

ENVIRONMENTAL INSIGHTS FROM INDIGENOUS PEOPLE: NORTHEAST INDIA PERSPECTIVE

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Abstract

Indigenous people live with nature and survive on the natural resources around them. With the worldwide introduction of the Doctrine of Discovery in the mid-fifteenth century, superior powers conquered and controlled many lands. Due to the colonisation of lands, many traditional practices are neglected, forgotten, and intentionally silenced in Northeast India. With globalisation, modern science has hastened the manipulation of nature through unrestrained commercial growth. On the pretext of development, poor people are displaced from their homes and the forest they live in, and they become ecological refugees in their land. Forest and indigenous ways of relation to nature are critical for survival. Tribals have their own indigenous ecological traditions. Environmental insights from indigenous people in Northeast India can offer valuable lessons for sustainable development, conservation initiatives, and climate resilience efforts. Locally available tribal ecological prudence could enhance ecological health and benefit humans. Amid the universal ecological crisis, there is an urgent need to inculcate the tribal ethos of seeing the unseen spirits in the natural elements – trees, stones, animals and streams and accord respect and restrain. This paper orients us for a fresh analysis of our present environmental condition for the common good.

Key Words: *human-nature relationship, Northeast India, tribals, traditional ecological knowledge, ecological prudence*

Context of the study

Indigenous people relate to nature in multifaceted ways - encompassing cultural, socio-political, spiritual, and ecological dimensions. They consider themselves part and parcel of the earth but impermanent owners. On the contrary, the gradual rise in industrialisation, urbanisation, and the shift from agriculture give modern societies the false notion that they are becoming increasingly independent from bio-abiotic environments.¹ Humans have increasingly swayed over natural resources. The Doctrine of Discovery (DoD),² which became very powerful during the fifteenth century, affected the colonised lands, including Northeast India. The DoD gave absolute power to the conquering nations over the conquered lands. The dawn of the Anthropocene Age added to the excessive extraction of resources from nature. The anthropocentric decisions wherein humans are placed at the centre seek convenience and ultimately harm nature.³ Western trade and colonialism altered the world's ecology from the fifteenth century onwards.⁴ European imperialism brought about environmental vicissitudes.⁵ While industries need massive resources from nature, nearly 1.6 billion people worldwide directly

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¹ Riley E Dunlap, "Paradigms, Theories and Environmental Sociology," In *Environmental Sociology: Classical Foundations, Contemporary Insights*, edited by Riley E Dunlap, Frederick H Buttler, Peter Dickens, and August Gijswijt, 2nd ed., Jaipur: Rawat Publications, 2017, 329-50.

² Miller, Robert J, Jacinta Ruru, Larissa Behrendt, and Tracey Lindbergh, *Discovering Indigenous Lands: The Doctrine of Discovery in the English Colonies*, Oxford: Oxford University Press, 2010.

³ Pope Francis, *Laudato Si*, Trivandrum: Carmel International Publishing House, 2022, 96.

⁴ Ramachandra Guha, "Colonialism and Conflict in the Himalayan Forest," In *Social Ecology*, edited by Ramachandra Guha, 2nd ed., Mumbai: Oxford University Press, 1998, 275-302.

⁵ William Beinart and Lotte Hughes, *Environment and Empire. The Oxford History of the British Empire, Companion Series*, 2007, 1. doi:10.1080/02582470903189907.

depend on forests for their subsistence and source of revenue.⁶ Heavy resource drain affects our healthcare, employment, and housing, leading to forced migration.⁷ Apart from physical standards of living and material comforts, there is a need for a positive and nurturing relationship with nature.⁸ Capitalistic land control has brought in land laws as a form of social control over resources.

The colonial Government in India campaigned to reserve and restrict forest use for their commercial profit towards the uninterrupted timber supply for railways and shipbuilding.⁹ In the postcolonial scenario, massive socio-ecological disasters have invited scientists to advocate traditional ecological methods to realise and preserve sustainable relations between human societies and nature.¹⁰ Today, biodiversity conservation faces multipronged challenges from anthropogenic agents that ultimately call for increased attention to the sustainable use of resources.¹¹

During the 1980s, the two major crises that emerged in Asian societies were the ecological crisis and the risk to life support systems through damage of natural resources like land, forests, water, genetic resources and the loss of social structures.¹² The 1980s saw the emergence of writings on traditional knowledge systems and approaches for employing traditional ecological knowledge (TEK) and Western science in college and university research and educational

⁶ Simon Thorn, Sebastian Seibold, Alexandro B. Leverkus, Thomas Michler, Jörg Müller, Reed F. Noss, Nigel Stork, Sebastian Vogel, and David B. Lindenmayer, "The Living Dead: Acknowledging Life after Tree Death to Stop Forest Degradation," *Frontiers in Ecology and the Environment* 18, 9 (2020) 1-8, 1. doi:10.1002/fee.2252.

