



**Journal of Social Sciences  
and  
Management Research**



**Traditional Ecological Knowledge and Bonded Labour System**

**Abstract**

Traditional Ecological Knowledge (TEK) and the bonded labour system represent two critical yet often interconnected aspects of socio-economic and environmental issues in marginalized communities. It is from an interdisciplinary approach comprising of sociology, anthropology, social work and ecology. TEK encompasses the cumulative wisdom, practices, and beliefs developed by indigenous and local communities over generations regarding the sustainable management of natural resources and ecosystems. TEK is essential for the well-being of the communities. In contrast, the bonded labour system is a form of modern-day slavery where individuals are forced to work to repay debts, often under exploitative and abusive conditions.

This abstract explores the intersections between TEK and bonded labour, highlighting how indigenous communities with rich ecological knowledge are disproportionately vulnerable to economic exploitation and bondage. The displacement and exploitation of these communities not only perpetuate cycles of poverty and social injustice but also lead to the erosion of valuable ecological knowledge.

Understanding and addressing the intertwined issues of TEK and bonded labour require a holistic approach that values traditional knowledge and enforces socio-economic justice. Protecting and revitalizing TEK can empower communities, promote sustainable development, and break the cycle of bonded labour, ultimately contributing to both social and environmental sustainability.

---

Keywords: Traditional Ecological Knowledge, TEK, bonded labour, modern slavery, indigenous communities, sustainable practices, socio-economic justice.

**Author Names:**

- Mrs. T. Praisey Glory Bai (Research Scholar, School of Liberal Studies, CMR University, Bangalore, Karnataka)
- Dr. Vandana M V (Assistant Professor, Department of Sociology, School of Liberal Studies, CMR University, Bangalore, Karnataka).

**Definition of Traditional Ecological Knowledge**

Berkes (2000) defines Traditional Ecological Knowledge (TEK) as "A cumulative body of knowledge, practice, and belief, evolving through adaptive processes and transmitted through generations via cultural means, regarding the relationship between living beings (including humans) and their environment." In a research study done by Finn et al., (2017) delve into the concept of Traditional Ecological Knowledge (TEK) as a repository of indigenous wisdom, transmitted across generations through oral tradition, cultural practices such as artistic expressions, rituals, and the cultivation, harvesting, and preparation of traditional foods. Indigenous knowledge is deeply embedded in specific cultures and societies, passed down through oral narratives and ceremonial traditions. It also refers to the knowledge, practices and beliefs that indigenous communities have developed over generations through their interactions with the environment. It is unique to each community and is an essential tool for their survival, well-being and sustainable use of natural resources. Disciplines from anthropology and ethnobiology to systems ecology and resilience theory have demonstrated the contribution of TEK to improving livelihoods (Reyes-García et al. 2008).

**Bonded Labour System**

Section 2(g) of the Bonded Labour System (Abolition) Act, 1976, (BLSA), defines bonded labour as labour in lieu of a debt or social obligations when the labourer forfeits any one of the following rights: (1) minimum wage (2) fundamental right of movement, (3) right to

employment, or (4) right to sell his/her product at market price. In such cases, the District Magistrate is mandated to take positive action of rescue, release and rehabilitation of the victim and prosecution of the offender. People from Scheduled Tribes in rural areas are often lured with petty sums to work in labour-intensive units, and then treated like cattle. (Adivasis and the Indian State, 2019)

### **Relationship between TEK and Bonded Labour & SDGs:**

- Exploitation: Indigenous communities with rich TEK are often economically marginalized and vulnerable to bonded labour. Their traditional knowledge is undervalued, and they are forced into exploitative labour to survive.
- Loss of TEK: When individuals from these communities are trapped in bonded labour, they are often removed from their traditional environments and practices. This displacement leads to a loss of TEK as younger generations are unable to learn and continue traditional practices.
- Due to poverty, lack of education and limited access to resources, caste issues belonging to the lowest strata in the society, tribal people become vulnerable to the trap of cycle of bondage.
- SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent work and economic growth), SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action) and SDG 15 (Life on Land) do have connections between TEK and abolition of Bonded Labour System.

### **Irular Tribe:**

The Irular, also known as the Iruliga tribal group, is a close-knit Dravidian community found predominantly in the southern Indian states of Tamil Nadu, Kerala, and Karnataka. The name "Irular" in the Tamil language translates to "people of darkness," reflecting their deep ancestral connection to the land. As the second-largest tribe in Tamil Nadu, the Irular community is recognized as a Scheduled Tribe (ST) by the Government of India.

