



# Traditional Fishing Equipment's and Techniques of the Santal Tribe in the Context of Tourism Development

Asim Kisku

Ph. D Research Scholar, Department of Geography, Visva-Bharati, Santiniketan, West Bengal 731235, India,  
Email: [asimkisku123@gmail.com](mailto:asimkisku123@gmail.com)

## Abstract:

Traditional fishing knowledge forms an integral part of the cultural and livelihood practices of the Santal tribe, one of the largest Indigenous communities in eastern India. Fishing among the Santals is not merely an economic activity but a socio-cultural expression that reflects their harmonious relationship with rivers, ponds, forests, and seasonal ecosystems. This paper examines the traditional fishing equipments and techniques used by the Santal tribe and explores their potential role in sustainable tourism development, particularly within rural and eco-cultural tourism frameworks. The study is based on ethnographic interpretations, secondary literature review, and field-based observations conducted in selected Santal-dominated regions across Jharkhand and West Bengal. Traditional fishing tools such as *Jatra*, *Tati*, *Dhibri*, *Julha*, *Tangra*, *Bersa* and communal fishing methods like Baha fishing festival, seasonal trapping, fish poisoning using bio-herbs, and gender-based participation are analyzed. The research highlights how these indigenous techniques are environmentally sustainable, low-cost, and rooted in collective labor and cultural rituals. With the growing interest in ethnic tourism, heritage trails, and experiential ecotourism, these traditional practices can be showcased to tourists through demonstration centers, cultural festivals, guided tours, and community-based tourism models. However, commercialization risks, ecological degradation, and loss of Indigenous knowledge due to modernization pose significant challenges. The paper concludes that community-led tourism, government collaboration, and documentation of Indigenous knowledge systems (IKS) can help preserve Santal fishing traditions while promoting responsible tourism and local livelihood enhancement.

**Keywords:** Santal tribe, Traditional Fishing Equipments, Indigenous Knowledge Systems (IKS), Cultural tourism, Eco-tourism, Sustainable livelihood

## 1. Introduction:

Indigenous knowledge systems represent one of the most valuable yet under-recognized dimensions of human civilization. Among these, the traditional fishing practices of the Santal tribe offer a remarkable example of sustainable natural resource management embedded in cultural values, ecological understanding, and collective identity. The Santal tribe, primarily residing in the states of Jharkhand, West Bengal, Odisha, Bihar, and Assam, has historically depended on forests, rivers, and seasonal wetlands for livelihood. Fishing has remained a vital occupational and cultural activity along with agriculture and forest gathering. Unlike commercial fishing that emphasizes over-extraction and mechanization, Santal fishing practices are based on ecological harmony, using handmade eco-friendly tools and localized knowledge regarding aquatic ecology, fish movement patterns, hydrology, and seasonal variation. These tools are simple yet skilfully designed using bamboo, tree bark, cotton thread, and natural fibers. In the contemporary tourism context, especially in the emerging fields of eco-tourism, indigenous tourism, cultural tourism, and experiential community-based tourism, traditional fishing practices offer unique opportunities for cultural display, livelihood diversification, and sustainable heritage promotion. Tourists increasingly seek authentic cultural experiences that connect them with nature and Indigenous traditions. The Santal fishing tradition aligns closely with this trend. However, modernization, mechanized equipment,

declining river flow, and socio-economic pressures threaten the continuity of these traditional practices. Therefore, documentation, revitalization, and tourism-based value addition become essential.

## 2. Objectives of the Study:

1. To document and analyze the traditional fishing tools and techniques used by the Santal tribe.
2. To explore the socio-cultural significance of fishing practices in Santal life.
3. To assess the potential of integrating traditional fishing practices into tourism development.
4. To identify challenges and sustainability concerns regarding Indigenous fishing knowledge.
5. To propose strategies for community-based tourism involving Santal fishing heritage.

## 3. Methodology:

The study adopts a qualitative and ethnographic research approach consisting of field observations in selected Santal villages in Jhargram (West Bengal). Informal interviews with Santal elders, fishermen, women, and community leaders. Secondary literature review from anthropological studies, tribal cultural research, and government tourism reports. Interpretive analysis to understand cultural meaning and tourism implications.

## 4. Results and Discussions:

The Santal tribe follows an animistic belief system centered on *Marangburu*, *Jaher Era* and *Moreko-Turuiko*. Fishing traditionally occurs during monsoon, winter, and festival seasons. Fishing among Santals is not simply economic—it embodies community cooperation, gender roles, seasonal rituals, and knowledge transmission across generations.