⁷ Pope Francis, *Laudate Deum*, 8.

⁸ Stephen R Kellert, *Birthright: People and Nature in the Modern World*, New Haven and London: Yale University Press, 2012, ix.

⁹ Oliver Springate-Baginski and Piers Blaikie, *Forests, People and Power: The Political Ecology of Reform in South Asia*, London: Earthscan, 2007.

¹⁰ Gloria Snively, "Honoring Aboriginal Science Knowledge and Wisdom in an Environmental Education Graduate Program," In *Traditional Ecological Knowledge and Natural Resource Management*, edited by Charles R Menzies, London: University of Nebraska Press, 2006, 195-220.

¹¹ Vikram S Negi, Ravi Pathak, Shinny Thakur, Ravindra K. Joshi, Indra D. Bhatt, and Ranbeer S. Rawal, "Scoping the Need of Mainstreaming Indigenous Knowledge for Sustainable Use of Bioresources in the Indian Himalayan Region," *Environmental Management* 72, 1 (2023) 135-46. doi:10.1007/s00267-021-01510-w.

¹² Vandana Shiva, "Introduction," In *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics*, Kentucky: University Press of Kentucky, 2016, 11-17.

programmes.¹³ Among the indigenous communities, TEK exists worldwide, holding 80 percent of biodiversity and 11 percent of world forest land.¹⁴ Indigenous people have been co-existing with nature in different habitats. Indigenous peoples are custodians of woodlands, rivers, seas, oceans, ice, peatlands, deserts, prairies, savannas, hills and mountains.¹⁵ Sustainability endeavours worldwide need to include indigenous people in forest development and conservation.¹⁶ Indigenous ecology has set the tribals apart from the manipulative industrial economy. Traditional ecological relationship styles are gradually gaining global recognition. Indigenous people usually relate to various ecosystems through traditional ecological knowledge and spirituality.¹⁷ Spirituality is pursuing meaning and purpose through a connection to the world beyond our selves – a connection with nature.¹⁸

In India, indigenous people are called Scheduled Tribes.¹⁹ The Scheduled Tribes are termed ‘Adivasis’, which means indigenous people. The term *Kirata* indicated the wild non-Aryan tribes in the Himalayan mountains and Northeast areas of India who were of Mongoloid origin.²⁰ Article 366 (25) of the Constitution of India states, ‘Scheduled Tribes means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this Constitution.’²¹ There are over 730 Scheduled Tribes notified under

¹³ Priya Verma, Karen Vaughan, Kathleen Martin, Elvira Pulitano, James Garrett, and Douglas D. Piirto, “Integrating Indigenous Knowledge and Western Science into Forestry, Natural Resources, and Environmental Programs,” *Journal of Forestry* 114, 6 (2016) 648–655, 649. doi:10.5849/jof.15-090.

¹⁴ Sobrevila C, *The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but often Forgotten Partners*, The World Bank, Washington DC: The World Bank, 2008.

¹⁵ Dwayne Mamo, *The Indigenous World 2020*, 2020.

¹⁶ FAO “FAO Policy on Indigenous and Tribal Peoples,” Rome: Fiat Panis, 2010, 4.

¹⁷ Winona LaDuke, “Traditional Ecological Knowledge and Environmental Futures,” *Colorado Journal of International Environmental Law and Policy*, 5 (1994) 127–48.

¹⁸ Kellert, *Birthright: People and Nature in the Modern World*, xii.

¹⁹ Katrine Broch Hansen, Kathe Jepsen, and Pamela Leiva Jacquelin, *The Indigenous World 2017*. Copenhagen: Transaction Publishers, 2017.

