, 2004a). Don Yoder has defined 'folk religion' as 'the totality of all those views and practices of religion that exist among the people apart from and alongside the strictly theological and liturgical forms of the official religion' (Bowman, 2004b). The birth of folk belief existed before the birth of science. Folk belief is the past of folk culture, and especially it forms the nano-culture of broad folk culture (McCormick & White, 2011). 'Folk culture' refers to a culture traditionally practised by a small, homogeneous, rural group living in relative isolation from other groups. Historically, handed

over through oral tradition (Blank & McNeill, 2018), it demonstrates the “old ways” over novelty and relates to a sense of community. Folk culture quite often comes with a sense of regional conflict. If elements of a folk culture are copied by, or moved to, a foreign locale, they will still carry strong connotations of their place of origin (Bauman, 1992).

Folk beliefs on sacred tree: historical roots

Therefore, tree worship was born from respect, devotion and faith in God. Sacred groves of religious culture are the centre of divine and religious beliefs. In fact, tree worship is a medium for the relationship between man or society and nature. Scientists are trying to make this idea a part of beautifying environmental geography through religious geography. In James Fraser's book 'The Golden Bough' (1935), the author finds examples of tree worship in the Palaeolithic era (250,000 BC). In different branches of the Vedas, people see a custom of worshipping 'Panchashakti', such as the sky, earth, water, fire, and air. Although this worship is based on human fear in the context of religious geography, from a scientific perspective, one cannot deny the relationship between nature and humans. Therefore, a special element of nature is trees. The history of worshipping trees as a sacred part of the earth through the worship of the earth is present in the 'Rig Veda' (4000 BC, according to Professor Hermann Zekory). During the Vedic sages worshipping various medicinal trees or praising them during sacrifices. Among which Somlata (moon creeper, which is a medicinal plant in Ayurveda) was important. Again, in the 'Yajurveda' (Boddupalli & Sastri, 2015), Asattha and Palash trees (*Butea monosperma*) have been identified as sacred trees. These two trees were valued both for their medicinal properties and as a primary source of sacred wood during sacrifices. The Vedic sages believed that these two trees were inhabited by medicinal deities, and they identified the forest of these trees as 'Kaspat'. So, one thing is clear: even from 5000 BC onwards, in the Vedic era (according to Bal Gangadhar Tilak, the Vedas were composed in 5000 BC, and Gandhiji also supported this), trees were considered worshipped or sacred deities, and Palash, Asathya, and Somlata (*Ephedra gerardiana*) occupied that place (WisdomLib, 2022). In the Kashidasi Mahabharata (3200 BC, according to Abdul Aziz-al-Aman), a scene is seen in which the weapon master Dronacharya is laid under a peepal tree after his death and surrounded by Lord Krishna and the five Pandavas expressing their grief and sorrow (Das, 1925). Therefore, there are statements about sacred trees and events centred on trees in Hinduism. Even if the tree is not worshipped directly, if one thinks a little more carefully, one can understand that in the Mahabharata, Kashidasi also considered the shade of the peepal tree or other suitable sacred places as a place to hold these sacred events. All this has been passed down through the ages in some way with religious culture. In the early 14th century BC, historical examples of sacred groves from the Krittivasi Ramayana were found (written in the early 14th century BC, according to Sri Benimadhav Shil) (Scribd, 2025). The 'Panchavati Van' (where Surpanakha's house was), 'Tapovana' (where the holy Sita and her sons lived), and 'Ashok Van' (where Devi Sita lived in Lanka) (srilankholidays, 2015) of that era are all sacred forests of the Ramayana. At the end of the Srimad Bhagavad Gita (according to Swami Prabhupada, written 5000 years ago) (Bhaktivedanta Swami Prabhupada, 1983), Lord Krishna compares the Asathya tree with the 'material world' and shows that to free oneself from 'material' greed, one should worship this tree, and Krishna explains that the 'leaves' of this tree are the 'Veda Mantra', and whoever worships this tree will be able to free himself from the sins of the 'material world' (Bhaktivedanta Swami Prabhupada, 2002). So sacred epics of Hinduism birth sacred beliefs for developing sacred ecology (Dhaliwal, 2023). The tips of the branches of this tree are the centre of human desire for pleasure, and the root of this tree goes towards Lord Brahma. So when people see so much pomp in worshipping the Asathya tree today, they do not understand that historical scriptures are the witnesses behind this history (200 BC - 200 AD) (Mishra, 2007). Manu in Hinduism has instructed in Mantra (Nos 8/246 and 8/248) to use the banyan, asatthya, and palash trees and temples as boundary markers (Bhattacharya, 1995). Upon closer look, it can be understood that if the Manusmriti was completed in 200 AD, then temples and