### 4.1 Classification of Fishing Sites:

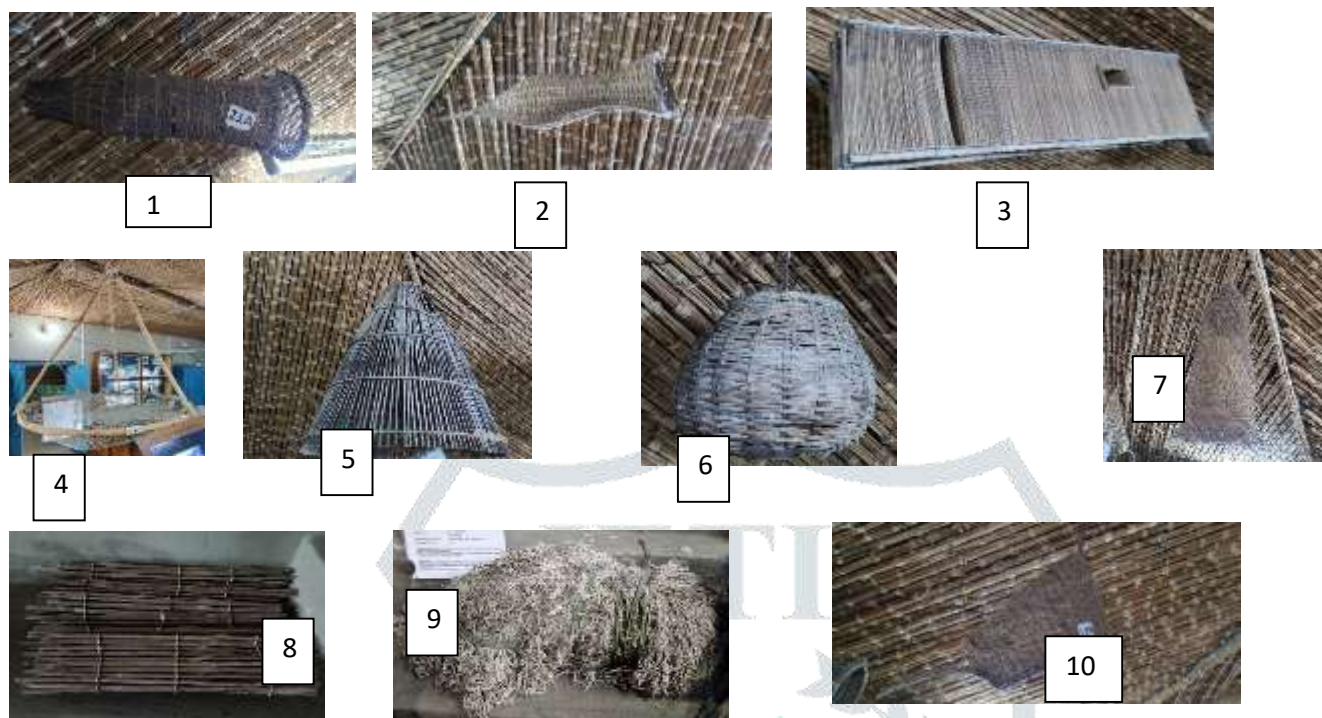
**Table 1. Fishing locations vary based on hydrological conditions:**

| Sl. No. | Type of Water Body | Local Name       | Characteristics                                       |
|---------|--------------------|------------------|-------------------------------------------------------|
| 1       | River              | <i>Nai</i>       | Continuous water flow, used during monsoon and winter |
| 2       | Pond               | <i>Gadia</i>     | Community-managed or artificial ponds                 |
| 3       | Swampy land        | <i>Dah Darha</i> | Seasonal waterlogged areas                            |
| 4       | Small Stream       | <i>Jharna</i>    | Used for trapping fish and hand collection            |

### 4.2 Table 2. Traditional Fishing Tools and Equipment's:

| Sl. No. | Equipment Name                       | Material Used                       | Purpose                                               |
|---------|--------------------------------------|-------------------------------------|-------------------------------------------------------|
| 1       | <i>Ber Jala</i> (Large Drag Net)     | Cotton/Jute/Rope                    | Used in rivers and ponds during group fishing         |
| 2       | <i>Paat Jala</i> (Casting Net)       | Fine thread and lead weights        | Thrown manually to trap fish                          |
| 3       | <i>Dhari/Julki</i> (Fish Basket Tap) | Bamboo strips                       | Placed in streams to trap fish moving with water flow |
| 4       | <i>Chhita</i> ((Hand Scoop Net)      | Bamboo hoop and cloth/net           | Used in shallow water                                 |
| 5       | <i>Goda</i> (Fish Spear)             | Wooden handle with iron nail points | Used to spear large fish in clear water               |
| 6       | <i>Chungri</i> Trap                  | Bamboo woven cylinder               | Used to trap prawns and small fishes                  |
| 7       | <i>Dole</i> or <i>Hudar</i>          | Bamboo-grain storage basket         | Storage and drying of fish                            |