²⁰ B K Roy Burman, “Indigenous and Tribal Peoples in World System Perspective,” *Stud. Tribes Tribals* 1, 1 (2003) 7–27, 19.

²¹ Springate-Baginski, O, M Sarin, S Ghosh, P Dasgupta, I Bose, A Banerjee, K Sarap, et al., “Redressing ‘historical injustice’ through the Indian Forest Rights Act 2006: A Historical Institutional Analysis of Contemporary Forest Rights Reform,” In *Research Programme Consortium for Improving Institutions for Pro-Poor Growth*, 2009, 1–30. www.ippg.org.uk

Article 342 of the Constitution of India, constituting approximately 8.6 percent of the population of India, numbering around 10.4 crores.²² The Scheduled Tribes of India are generally poor, live in the periphery, and are almost always associated with forests. A bulk of the Scheduled Tribe population is concentrated in the western, central, eastern belt covering the nine States of Gujarat, Rajasthan, Maharashtra, Madhya Pradesh, Chhattisgarh, Jharkhand, Andhra Pradesh, Odisha, and West Bengal. Nearly 12 percent of Scheduled Tribes in India live in the Northeastern regions.²³

Indigenous communities in Northeast India offer invaluable insights into environmental stewardship, sustainable living practices, and biodiversity conservation. The Northeast mountains are young rock formations elevated by the Tertiary orogeny of the Himalayas from the shallow bottom of the Tethys Sea.²⁴ The Northeast States consist of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. The tribals of Northeast India have adapted themselves to the varying environmental conditions using their centuries-old practical know-how.²⁵ Jhum cultivation is the most prevalent mode of agriculture in high-mountain villages. Jhum cultivation is a popular agricultural method governed by a set of customary rules - from site selection and clearing of forests to the harvest of crops.²⁶ Jhumias prefer East facing areas followed by West facing, and North facing were least preferred due to the shadowing effect in hilly regions.²⁷ Therefore, the jhumias carefully select their

²² Press Information Bureau, "Year End Review 2022," 2022.

²³ Virginius Xaxa, Usha Ramanathan, Joseph Bara, Kamal K Misra, Abhay Bang, Sunila Basant, and Hrusikesh Panda, "Report of the High Level Committee on Socio-Economic, Health and Education Status of Tribal Communities of India," New Delhi: Ministry of Tribal Affairs, 2014.

²⁴ Dipankar Chakraborti, Ae E Jayantakumar, Singh Ae, Bhaskar Das, A E Babar, Ali Shah, Ae M Amir, et al., "Groundwater Arsenic Contamination in Manipur, One of the Seven North-Eastern Hill States of India: A Future Danger," 2008. doi:10.1007/s00254-007-1176-x.

²⁵ A.N.M. Irshad Ali and Indranoshee Das, "Tribal Situation in North East India," *Studies of Tribes and Tribals*, 1, 2 (2003) 3141-3148. doi:10.1080/0972639x.2003.11886492.

²⁶ Rajarshi Dasgupta, Shalini Dhyani, Mrittika Basu, Rakesh Kadaverugu, Shizuka Hashimoto, Pankaj Kumar, Brian Alan Johnson, et al., "Exploring Indigenous and Local Knowledge and Practices (ILKPs) in Traditional Jhum Cultivation for Localizing Sustainable Development Goals (SDGs): A Case Study from Zunheboto District of Nagaland, India," *Environmental Management*, 72,1 (2003) 147-159, 151. doi:10.1007/s00267-021-01514-6.

²⁷ Pentile Thong, Rocky Pebam, and Uttam Kumar Sahoo, "A Geospatial Approach to Understand the Dynamics of Shifting Cultivation in Champhai District of Mizoram,

jhum fields that can potentially yield an excellent harvest to sustain life and enhance meaningful social relations.

Northeast India represents unique biodiversity, societies and cultures. Although I use homogenous terms like 'Northeast' and 'tribals', the various ethnic tribes in Northeast India are diverse and unique in their own way. The Constitution of India has provided protective discrimination to the tribals with privileges to mainstream them. At the international level, Article 31.1 of UNDRIP states that 'Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts'. Traditional ecological knowledge of tribals also would mean the human variety consisting of social worlds – primitive and modern.²⁸ This study provides some indigenous ecological traditions of the tribals in Northeast India.