trees have been side by side for about 1813 years (Manu, 1991). If there is such a provision from the beginning of society that you are obliged to keep trees and temples side by side in the boundary and you cannot cut them, then the sanctity of the temple should also gradually place the tree in the seat of sanctity, and to maintain the sanctity of the temple, those trees that cannot be cut will be used as shade for the temple. Therefore, the coexistence of trees and temples in this way may have given birth to sacred groves and sacred ecology.

In the Islamic world, some truths about the preservation of trees can be learnt from the Quran. The Qur'an refers to al-Masjid al-Haram, commonly translated as "the Sacred Mosque" (Qur'an 2:144). In this context, the term haram denotes sacredness and inviolability. The prohibition against cutting trees within the sacred precincts of Mecca is recorded in hadith rather than explicitly stated in the Qur'an (Sahih al-Bukhari, nos. 1832 and 1834). This protection concerns vegetation within a designated sanctuary; it does not imply that individual trees are objects of veneration or that the same prohibition applies to the surroundings of every mosque. From an environmental perspective, such restrictions may be interpreted as linking the sanctity of a place with the protection of its vegetation.

Trees also appear in Qur'anic accounts of religious significance. Surah al-Fath describes believers pledging allegiance to the Prophet Muhammad under a tree during the events at Hudaibiyyah (Qur'an 48:18). The passage concerns the pledge and Allah's approval of the believers, rather than a teaching centred on the tree itself. Surah an-Najm mentions Sidrat al-Muntaha, the Lote Tree of the Utmost Boundary, near the Garden of Refuge (Qur'an 53:14–16). These verses do not state that Allah is present in the tree's leaves. Together, these references offer material for examining the religious significance of trees and sacred places in Islamic tradition. Their relevance to sacred ecology, however, should be presented as an analytical interpretation rather than an explicit ecological teaching of these verses.

In the Bible (which was written from 500 BC, according to Swami Vivekananda), one thing can be observed: whenever Jesus gave any advice to his disciples, he would go and stand under a tree on the mountain and give advice. It is as if trees were given more importance somewhere in the life of Jesus. Therefore, if we go back to the civilisation, the importance or sanctity of trees was directly associated with great people. We can trace the history of tree worship from the life of Gautama Buddha (sixth century BC). Gautama Buddha was born under a Sal tree in Lumbini, Nepal. It is known from the life of Buddha that Queen Maya gave birth to Gautama while standing on the branch of a Sal tree (*Shorea robusta*) in Lumbini, and that place and tree are considered sacred. Then, Gautama Buddha attained Mahaparinirvana at the age of 35 under a peepal tree (*Ficus religiosa*). Again, after attaining Nirvana, when one of his disciples, Sujata, was waiting to feed him with her own hands, Sujata thought that she would feed Buddha with her own hands under an Asathya tree in the distance. From this thought, one day, one of her maidservants came and informed her that Buddha was sitting under that Asathya tree. Sujata ran and fed Buddha with her own hands under that tree, and then, when the Buddha left that place, she used to worship that Asathya tree (*Ficus religiosa*) regularly. In this way, the sacred ecology is developed based on folk sacred beliefs about the Asathya tree. Apart from these, so many examples of folk beliefs on sacred trees are found in different places of India, like the sacred tree of Chilka of Odisha (Figure 2), the sacred tree of Kankalitala in Birbhum (Figure 3), the sacred tree with Banbibi shipping in S. 24 Paraganas (Figure 4), the sacred tree as identified in the name of Lord Shiva (Figure 5), and sacred trees in Gopiballavpur in West Medinipur (Figure 6).



Figure 2. Trees in Chilka Lake become sacred based on tourists' beliefs.



Figure 3. The tree becomes sacred based on folk belief at Kankalitola, Birbhum.