Traditional Santal fishing equipment includes *Jatra*, *Tati*, *Dhibri*, *Julha*, *Tangra*, *Bersa*, *Chhiri*, *daura* or *khocha* (bamboo basket traps), *jaal* (nets), *chepa jali* (hand nets), *bansi* (hook and line), and herbal fish poison methods.



**Plate 1. Traditional Fishing Tools and Equipment's**

- (1. *Ghugi*, 2. *Ghoga*, 3. *Ghuni*, 4. *Ghun Jaal* 5. *Palui*, 6. *Khalui*, 7. *Taratang*, 8. *Shiyara*, 9. *Chat Jaal* and 10. *Taratang*)

#### 4.3 Traditional Fishing Techniques:

**Ghuni(look):** A special type of trap made by cutting bamboo into thin strips like broom sticks. It looks like a box. Its weave is very dense, so it is called '*Ghuni*'. It is six inches high. It is one and a half feet long and three inches wide. However, it can also be larger in size. It is used for catching small or medium fish during the rainy season in fields. The '*Ghuni*' has three holes for the fish to enter. These holes are small or large according to its size. The holes for the fish to enter are called '*Eenke*'. The '*Ghuni*' has another hole for the fish to come out. Two holes in the direction of the current and one in the direction of the current. The trap is placed by leaving a hole. While placing it, care must be taken to ensure that it is submerged in water. It is usually placed in the afternoon and taken out in the morning. Sometimes it is kept for the whole day. Although the effort of the hunter is less in catching fish, the use of this trap is quite time consuming.

**Palui:** Bamboo is cut into thin strips and peeled to make a '*Palui*'. In this case, the sticks are thicker than the '*Ghani*'. Its shape is like a cone. The top and bottom are open. It is one and a half to two feet high. The upper open part is called the mouth. The diameter of the mouth is usually 15 inches. And the diameter of the lower open part is 5 feet. However, if the size of the '*Palui*' is small or large, the size of the mouth is also small or large. Again, different shapes are seen in the structure. Like the '*Ghuni*', it takes more time to make the trap. It is necessary to take a lot of precautions while fishing. During the rainy season, when land is flooded, it is used for fishing in knee-deep water or shallow water. Due to the flooding of the land, some parts of the leaves are above the water. When the fish move, the leaves shake, at that moment the fish hunter carefully holds the '*Palui*'. Holding the '*Palui*' with one hand, the other hand inserts the '*Palui*' inside and tries to close it all around first, so that the fish cannot escape.

**Chatuni Jaal (Fake Licks):** In some place in Rarbanga, '*Chatuni*', '*Jhuli*' and '*Jali*' are called nets. It is made by tying bamboo poles in circle and putting a net inside it. Currently, nets are used. Its diameter is about 5 feet. During the rainy season, girls and young boys usually use this readily available net while fishing in the mouth of small *Khal* and ponds.

**Luti (Looti):** The palm leaf is Cut and immersed in a pond for several days. The fish take shelter in the leaves. The hunter carefully goes into the water and slowly lifts the palm leaf out of the water with the help of a net. Two people are needed for this. One lifts the palm leaf from the water with the help of a net, the other shakes the leaf. The fish fall from the leaf into the net.

**Shola:** A one and a half feet of thread is tied to the Shola, earthworms are attached to the ends of the hanging thread and thrown into the water body in such a way that the thread floats under the water. It is called Shola, because it floats in the water body with the help of the Shola. It is used to catch fish such as *koi*, *magur*, *tangra*, *shoal*, etc. It is called 'Bosa' or 'Lafa' in North Bengal. The hunter can sit or work with it for a long time, hence its name 'Bosa'. In Birbhum, it is called 'Bhasa Satla'. However, in this case, a bunch of jute sticks is used along with the Shola. Since the bunch of jute sticks looks like a reed, it is called 'Nal Dhar' in Katwa and the adjacent areas. This trap is used to catch fish in closed water bodies and water bodies with little current during the months of Asar, Shan and Bhadra.