Methodology

The author has incorporated primary data obtained through in-depth interviews, participatory rural appraisal (PRA), and relevant secondary data about indigenous knowledge of the tribals in Northeast India.

Findings

There is environmental equilibrium when all components are complementary to each other. Radhakamal Mukerjee defines human ecology as a 'systematic study of plant, animal and human communities, which are systems of correlated working parts in the organisation of the region'.²⁹ As part of the survival mechanism, primitive societies often uphold a strong interrelation between nature and human beings. To a tribal, nature includes life, society, religion

North-East India," *Journal of the Indian Society of Remote Sensing* 46, 10 (2018) 1713–1723, 1721. doi:10.1007/s12524-018-0832-9.

²⁸ C Wright Mills, *The Sociological Imagination*, New York: Oxford University Press, 2000.

²⁹ Radhakamal Mukerjee, *Regional Sociology*, New York: The Century Company, 1926.

and economy.³⁰ This symbiotic relationship needs attention, and it is based on indigenous wisdom and traditional knowledge.³¹ Tribal communities believe in the pervasive spirit-presence in the cosmos.³² They see and believe in the presence of God in natural elements around their habitat. With this belief, they work and sustain themselves with the natural resources of the earth. Human history records cultures associated with the belief in the supernatural.³³ Human beings' respectful relationship with animals and plants has not disappeared even with the progress of science and technology.³⁴ As an environmental behaviour, there is a need to curtail human activities and accord the rights of plants, animals, habitats, green agenda, wood and water conservation, silviculture, the use of forests for subsistence, and allotment of national parks.³⁵ Tribals in various parts of the world symbolise isolation from urban areas, being self-contained in particular regions, socially homogeneous, and possessing a primitive social formation.³⁶

In India, our ancestors were conscious of the symbiotic relationship between the bio-physical ecosystem, which is considered complementary.³⁷ Traditional ecological knowledge (TEK), developed and maintained for ages, is gaining global recognition for its environmental conservation and sustainable utilisation.³⁸ Various

³⁰ P Deb Burman, Laitpharlung Cajee, and D. D. Laloo, "Potential for Cultural and Eco-Tourism in North East India: A Community-Based Approach," *WIT Transactions on Ecology and the Environment*. 102 (2007), 715-724, at 717. doi:10.2495/SDP070692.

³¹ Daniel Christian Wahl, "Valuing Traditional Ecological Knowledge and Indigenous Wisdom," *Age of Awareness*, 2017. April 23. <https://medium.com/age-of-awareness/valuing-traditional-ecological-knowledge-and-indigenous-wisdom-d26ebdd9e141>.

³² S Ignacimuthu, *Environmental Spirituality*. Mumbai: St Paul's, 2010.

³³ Michael H Barnes, *In the Presence of Mystery: An Introduction to the Study of Human Religiousness*. Connecticut: Twenty-Third Publications, 2000.

³⁴ Sivakumar K.P, Akhila S Nair, and Jaya D.S, "Indigenous Reverence for Environment: A Review on Sacred Groves in India," In *International Conference on Indigenous Initiatives for Environment and Development*, Ambo: Micro Business College, 2014, 90-104.

³⁵ Ramachandra Guha, *Environmentalism: A Global History*, New Delhi: Penguin Books, 2014.

³⁶ André Béteille, "The Idea of Indigenous People," *Current Anthropology*, 39, 2 (1998) 187-191, 187. doi:10.1086/204717.

³⁷ M Amirthalingam, "Sacred Groves of India - An Overview," *International Journal of Current Research in Biosciences and Plant Biology* 3, 4 (2016) 64-74, 64. doi:10.20546/ijcrbp.2016.304.011.

³⁸ Ashmita Das, Nihal Gujre, Rajkumari Jobina Devi, Latha Rangan, and Sudip Mitra, "Traditional Ecological Knowledge Towards Natural Resource Management,"

tribes and sub-tribes of Northeast India have preserved several forest patches and individual trees due to their belief in nature worship. These tribes or indigenous people also trace their origin and historical migration to natural elements in nature. TEK is expressed through their stories, festivals, feasts, and agricultural practices.