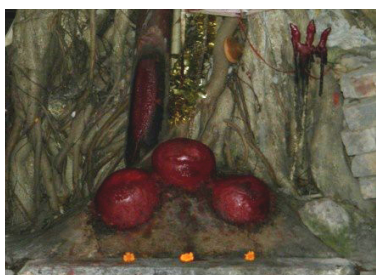


Figure 4. Folk belief on Banabibi in the South 24 Paraganas district and people

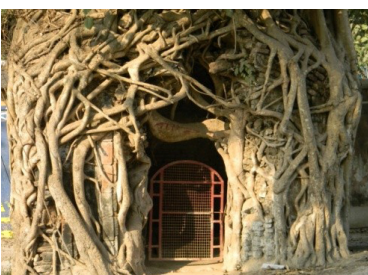


Figure 5. The tree has become sacred due to the belief of humans in it as Lord Shiva.



Figure 6. Sacred tree worshipping in Gopiballavpur; even folk people have the belief in dead trees here.

Case Studies

Sacred Hill (Knoll) of Borgidanga in Nalhati Tila, Birbhum

The sacred knoll in Nalhati is an astounding fact of the Birbhum district. The size of this tila is about one sq. km., and a very beautiful village, Borgidanga, is situated at its margin. The sacred tila is made of hard lateritic soil, which was believed to be sacred by the people of this area. There, two opposite religions are coexisting. To its west is the Muslim Hajarath Anshari Baba Sacred Mazar (Figure 7), and to its east are the Hindu Nalateswari temple, a sacred neem tree, and Lord Ganesha (Figure 7) (Nalateswari Temple Trust, n.d.). In respect of 'Unity among Castes', this sacred tila bears relevance at a global level. It makes a model for creating unity and reducing the conflict among religions. Thus, this sacred tila and its folk culture form the abode of peace to reduce the war among religions. In this tila, two folk tales are present that are part of the sacred tila culture, and people can identify them as a part of the folk culture of global religions. According to the recent Baba Khadim Mahammad Lokman Sekh of this Mazar, the sacred tale about this Mazar was that in Mazar Sarif, people believed that Hazarath Anshari Baba came once (Sekh, 2025). On his stay here, he cooked rice on this tila, for which he used a narrow bough of a neem tree (*Azadirachta indica*) to stir the rice. After completing cooking, that bough was left there. From that, a rare neem tree was born, which has the special characteristic of one side of the neem leaf being sweet and the other being bitter, which was the probable folk belief cause of this rare characteristic. The folk myth is that the portion of the bough that soaked into the sweet rice became sweet, and the rest of the exposed part maintained its general bitterness. So, the two sides of the neem leaf bear two different tastes, but before 2000, this tree withered. Muslim folks believed that the place of the rare sacred neem tree is a sacred place. In connection with their folk belief, they planted another neem tree in its place (Figure 7). Based on this sacredness, they conserved this tila as a sacred bourn with the enactment and implementation of

different rules; for example, the ranching of animals was completely prohibited. Drinking, smoking and any other anti-social activities were completely restricted, and they hung several Muslim flags to demarcate the periphery of this sacred tila. On the other side, Hindu culture has been conserved since the age of the Puranas (Dallapiccola, 2002). The windpipe of Sati Durga was dropped here, and from that myth, people established their Hindu religion on this tila. To the eastern side of this sacred tila, the temple culture and the worship of the deity persist (Kinsley, 1988). It has great importance because Hindu people believed that during the Dakshya Yajna, the Devi was cut into fifty-one parts by the Chakra (an ancient wheel-shaped missile) of Lord Vishnu, and one part (windpipe) among them fell here (Pattanaik, 2003), and the location became a sacred tila. Under the sacred neem tree, the footprint of Sati is being conserved based on this folk belief, and this concept again increases the religious importance of this sacred knoll. Different arts and terracotta are found on the walls of this tila. The visual explanation of terracotta is that there are two elephants and one boy. Actually, it is the representation of God Ganesha, and the historical explanation is that before worshipping Devi, people should worship Ganesha. Another part of the wall of this temple bears different-colored art, like the Tandav Stotram (fierce cosmic dance) of God Shiva with Devi Sati on his shoulder, and the tale is that after the death of Devi Sati, the wall paintings bear the folk culture and the folk myth of the Hindu religion. In the sacred bourn of the Naletswari temple, a sacred neem tree has been worshipped for more than fifty years. People bind the pieces of bricks with the stream and branches of this tree, which reflects the importance of the tree to the beliefs of folks. The opposite cultures (Hindu & Muslim) cohabit here on a single tila, and this way all are being conserved (different trees, temples, mazars, worship of the part of the tree, sacred trees, the folk culture, and folk beliefs). Here, sacred banyan and neem trees are being conserved (Anthwal et. al., 2010), which is fruitful for floral diversity and developed spiritual ecology (Sponsel, 2012). Based on folk belief, the pilgrimage concept (Malville & Saraswati, 2009) has been generated, and tourists stream here. With the advancement of time, the importance of that tila will increase for regional sacred tourism (Shackley, 2001). In parallel, the maintenance of folk-religious ritual is conserved based on folk belief, and the economic infrastructure of this sacred tila has been glorified. Thus, on the basis of folk belief, the local economic scenario has improved to some extent.