Traditionally, the Irular people prefer hillside dwellings, yet in recent times, they have adapted to living in the plains near the hills. Their traditional homes are ingeniously crafted using bamboo branches for the structure and roofing made from dry coconut and grass. However, the ecological impact of deforestation has led to a scarcity of bamboo, compelling the community to innovate their dwelling construction using locally available resources such as soil and stones.

The main occupation of the Irulars have been snake catching, rat catching and honey collection. They are skilled hunters, gatherers, understand and has the knowledge of animal behavior and their habitat. The government seeks help from the Irular people to collect the traditional medicinal plants from the forest as they are skillful in doing the job. In order to fulfill their food needs, they do hunt. By the order of the forest authorities, they left the top of mountain and started doing agriculture work for their needs. They cultivate Ragi, Samai and other agricultural crops. Though there are Irular landlords, due to shortage of rains, the cultivation is becoming less. They live close to the forest area and at times, their agriculture is being spoiled by animals like elephant etc...So they demand the forest authorities for electrical fence work and due to various challenges, they had started looking into other job opportunities like working in the construction sites, rice mill, brick making, wood cutting, cattle farming and domestic work.

According to 2011 census, there are about 23,116 households in Tamilnadu. In the research study conducted by Stanley & Dr. P.K. Muthukumar (2019), studies show that among the Irular tribe, nearly 83% are illiterate, 81% live below poverty line, 84% live under inadequate housing conditions and majority were involved in farming, mostly with insecure jobs, low income and indebtedness. A state-level survey on bonded labour (Sept 2016) revealed that most rescued bonded labourers comprising of 90% belonged to Irular tribes which is the biggest tribal group in Tamil Nadu. Due to nomadic in their nature and lacking basic amenities including livelihood, they easily fall into the debt trap.

---

**Irulars & Bonded Labour System: Case Study**

Irular tribe being a particularly vulnerable tribal group (PVTG) has a history of having faced violent displacement. So, they have started depending on wage labour for survival and many of them being forced to work as bonded labourers. When there are hardly any jobs in rural areas, they are often lured with petty sum to work in labour-intensive units and then treated like cattle.

Vani was just 12 years old when she began working at a brick kiln. She belongs to Irular tribe. Though she desired to pursue her education, her parents were struggling to manage the family needs as they were a family of six children. Unfortunately, Vani had to sacrifice her education and begin working to support the running of the family. She couldn't continue her studies after 5<sup>th</sup> standard. Due to poverty, she was pulled out of school with the question, *"How are you going to support the family if you only want to study more?"* Her family was in need of money to conduct her brother's wedding. Based on the oral agreement that both Vani & her brother's family would begin working at the kiln. It was Vani's brother's wedding that brought them to the kiln. The owner of the brick kiln was ready to give out nearly Rs. 45,000/- if all three of them (Vani, and the newlyweds) begin working at the kiln.

The circumstances that Vani's husband family into bonded labour were similar in nature, though they were recruited to work in this brick kiln at different times. In the case of her husband Raj, his grandfather and his parents were already working at the kiln when he joined them, reluctantly. Their marriage was deliberated by the brick kiln owner, who convinced both families that it was a good move. The kiln owner, devising it as a plan to retain the two labourers, explained how the respective family debts would continue to be paid off as Vani and Raj continued to work at the kiln.

Life in bondage was a painful experience. Her husband mentioned that his life was on thorns. Each and every second, living inside the brick kiln and working there was difficult for him. He questioned himself, *"Did I make a mistake of getting an advance?"* It was a

mental torture and indecent situation and felt bad to face others. Once his family got into the worksite, they used to work from 5am to 6pm. The owner does not send for them for any festivals (as a family....). Early in the morning around 3pm, his mother used to cook food. There was no electricity facility in the brick kiln. There was neither water nor bathroom facility. In the midst of their work, his mother used to run to gather firewood for cooking. As a family, they had a tough time together inside the brick kiln. They used to utilize the water that was brought to make bricks.