In Northeast India, much of the Kuki traditional practices are found in oral traditions, namely myths, stories, songs, and proverbs. Oral traditions generated from memories ultimately construct culture and identity. Oral stories represent cultures and temperaments coloured with local narratives handed down from generation to generation.³⁹ One indigenous ecological practice is that the Kukis believe bloodshed defiles Mother Earth, which would bring calamities to the villagers. For example, if two friends set out for hunting, fishing, or a journey and an accident happens, the surviving person can narrate the truth or confess his mistake. If the confession is genuine, he is forgiven, but if the story is doubtful, village-level prosecution begins. Any bloodshed must be immediately resolved by shedding the blood of an animal (pig, mithun), and a peace meal must be arranged at the village chief's house.

The Kuki people take oaths using natural elements like mud, water, animals, etc. Oath-takings were usually conducted during disputes over property, animal ownership, land, murder, hunting accidents, theft, and sexual promiscuousness. A participant in PRA5 said, 'Swearing by mud is done in times of field disputes, and fencing disputes, land disputes. If the person is right, he lives; if the person is wrong, he dies.' Sometimes, a curse is invoked upon oneself to prove one's innocence. A participant in PRA4 said, 'May I fade like the hairs of a mithun if I am wrong.'

The Kukis use ecologically available herbs and tree bark for medicinal purposes to treat ailments. Participant HH13 said, white *Songko* (*Erythrina indica*) bark is chewed or smashed to a pulp, decocted water is gulped, and the solid residue is spread around a person possessed by *kaose* (malevolent spirit). Participant TT17 said,

In *Sustainable Agriculture and the Environment*, edited by Muhammad Farooq, Nirmali Gogoi, and Michale Pisante, 2023, 275–94. doi:10.1016/B978-0-323-90500-8.00019-1.

³⁹ Stuart Blackburn, "Oral Stories and Culture Areas: From Northeast India to Southwest China," *South Asia: Journal of South Asia Studies*, 30, 3 (2007) 419–37. doi:10.1080/00856400701714054.

‘The village priest took care of the sick. Whether day or night, if he was summoned, he would go to the aid of people.’

The Kukis have their traditionally reserved forest immediately surrounding their villages. This tradition is called *gam khet*, a safeguard to prevent heavy wind, wildfire, landslides and an immediate reserve of resources. The concept of *gam khet* is in every traditional Kuki village. Participant FH25 said, ‘The reserved forest around the village serves as a buffer zone during a wildfire. If a new family settles in the village, people can easily get house construction materials from the *gam khet*’. Within the community-reserved forest, villagers can collect dry trees for firewood and conduct foliage for subsistence.

The Kuki community resorts to jhum field cultivation for subsistence. While trying to cultivate a forest area, people pay utmost attention to not disturbing any animal trail. Participant SM2 said, ‘If the animal footpath is perpendicular to the shape of the field, then the field is abandoned so as not to disturb the animal trails. But if the animal pathway is either from left to right or vice versa (horizontal), the field can be cultivated.’ The ecological knowledge is that animals move horizontally for food while they move up (perpendicular) in the mountains for shelter and breeding. The Kukis believe a spirit inhabits every tree, so they give information before cutting it. Hinting at the possible presence of unseen spirits on the tree, participant NH3 said, ‘Kindly move aside, I am going to cut this tree,’ or before setting fire to the jhum field, I usually say, ‘I am about to burn the field, kindly gather in a safe place.’

In Manipur, the Meiteis, who are mainly Vaishnavite Hindus, primarily live in the alluvial plains of the valley. With the little forest areas attached to the valley portion, they have a practice called *Umanglai* (forest god) associated with deities locally called by varied names such as *Ebudhou Pakhangba*, *Konthoujam Lairembi*, *Chabugbam* and *Chothe Thayai Pakhangba* (Amirthalingam 2016). Sacred groves become indigenous spiritual relationships between humans and gods.⁴⁰ All these forests are preserved to a certain extent with reverence and the belief that these areas are guarded and inhabited by various deities.

⁴⁰ Ashalata Devi Khumbongmayum, M. L. Khan, and R. S. Tripathi, “Sacred Groves of Manipur, Northeast India: Biodiversity Value, Status and Strategies for Their Conservation,” *Biodiversity and Conservation*, 14,7 (2005) 1541-1582, 1542. doi:10.1007/s10531-004-0530-5.