Figure 7. Naletaswari Tila and Mazar are on one side, and the temple is on the other side. On both sides, sacred trees are conserved based on the folk beliefs of Hindus and Muslims.



'Thirteen Manasa Sisters' in Koma Village, Birbhum

The 'Thirteen Manasa Sisters' is the sacred temple of Koma village of the Birbhum district of West Bengal (VillageInfo, 2026). The village has an absolutely rural frame in the context of culture, economy, occupation, roads, lifestyle, food habits, dress, daily life scenarios, and festivals. The Boga folk festival related to these 'Thirteen Manasa sisters' is the prime festival of this village. This sacred place conserved the rare sacred tamarind tree (*Tamarindus indica*) for more than one thousand years (Figure 8). The people of this village believe that this sacred tree is the birthplace of the sacred total Goddess Manasa with her thirteen sisters (Dimock, 1963), and more than a thousand years ago, Goddess Manasa wished to come to this village. It is also believed that she gave the divine comment to a Brahman priest, Debangshi, to establish her temple, and then Debangshi established this temple. People do not know what Debangshi looked like, but they believe that the human face on the wall of the temple represented that first priest (Figure 9). This is a folk belief of this village. Whether or not this folk tale is historically accurate, the oral tradition partially proves trustworthy with these murals carved on the temple walls. Villagers believe that the gap in the trunk of this sacred, rare tamarind tree (Figure 8) is the site of birth of these thirteen rock idols and this generated folk tale.

The folk myth is that this sacred tree is the home of goddess Manasa, and the proof of this is that all the seeds of this tree have a special structure like a snake or goddess Manasa. If people compare this seed with other tamarind seeds, they can easily find out the differences. In general, the shape of the tamarind seeds is comparatively square, but the seeds of this sacred tree are protruding and have the structure of the side face of a snake or, as believed here, of goddess Manasa with a head, nose, or mouth (Figure 9). Local people also believe that this structure indicates the presence of goddess Manasa, or the god of snakes (Dimock, 1963). Local folks do not use these food items, as they believe that this tamarind is part of the goddess, and if they roast it on fire, then their goddess may feel the pain. People of this village worship the goddess with vermilion, milk, water, and oil. These sacred rocks have a special female structure, and in the interior of the temple, a sacred pit is present (Figure 9), which is believed by the local dwellers to extend up to Kashi in Uttar Pradesh. A folk tale is associated with this trench, according to the recent priest Gadadhar Hazra. Once, people tried to fill this hole with 64000 pitchers of water, but they failed to do so. That night, the priest heard a divine command that 'this hole extends up to Kashi, and to fill this up, only one pitcher of milk and one pitcher of molasses water during the worship of goddess Manasa would be enough' (Hazra, 2025), and this has a proven result. Maintaining the folk belief and ritual, like water worshipping during the Bengali Jaisthya month, the tale of water worshipping is the traditional concept that is found in the Purana (Wilkins, 2004). After the marriage of God Shiva and Goddess Parvati, they moved to the sacred hilly Kailash, and before going, they worshipped water. Though the earth is modernised, the rural folks are maintaining their age-old Hindu and folk cultures. Villagers believed that in times of scarcity of rainfall, they organised 'Jalpuja' (water worship) with Yajna because they belonged to the group of agriculturists and had to depend on water availability on a large scale, so this made them worship the water god to keep him pleased and thus keep themselves going, rather than flourishing with time. Based on folk belief, the sacred tree is conserved, and villagers maintain their respect for water, which is essential to mitigate environmental risk at the local level.

