

## “SUSTAINING THE PAST: INDIGENOUS KNOWLEDGE AND ENVIRONMENTAL MANAGEMENT IN TRIBAL SOCIETIES.”

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### Abstract

The indigenous knowledge system of the tribes of Wayanad represents a symbiotic relationship between humans and nature, passed down through generations as oral traditions and practices. This paper explores the unique aspects of tribal house construction, medicine, food practices, and agricultural techniques in Wayanad, a region known for its rich biodiversity and cultural heritage. The study emphasizes how these practices are rooted in sustainability, community welfare, and the preservation of natural resources. The paper also highlights the challenges these knowledge systems face due to modern development and the need for their preservation in the context of global environmental concerns.

Key words: Indigenous Knowledge, Tribes, Environment, Ethno Medicine, Conservation

Indigenous or traditional knowledge refers to the knowledge and practices developed and maintained by people with long histories of close interaction with their natural environment. Indigenous knowledge is a community-based knowledge system. It is a dynamic system developed, preserved and refined by different succeeding generations through art and oral traditions. It is manifested in all spheres of human activity such as art, architecture, literature, health, education, agriculture etc. Modern science and technology recognise the value of Indigenous knowledge system.<sup>1</sup>

In Wayanad, the tribal communities, including have nurtured knowledge systems that reflect their adaptation to the region's forested and hilly terrain. These systems prioritize sustainability and biodiversity conservation, contributing to their identity and resilience in the face of external influences.

Wayanad, one of the hill stations of Kerala, is located at about 76 km east of the coastal city Kozhikode. It lies at an elevation of 700 to 2,100 m above sea level.<sup>2</sup> The name, Wayanad, is believed to have been derived from the word, *Vayalnadu*, meaning the land of paddy fields. This district has the highest concentration of tribals in Kerala. They form 18.5% of the total population of the district (As per the census report of 2011). They can be prominently classified into Panyias, Adiyas, Kattunayakans, Kurichiyans, Kurumas, Ooralis, Uraali Kurumas etc.

The knowledge systems of these communities uniquely blend practical wisdom as well as skills, facts and knowledge passed down over generations. Each tribal sect has its own cultural heritage, developed over years of understanding, perception, and lived experience. In addition, each tribe has its own narratives about its relationship with nature and natural phenomena. The tribal communities have rich oral traditions—songs and stories on the history of the tribe, myths regarding their origins, and tales of gods. Oral traditions can be rich sources for understanding a community's origin, history, experiences, expressions, ideas of divinity and perspectives about life and death.<sup>3</sup>

Tribals are also known for their indigenous cultivation practices. They followed slash and burn (shifting) cultivation known as *punam* cultivation. Even now, most paddy cultivation in the district is done by the Kurichiya and Kuruma communities. The agro-climatic condition of

Wayanad is generally favourable for rice production. Organic manure made of cow dung and decomposed plant residue is added to fertilise the land. Traditionally, planting the sapling is a ritual and is celebrated by festivities in this indigenous community. The celebration Thulampathu or Putthari (meaning 'new rice') is significant for this paddy farming culture.<sup>4</sup> The songs like Kambalanatti belongs to the agricultural practices of tribals.

It is noteworthy that indigenous methods of farming have helped to protect crops, including rice, from diseases. In addition, traditional methods of farming are more sustainable in the long run. Traditionally, the Kurichiya community preserved paddy seeds like treasure for the following generations. Kurichiyas cultivate different varieties of scented rice, like chomala, gandhakasala etc. The seeds are wrapped in hay and stored in way that they don't germinate for close to three years in comparison to hybrid seeds that have a shelf life of only three months. They also vouch for a regular practice of seed purification where they cultivate different kinds of seeds to avoid cross-pollination of plants.

Cheruvayal Raman, a native of Mananthavady in Wayanad and a member of the Kurichiya community, is renowned for his dedication to preserving indigenous rice varieties. He is recognised as a heritage paddy preserver by the Government of Kerala, Cheruvayal Raman has preserved many rare and medicinal rice varieties, by cultivating them in his field. Karuthan and Pena are the *wayanadan kara nellu* (upland paddy) preserved by him. Raman is also of the opinion that traditional rice varieties have medicinal qualities too, if cultivated organically. Veliyan is a traditional paddy variety used in Wayanad, with a maturity period of above 200 days and resilient in adverse weather conditions. Kalladiaryan, Thavalakannan, Punnatan Thondi, and Onamottan can withstand drought.

Tribals treat paddy fields are environment-friendly as they not only provide natural drainage for flood waters, but they are also crucial for preserving a diverse range of flora and fauna. They follow the lunar calendar to schedule his agricultural activities, including preparing the land, sowing seeds, and harvesting rice. For example, it is preferable to plant saplings on full moon days, as rodents are unlikely to come out on those nights and will not attack the young plants. These indigenous agricultural practices have not been written down or documented in any form, though there is an increased awareness of the importance of these knowledge systems

These tribes hold vast knowledge about indigenous water management and harvesting practices. Traditionally, tribes used bamboo drip irrigation to water their fields. Mullu Kurumas, who are skilled in the use of bamboo, reside in the panchayats of Noolpuzha, Kidanganad, Muppainad, Muttill, Parakkadi, Thirunelli, and Mananthavady. *Panam keni* is a special type of traditional well used by the Mullu Kurumas as their main source of water. Kenis are located either in the corners or in the middle of paddy fields, or near forests. They are of cylindrical in shape, the bottom stem portion of large palms are used to make wooden cylinders after retting them in water for a long time so that the inner core gets rotten and degraded and the hard-outer layer remains. For the Mullu Kurumas, kenis are sacred and should be approached with the greatest respect and that they approach it barefoot. Keni is the property of the hamlet, not any one's property. The keni system is an example of how water was traditionally conserved.<sup>5</sup>

Another peculiarity of the tribal life is their holistic herbal medicine. The tribes possess unique knowledge about the use of many wild flora and fauna in traditional medicine which

has developed over generations of forest dwelling; most of which are either lesser known or hitherto unknown to the outside world. Many tribal groups have been using several plant or animal products for medicinal preparations and these medicines are known as ethno medicine.<sup>6</sup> Kurichiyas uses a fried paddy mixture to cure injuries and reduce leg swelling. According to them scratches on the foot can be treated with boiled paddy. They have no side effects.