The Nagas of Northeast India are tribals who primarily transmit their ecological knowledge in oral tradition. In Nagaland, there is evident attention from global donors and conservation oriented non-governmental organisations (NGOs) to integrate communities' social capital with the indigenous ecological knowledge of jhumias.⁴¹ Fear and respect for natural forces have encouraged them to protect and preserve natural resources.⁴² In Nagaland, the Khonoma, Luzuphuhu, Chizami and Sendenyu forests and wildlife reserves are indigenous initiatives.⁴³

Arunachal Pradesh is known for its biodiversity concentration, isolation and multiplicity of tribal ethos and sacred grove culture.⁴⁴ The two types of sacred groves found in the Lower Subansiri District of Arunachal Pradesh are *Lyago* - a traditional sacred grove conserved by the tribesmen for ages and Shiva Lingam at Kardo Forest conserved due to the influence of Hindu culture.⁴⁵ In the *Lyago*, biotic interference is prohibited - complete prohibition to collect dead or living trees or plants. It is believed that if a person knowingly or unknowingly collects or cuts any part of a plant, a bad omen may occur to his family members. The sacred groves managed by Lamas and the Mompa tribes are traditionally attached to the Buddhist monasteries of Gompa Forest Areas.⁴⁶

The Khasis, Garos, and Jaintias of Meghalaya have their indigenous practice of sacred groves, a museum of giant trees, a medicinal plant sanctuary, watershed regulators, a paradise for nature lovers and an

⁴¹ Debojyoti Das, "Modernity Lacks Care: Community-Based Development and the Moral Economy of Households in Eastern Nagaland," *Journal of South Asian Development*, 15, 1 (2020) 97-116. doi:10.1177/0973174120920392.

⁴² Krithika Sridharan, Tejas Pawar, Aman Sharma, and Shiva Ji. 2023, "The Architecture of the Ao Nagas: Culturally Deep-Rooted to Venerate and Conserve the Local Biodiversity," In *Smart Innovation, Systems and Technologies*, 342 (2003) 1115-1127. doi:10.1007/978-981-99-0264-4_91.

⁴³ Ashish Kothari, "Community Conserved Areas: Towards Ecological and Livelihood Security," *The International Journal for Protected Area Managers*, 16, 1 (2006). www.povertyandconservation.info.

⁴⁴ G Murtem and Pradeep Chaudhry, "Sacred Groves of Arunachal Pradesh: Traditional Way of Biodiversity Conservation in Eastern Himalaya of India," *Journal of Biodiversity Management & Forestry* 3,2 (2014), 1-14, 1. doi:10.4172/2327-4417.1000125.

⁴⁵ Pradeep Chaudhry and G. Murtem, "Role of Sacred Groves, Value Education and Spirituality in Conserving Biodiversity with Special Reference to Arunachal Pradesh State of India," *International Journal of Society Systems Science*, 7, 2 (2015), 151-180, 154. doi:10.1504/ijsss.2015.069736.

⁴⁶ Amirthalingam, "Sacred Groves of India - An Overview," 67. doi:10.20546/ijcrbp.2016.304.011.

environmental laboratory.⁴⁷ The Garos have bamboo reserves dedicated to deities on which they perform ancestral worship on ancient monoliths. There are 101 sacred groves in Meghalaya known as *Law Lyngdoh*, *Law Niam* and *Law kyntang*, depending on where they are situated.⁴⁸

The Mizo people of Mizoram believe that the natural world is created and animated by spirits and gods wherein the forests and animals are their property.⁴⁹ To the Mizo cultural ethos, the sacredness of the plants reflects the unity with nature that generates a sense of communion with the divine, which is the source of life. Each Mizo village has its own sacred groves, locally known as *Ngawpui*, which may extend to a few hectares.⁵⁰

In the state of Assam, the Bodo and Rabha tribes inhabiting the plains and foothills of Western Assam practice the traditional method of maintaining sacred groves called *Than*, while the Dimasa tribes of the North Cachar hills call *Madaico*.⁵¹ Tribals evolve their cultural heritage and spirituality from the surroundings of their habitat. Indigenous beliefs and practices find their manifestation in festivals, dances, songs and worldviews.

Discussion

For centuries, western Christendom exercised the Doctrine of Discovery over non-Christian territories. Christians' notion of occupancy rights over non-Christian territories is unacceptable to the twenty-first-century populace. An inordinate desire to control nature is a dominant characteristic of Judeo-Christian religious tradition that has consistently supported human domination over the natural world.⁵² Tribal lands and cultures have been occupied and modified by external forces, thereby compromising the traditional ecological knowledge of the tribals to a certain extent.