For 1000 bricks, they were promised to pay Rs. 600/-. As a family, they made about 10,000 bricks. But they were paid only Rs. 1000/week. The owner used to beat them and they were in fear. When they decided to leave, the owner mentioned that they had to repay Rs. 70,000/- in spite of not getting that amount as an advance. They were made to overwork inside the brick kiln. Even if a brick gets wet in the rain, they will be scolded. They can't sit and drink water even if they are thirsty. If there are any wastages while making bricks, they will be physically and verbally abused. During the rainy season, one of them should be there to take care of the bricks and no free time was given. Sleep time is from 9pm to 2am and then get up to go for work. Labourers in the kiln, who had been brought in from other places were also beaten and abused. The labourers had to forsake their liberty and their freedom of movement has been curbed. They are not given minimum wages and are given only minimal food for survival.

Vani had been working in the kiln for nearly five years and later, she was rescued by the government officials. This is a story that resounds in the lives of all bonded labourers and especially, the labourers belonging to Scheduled Tribes live in continuous fear of violence from their employers.

#### **Learnings from the case study and field observations:**

From the case study of Vani, we can understand that poverty and helplessness of labourers are usually believed to be the direct cause of such exploitation of labour. If Vani's family would have got a sustainable work opportunity based on their skill set which are specific to

---

their tribes, they would have not ended up in getting trapped with the bonded labour system. When they are violently forced to leave from their geographic locations, they tend to become more vulnerable and lose their confidence in taking up new jobs in which they are not familiar.

**Observations from the field:**

1. For the survivors of bonded labourers in order to rebuild their life or in their journey of rehabilitation, obtaining a sustainable job is very crucial so that they remain strong, resilient and won't fall back into the prey of bondage. After rescue, when some of bonded labourers were given training to take up company jobs, hardly few survivors stayed in that new field. They felt so uncomfortable in switching over to the company jobs of where they have to wear uniforms, shoes or even coming to office on time.
2. A group of released bonded labourers who were residing in a particular village was offered a job in a garment export company. Once, when they had a village function, the entire community who were working that company took a day off even without informing their supervisor. They did not realize the importance of keeping their supervisor informed and how the company gets affected in case if they don't turn up as the production will be greatly under trouble. Later, they switched onto the agricultural jobs, NREGA jobs that were available in and around their community. They felt more comfortable rather than taking up the company jobs.
3. During the rehabilitation program for Vani, she and her husband preferred to take up the agricultural jobs in which they are skilled up and did not opt for company-based work. So, one of the key learnings during the rehabilitation process for any tribal community is that importance should be given to improvise their traditional knowledge so that they can interact with the environment enhancing its resource potentials without exhausting it. It informs about their community's self-identity,

how they understand themselves each other and how they fit in the wider world and thereby their self-esteem will be built on. It connects generations both living and long gone.

4. To protect the bonded labourers post-rescue, from further exploitation, the government in Tamil Nadu, India, has established an herb garden for families of the Irula tribal community in Chengelpet district. The garden provides an opportunity to cultivate and sell a diverse range of herbs, medicinal plants and fruit-bearing trees. Having secure job opportunities will prevent the released labourers from obtaining loans from unscrupulous lenders who prey on their vulnerability. This helps them along with the other vulnerable families earn a stable income.

### **Recommendations to Rehabilitation Program for Released Bonded Labourers:**

#### **1. Community Based Rehabilitation (CBR)**

CBR is based on the philosophy that rehabilitation is most effective when carried out in the place where the individual is situated (Rehabilitation Manual, 2015). The rehabilitation process is provided in the context of the participant's own community. This provides an opportunity for support systems to be established in their own setting, and collaborative arrangements made with other organizations, government officials and services that will continue.

#### **2. Skill Training & Livelihood**

As part of rehabilitation program, released bonded labourers are made aware about the local employment opportunities available to them, potential livelihood trainings and they are encouraged to choose based on their skills and strengths. For skill training/vocational training to be successful, there should be a match between the interest of the participant and the training which would in turn encourage and motivate them to sustainably stay in that job. (e.g. making of bamboo products, medicinal herbs).



### **3. Resilience to Rebondage**

Resilience is what gives people the emotional strength to cope with trauma, adversity, and hardship. Resilient people utilize their resources, strengths, and skills to overcome challenges and work through setbacks. Ungar (2013) defines resilience as both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways.

As a social worker, we need to identify their strengths both personally and as a community linking them with social support. They need to be treated with respect and dignity. They should be empowered to take decisions by themselves. During interventions, we should not only focus on what individuals need to change but also on aspects of the social ecology (environment) that needs to be changed so that new coping patterns are adopted.

### **Conclusion:**

Traditional knowledge can be preserved for future generations so that it does not disappear with the passing away of elders. Tribal groups can learn how their ancestors procured, processed resources and their relationships to other communities, other species and the cosmos. The released bonded labourers can learn to manage their own resources and TEK may help to find useful solutions to current problems in our lives and societies at large, sometimes with the combination with modern scientific and technological knowledge.