Figure 8. A rare species of tamarind seed with a tree is worshipped just beside the temple of 'Thirteen Manasa Temple', and a clear comparative difference in the visibility of natural and rare tamarind seeds is discussed.

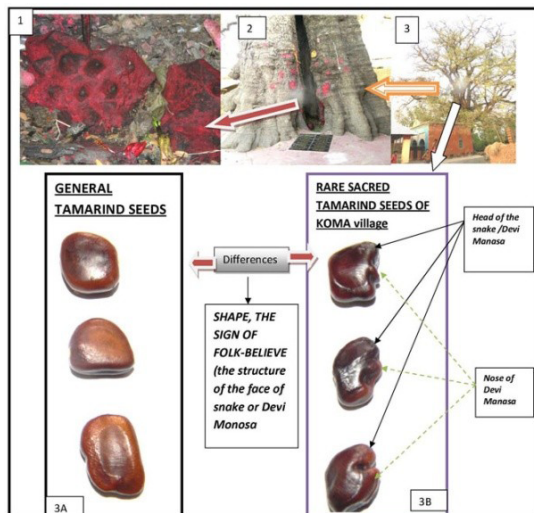
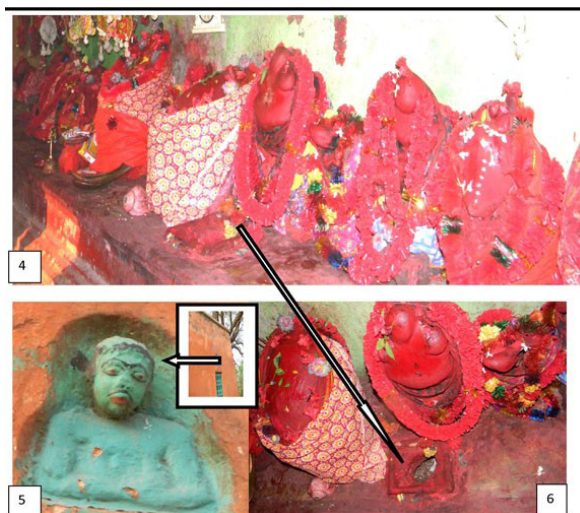


Figure 9. Goddess Manasa, including thirteen sisters' idols, is worshipped side by side in Koma village, and Brahman priest Debangshi's figure is visible on the temple's wall. The author is indicating the sacred hole within the temple, which is a mythological history of this village.



Folk Beliefs and Environmental Sustainability

Nourishing several pockets of sacred trees, the rates of CO₂ emissions can be reduced to a considerable extent, and groundwater (Agarwal, 2016) will be recharged, which helps to balance the global hydrological cycle. Moreover, the rate of soil erosion will be reduced, and the humic acid of sacred leaves will be fruitful for maintaining soil fertility. The faunal diversity in sacred zones (Bhagwat et. al., 2005) – those inhabited in the sacred landscape – is the symbol of ecological balance in the local environment. At a broad level, it will be helpful to maintain the environment at a macro level through the conservation of trees in different pockets of the world. With the help of Sacred Groves' perception (Bhakat et. al., 2008), a large number of trees would be conserved, which would control global warming as well as glacial melting. Ultimately, the deposition on riverbeds results in flood generation and disastrous consequences. Consequently, the whole climatic hazard will be checked or controlled with the control and nourishment of the sacred groves. Sacred groves improve soil stability, prevent topsoil erosion and provide irrigation for agriculture in drier climates. It helps in improving the soil fertility through efficient nutrient cycling and conserving soil moisture through humus buildup in the soil, and partly through a deep root system, which has root biomass uniformly distributed through the soil profile. Sacred ecology is important for microbiome aspects such as natural pond conservation (Thaker, 2022), river behaviour regulation, strengthening the floral and faunal diversity, preservation of vulnerable, rare plant species, palaeoclimatic behaviour, and the foundation of future world forestry. In the context of biological conservation, pond ecosystems can also be preserved, as these ponds serve as breeding sites for some animals and recreational facilities (Pal, 2011). Sacred groves enhance social integration improvement, educational significance, economically beneficial scenarios, significance in respect of human behaviour, and the preservation of open-air palaeoculture; generate local- and global-level tourism; improve local infrastructure and accessibility; enhance Ayurvedic medicine significance; and encourage the roots of culture. Through the supervision of sacred groves, traditional cultures, different festivals, rituals, rules, customs, faiths, beliefs and the specific identity of the society are nurtured.