Uralikurumars are found in southern Wayanad and Vythiri taluk. They are the healers of Asthma, respiratory trouble, skin problems, diabetes, eye, ear, nose problems etc. Paniyas have remedies for diseases like Asthma, respiratory trouble, skin problems, diabetes, eye, ear, nose problems, piles, snake bites, tonsillitis, epilepsy etc. Vellan Vaidyan a tribal healer in Thirunelli claims to possess a drug that can cure even cancer. Kelu vaidyar is famous for the treatment of asthma, Diabetes, and skin diseases like psoriasis and eczema. However, the divine blend of these therapeutic plants remains as a tribe secret, which is hardly unveiled. They believe that the medicine loses its curing power if the details of ingredients are revealed. Neem, tulsi, and wild turmeric are the main ingredients of their medicine.

Food practices among the tribes of Wayanad reflect a deep connection with nature. The medicinal value of food is a significant aspect of their cuisine, with certain preparations specifically used for therapeutic purposes. Wild tubers, jackfruit, mushrooms, and leafy greens are staple items, supplemented with rice and millets cultivated using traditional methods. Seasonal variations influence food habits, ensuring dietary diversity and nutritional balance.<sup>7</sup> Cooking methods involve minimal processing, preserving the nutritional integrity of the ingredients. The leafy vegetables are a constant part of their diet, which include Kodangal, Muyal Cheviyan, Kozhuppa, Vassala Cheera, Kuppa Cheera, Mullan Cheera, Kadaladi, Vayal Chulli, Churuli, Thal, Thakarta etc. Some of the rich starch providing tubers that dig out from forests are Venni Kizhang, Kettu Noora, Kavala Kizhang, Nara Kizhang and Nukappa Kizhang.

Tribals usually steam bake the tubers and eat it with chutney, made of green chilly crushed in oil with salt or they consume it with honey whenever it is available. When crab or fish is caught from the streams it is a side dish. In some places, the Kurichiyas use arrows for shooting fresh water fish.<sup>8</sup> Women usually possess knowledge about each and every plant, mushroom, tuber, fish and crab, its location and the season of availability and they walk considerable distance in search of the wild food.

They have the habit of saving and preserving a portion of the wild food for future consumption when it is available in abundance. For example, they dry mushrooms hanging suspended over the fireplace, keep the juice of wild mango in bottles for preparing curry and store the nuts of wild jack fruits and other nuts and let children learn how to preserve the wild food for later use. Here we can see a smooth transfer of knowledge from one generation to another generation takes place to ensure the sustainability.

The traditional houses of the Wayanad tribes are masterpieces of sustainable architecture. Built using locally available materials such as bamboo, thatch, mud, and wood, these structures are designed to withstand the region's heavy monsoons and warm summers. The tribes collect mud from crab hole for smoothening floor of their houses.<sup>9</sup> This not only improves the aesthetic quality but also makes it easier to clean and maintain. They use this mud for making hearths because it has heat resistance capacity. These materials are biodegradable and can be

replenished by nature. Additionally, these houses are strategically located to minimize environmental damage, often nestled in forest clearings or near water sources.

### Conclusion

The indigenous knowledge system of the tribals of Wayanad is a testament to sustainable living and cultural resilience. Their practices in house construction, medicine, food, and agriculture offer valuable lessons for addressing contemporary global challenges such as climate change and biodiversity loss. Preserving these traditions requires collaborative efforts involving tribal communities, policymakers, and researchers to ensure their relevance and survival in the modern world.

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<sup>1</sup> For more details see Berkes.F, Sacred Ecology (3<sup>rd</sup> ed.) Routledge, 2012, Brokensha,D, Warren, D.M, &Werner, O, Indigenous Knowledge Systems : A reader, University Press of America, 1980

<sup>2</sup> Ward and Conner, A Descriptive Memoir of Malabar (1906), Thiruvananthapuram, 1995, P.179

<sup>3</sup> O.K Johnny, Wayanad Rekhakal(mal) Pappiyon, 2010, p.137

<sup>4</sup> Chacko D Kannottmodi, Kurichyarude Lokam, Kerala Bhasha institute, Thiruvananthapuram, 1994, p.55

<sup>5</sup> For details see “Keni- The Vanishing Wonder Well” Girish Gopinath, Journal of Geological Society of India, 2018, “Harvesing Water- The Traditional Way”. S Unnikrishnan Nair, LEISA India, 2013

<sup>6</sup> Dr. Jose Boban.K, Tribal Ethno Medicine: prospects and problems in Medicine and Society ,2012

<sup>7</sup> K. Mahadevan, G.Subramaniam, N Viswanathan, Life style, Health and Longevity of the Kurichias, in Discover Wayanad the Green Paradise,1995

<sup>8</sup> Edgar Thurston,Caste and Tribes of South India,, Madras, 1909, P.128

<sup>9</sup> Interview with Vellachi (80) tribal women, Pallikkunnu, wayanad, 5, April, 2021