Both the Centre and State governments had earmarked funds exclusively for SCs and STs for promoting socio-economic empowerment and inclusive development including education, skill development, livelihood options, health infrastructure, availability of drinking water, provision of housing, electrification, road connectivity, toilets, etc. in coordination with the concerned Union Ministries and State line Departments. This needs to be utilized and executed towards the development of the tribal community.

---

Especially, when it comes to skill development and livelihood options, the government should consider Traditional Ecological Knowledge as it improves the livelihoods of indigenous communities. TEK empowers them by reducing their vulnerability to all forms of inequality and exploitation and it represents a holistic perspective that is uniquely local and tribally driven. Protecting and revitalizing TEK can empower communities and provide sustainable alternatives to exploitative labour practices. At the same time, enforcing laws against bonded labour and providing rehabilitation and support for affected individuals are crucial steps toward breaking the cycle of exploitation.

### References:

1. Adivasis and the Indian State: Tribal groups particularly vulnerable to bonded labour, strict enforcement needed to prevent exploitation. (2019, August 30). Firstpost. <https://www.firstpost.com/india/adivasis-and-the-indian-state-tribal-groups-particularly-vulnerable-to-bonded-labour-strict-enforcement-needed-to-prevent-exploitation-7257231.html>
2. Berkes, F., J. Colding, and C. Folke. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological Applications* 10:1251-1262. [http://dx.doi.org/10.1890/1051-0761\(2000\)010\[1251:ROTEKA\]2.0.CO;2](http://dx.doi.org/10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2)
3. Berkes, F. 1999. Sacred ecology. Traditional ecological knowledge and resource management. Taylor and Francis, Philadelphia and London, UK.
4. Finn, S., Herne, M., & Castille, D. (2017). The Value of Traditional Ecological Knowledge for the Environmental Health Sciences and Biomedical Research. *Environmental Health Perspectives*, 125(8), 085006. <https://doi.org/10.1289/EHP858>
5. Generations of Irulars in clutches of Bonded Labour in Tamil Nadu' (2016), Daily Thanthi Next. Retrieved on 24 February 2025. <10thSept2016DTNext.pdf>
6. Gómez-Baggethun, E., Corbera, E., & Reyes-García, V. (2013). Traditional Ecological Knowledge and Global Environmental Change: Research findings and policy implications. *Ecology and Society*, 18(4). <https://doi.org/10.5751/ES-06288-180472>

7. Govindharaj, Y. (2023). Irula Primitive Tribes in the Nilgiris District of Tamil Nadu with reference to the State of Living, Wealth, Cultural Practices, Religious beliefs, Health and Settlements – An Assessment. 12, 852 – 878.
8. Irula people. (2021). In *Wikipedia*. Retrieved from [https://en.wikipedia.org/w/index.php?title=Irula\\_people&oldid=1035865753](https://en.wikipedia.org/w/index.php?title=Irula_people&oldid=1035865753)
9. Rehabilitation Manual, Version 1 (2015), Published by International Justice Mission. pp. 18 to 25, 75, 126.
10. Ungar, M. (2013). Resilience, Trauma, Context, and Culture. *Trauma, Violence, & Abuse*, 14(3), 255–266. <https://doi.org/10.1177/1524838013487805>
11. Seerangan, C. (2023). Traditional Ecological Knowledge (TEK) and its Role in Promoting Sustainable Well-being among Scheduled Tribal Communities in the Kolli Hills of Tamil Nadu. *International Journal of Research Publication and Reviews*, Vol 4, no 5, pp 6073-6077.
12. Sivaraman, D. M. A. (2014). CULTURAL HABITS OF IRULA TRIBE. *Shanlax International Journal of Arts, Science & Humanities*, 1(3), pp 13 – 16.
13. Stanley, F. S., & Dr. P.K. Muthukumar. (2019). Health Status and Living Conditions of Irulas in Coimbatore District of Tamil Nadu, India, *Vol 20* (4), pp 1421 - 1427
14. The Bonded Labour System (Abolition) Act, 1976 (the ‘BLA’) S2(g) (i), (ii), (iii), (iv), (v)
15. Socio-economic profile of the selected tribal population | *International Journal of Current Research*. (n.d.). Retrieved, from <https://journalcra.com/article/socio-economic-profile-selected-tribal-population>