Recently, due to globalisation, most of the old-aged cultures and traditions have been moved to the brink of destruction, and the folk culture is one of the best cultures of the Hindu civilisation. So, maintaining the Sacred Groves' identity, we can curtail the rate of hazards, and also it may improve

the tourism, which ultimately enriches the economic prosperity. Due to sacred belief, people moved to the periphery of Sacred Groves to make wishes, and for their fulfilment, they made offerings, which in turn led to the practical development of that area (like the planting of tube wells, waiting rooms for tourists, etc.). While worshipping, different food items are offered; this is the source of food for local animals. The avian and animal groups are largely facilitated by Sacred Groves because they can stay and live without any disturbance by human beings, which will create a tranquil environment for their mental peace. The psychological environment forms the most important part of life. Without this peace, people's minds fail to bear a fruitful, scenic, physical and non-physical atmosphere. Sacred groves reduce the rate of climatic harshness like floods, droughts, cyclones and soil erosion, and through these, the plucking of inhabitants from their habitats and the number of refugees is decreased. Due to sacred trees, the groundwater is recharged, and the scarcity of water is reduced, which will be helpful for local people with respect to their demand for fresh water. It will also refresh the courtier-of-mind psychology of folks. During sacred grove-related festivals, economic regeneration spurts out in the local area and helps to improve the economic base of folk people, which is fruitful for reducing the scarcity of the economy to some extent and reducing the mental hazards, like tensions. Moreover, in recent years, there has been an increasing awareness that the significance of the medical plant studies goes beyond mere anthropological curiosity (Sukumaran & Raj, 2010). So, with the conservation of historical sacred groves, different medical plants can be conserved to reduce the hazards in the medical environment. So sacred ecology acts as a natural gene pool preserve and serves as an example of habitat preservation through community participation (Gadgil & Vartak, 1975).