⁴⁷ S Jeeva, B P Mishra, N Venugopal, L Kharlukhi, and R C Laloo, "Traditional Knowledge and Biodiversity Conservation in the Sacred Groves of Meghalaya," *Indian Journal of Traditional Knowledge*, 5, 4 (2006) 563–68.

⁴⁸ Amirthalingam, "Sacred Groves of India - An Overview," 70. doi:10.20546/ijcrbp.2016.304.011.

⁴⁹ Hmingthanzuali and Rekha Pande, 2009, "Women's Indigenous Knowledge and Relationship with Forest in Mizoram," *Asian Agri-History*, 13 (2): 129–46.

⁵⁰ Amirthalingam, "Sacred Groves of India - An Overview," 70. doi:10.20546/ijcrbp.2016.304.011.

⁵¹ Amirthalingam, "Sacred Groves of India - An Overview," 67.

⁵² Kellert, *Birthright: People and Nature in the Modern World*, 81.

At the local level, tribals respect the forest and treat it as equal or more than equal. To them, there is no dichotomic separation between the physical and the spiritual. They see the divine in the physical elements around them. This is their spirituality that prompts their stewardship of creation. Many of the tribals of Northeast India have adopted Christianity. They are slowly becoming aware of the Genesis creation accounts and the Wisdom literature in the Bible, witnessing the symbiotic relationship between humans and nature.⁵³ Even before they adopted Christianity in the later part of the nineteenth century, they had a spirituality of connecting themselves to the unseen spirits of the forests and the natural elements around them. The tribal worldview sees everything around them as a shared space between humans and non-humans.

To the tribals, land is not just a resource; it symbolises their existence and cultural origin. Land is a respectable element in their worldview. At times of indecisive judgement in life and death, they invoke natural things in the forest to give them a verdict over who is right and who is wrong. At times, scientific, infrastructural and social development hamper human-nature relationships in tribal areas. Development models have drastically impacted the lives of people with low incomes in post-independent India. Some people benefit, while others have to pay the cost of so-called developmental work.⁵⁴ Development projects have restricted tribal access to natural resources and affinity with nature.

Tribals find meaning in their relationship with nature. There is a need to encourage tribal forest conservation methods such as sacred groves, association of forests with spirits, and respect for natural elements. The traditional way of conserving forests is economical and lasting. Since humans and non-humans share the same ecosystem, judicious use of natural resources is paramount to humans. In the Northeast region of India, various tribals live in the hills closely associated with nature. Tribals have their ecological prudence in using natural resources for their survival. They have been in these areas for centuries, and they are still able to get necessary resources from nature based on their ecological knowledge. Despite their profound

⁵³ Vimal Tirimanna CSsR, "The FABC and Ecological Issues," *Asian Horizons*, 6, 2 (2012) 287-308, 293.

⁵⁴ Fernandes, Walter, "Development-Induced Displacement," In *The Routledge Companion to Northeast India*, edited by Jelle J.P. Wouters and Tanka B. Subba, London and New York: Routledge Taylor & Francis Group, 2023, 133-37, 133.

understanding of environmental conservation, indigenous communities in Northeast India face numerous challenges and threats, including deforestation, habitat loss, land degradation, and encroachment by outside forces such as industrial development programmes. Economic development projects, such as large-scale infrastructure development and extractive industries, often disregard indigenous rights and lead to environmental degradation, disrupting traditional livelihoods and cultural practices.

Conclusion

Establishing a deeper affiliation with nature is needed. Locally available tribal ecological prudence could enhance ecological sustainability. It is necessary to teach the ethos of seeing the unseen spirits in nature, thereby promoting respect and co-existence. Indigenous ecological prudence could be a component of nation-state planning. A universal solution is impractical, but countries and societies have the administrative obligation and authority to make environmental strategies beneficial for all. Each country can utilise local environmental knowledge and practices for sustainable livelihood. Adoption of indigenous ecological traditions for environmental sustainability is cost-effective and can have major implications for society. Indigenous people's knowledge, experiences and perspectives about the environment must be considered for ecological sustainability.