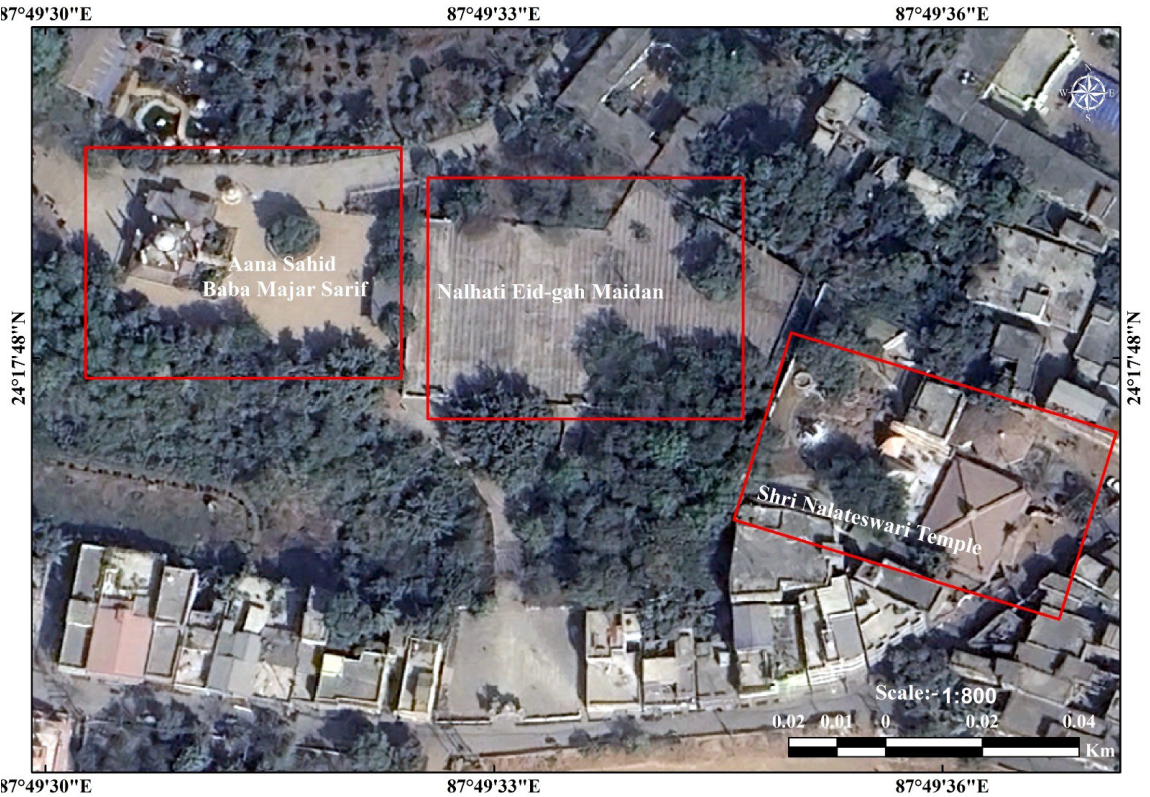
Findings

Oral traditions and folk beliefs are interconnected. Based on folk beliefs about trees, the community worships and conserves them for the sake of nature. Through this sacred folk belief, biodiversity is protected. The community is engaged in protecting sacred trees, temples, and mosques. It generated ecological conservation. The sacred Nalhathi Tila is the base of community faith on the knoll and temple, which helps to save biodiversity on one side, and on the other side, the traditional Muslim Mazar is preserving it. So, it maintains religious harmony based on specific landforms like knolls or tilas in Nalhathi. It strengthens the peace, harmony, and social cohesion. Through generations, the folk beliefs of Koma Village preserve the sacred tamarind tree of the 'Thirteen Manasa Sisters', which has long-term effects and bears culturally rare tree species. Tamarind trees are part of their indigenous knowledge system, which encourages heritage conservation. Folk beliefs on sacred groves create a buffer zone against environmental degradation through carbon sequestration, groundwater recharge, soil conservation, and climate regulation. Sacred groves based on sacred beliefs and oral tradition raise awareness to respect nature and contribute to sustainable environmental governance. Both the case studies prove that folk beliefs can enhance pilgrimages, ecosystem resilience, biodiversity conservation, customs, festivals, rituals, folklore, local traditions, supportive rural livelihoods, landscape preservation, landform identification, and sustainable development. So folk beliefs are non-scientific management, but often they act like scientific contributions in environmental sustainability (Figure 10).

Figure 10. Integrated Folk Belief and Oral Traditions Framework for Sustainable Development



Figure 11. Religious harmony through folk beliefs in Nalateswari Tila is explained by georeferencing Google Maps.



Conclusion

A part of educated people thinks that the environment designs the way of human life, and another part of society sees humans as the builders or designers (Swim et al., 2011) of the environment. But in respect of the modern situation, humans' aggressive demand and their unthoughtful, careless behavior (Swim et al., 2011) towards the environment create numerous problems. With the cup of tea and snacks, we arranged different conventions every year, but the utmost result is poor because we tend to forget the folk myth, like 'to reduce the toxic effect of snake's poison, the poison itself is used'. This means, to reduce the environmental problems we have, we have to apply the concept of 'environment'. Sacred Grove is one of the leaves of the environment through which numbers of trees are being preserved (Abas et al., 2022) in different pockets of the environment, and parallel sporadic socio-economic and cultural resources are being conserved (Singh et al., 2017). Thus, being environmentalists, all people should have to maintain their cultural specimens, biodiversity, social identity and even their psychological stability by nourishing sacred grove perceptions. So, though it is the worshipping of God and different folk beliefs that are associated with being an environmentalist, we have to conclude that it is a culture of nature-worshipping, and this folk culture conserves the human's love and respect for trees, rocks and water, which have been marinated since the Vedic era (2500 BC) (Rig Veda, 2002). That is the miniature form of vast diamond social culture and can be judged to be a mini-culture or nano-culture of a broad vista of cultural geography. So through the folk belief we are conserving a sacred tree and a part of folk culture in Koma and Nalhati Tila. These two are so important in respect of local biodiversity and racial culture surviving through oral tradition. With the application of folk belief at every corner of the society, we can conserve regional traditional culture and traditional identity and can also conserve the rare trees. Moreover, to generate local tourism, this folk culture has greater implications.

Authors' contributions

First author – writing the article text, correspondence, submission of the article.

Second author – writing the article text, technical formatting.

Third author – writing the article text, literature review, editing the text.

Fourth author – writing the article text, literature review, technical formatting.

Conflict of interests

The authors declare that there is no conflict of interest.

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