**Ladka (Fight):** A medium-size bamboo is made by cutting off its last ten hands. The end of bamboo should be such that it shakes easily. The rope tied to the end should be two feet long. The beginning of the bamboo is in the hunter's hand. He starts moving the stick very slowly. And the bait (earthworm) starts moving at the end of the rope tied to the end. The fish in the rice fields or water bodies eat the bait out of greed for food. The hunter catches fish in this method and calls it 'ladka'. In Purulia, it is called 'lacha'. In the Sundarbans, it is known as 'edara'. This trap is used to catch fish during winter. The trap is laborious to use as the fish are caught by moving from one rice field to another and from one water body to another.

**Khebla Jaal:** It is called 'Ghurni Jaal', 'Kanui Jaal', 'Khebla Jaal' and 'Khiya Jaal'. It is also called 'Jhap Jaal', 'Ura Jaal' or 'Uro Jaal', 'Matha Ghurni Jaal' etc. In Sundarbans and Dinhat it is called 'Jhanki Jaal', 'Khewali Jaal' is called by the people of Rasikbil of Cooch Behar. It is Known in Jalpaiguri as 'Chhabi Jaal'. In Malda it is called 'Khayo Jaal'. The net is placed on the elbow of the hand and thrown into the water. After being thrown, it floats in the air before falling into the water. Since it is on the elbow, it is called 'Kanui Jaal'. And since it floats in the air, it is called 'Ura Jaal' or 'Uro Jaal'. Fishermen use this net to catch fish all year round. The net is eight to ten hand long. The iron barbs help the net to sink in the water. The bag-shaped part made of iron bars and thread under net is called 'Ghai'.

**Ghat Jaal (Ghat Net):** This net woven in a clever way. The two ends of the net are tied to the ends of two narrow bamboos. In the middle, there is a small net (bag) that spread out and the net is made heavier with thorns. As a results, the net hits the ground as soon as it falls into the water. And the fish get stuck in the bag. It is used for fishing in ponds or small water bodies. Usually, this net is used on the ghat of the pond, so it is called 'Ghat Jaal', 'Chara Lot' or 'Ghetto Jaal' (Purulia). In Boxirhat of Cooch Behar, it is called 'Jhanti Jaal'. This trap is used when the water in the water body is low. The use of the net is quite laborious. Ghat nets are used to catch large fish. Its weaving is forked. The ghat net that can catch small fish is called 'Ghar Ganthi'. The weaving of this net is dense.

**Dipping Bamboo Pieces:** This Trap can be used in ponds or lakes. Need to take a piece of bamboo about a foot long, one side of which is open, and the other side is closed because of the bamboo knot. Then, if you leave the bamboo piece in the water body with vine leaves for a few days and remove it, the fish will come out. This is because fish mistake bamboo for a shelter. Fishing with this method is so easy that anyone can catch fish. Fish such as *koi*, *magur*, *lata* etc. are caught in this way. It is very similar to 'bamboo mill' common in the Sundarbans.

**Ghun Jaal (Fake Net):** It looks like a cone. First, a round net (about 5 feet) is tied with bamboo poles. Then, four bamboo poles are tied at equal distances from the round poles and the other four ends of the bamboo poles are tied together. This point of attachment is the center of gravity of the net. The women carry the net on their shoulders and go fishing by holding this center of gravity. It is used to catch small fish (shrimp, chup, *tangra*) in ponds or small water bodies. It is often used while fishing in drains. It is also called 'thela Jaal' because the fish is caught by pushing forward in shallow water. This method requires more physical labor. While fishing, half of the body is submerged in water. A net is tied around the waist or head. The fish are kept in this net. If the water level in the water body is low, many people fish with this net together. I can see people using their hands to catch fish by placing nets in a row around the water body.

**Tagi:** There are eight to ten thorns at the end of a thread about fifty feet long. Earthworms are first attached to the thorns. Then the fishing line is tightly twisted, the thorns are stuck in the opposite direction and thrown into the water body. The other end is tied to a tree on the edge of the water body, a stick is cut in the middle and the thread is inserted into it. When the fish comes to the line and gets stuck in thorns, then when the thread is pulled, the

thread comes off the stick. It is understood that the fish has caught. *Tagi* is used to catch big fish. It is also called 'Taga' or 'Don'. With the help of *tagi*, fish is caught in ponds and rivers throughout the year. It requires less labor and costs less.

**Lafa (Jump):** The net is used as a trap. During the rainy season, when the water falls from above like a waterfall, fish are caught using this trap. This trap is placed at the mouth of the barrage, in small streams that merge into the river, and in canals. Sometimes this trap is hung with a rope, and sometimes it is placed tied to a bamboo. The fish jumps up and falls into the trap. When it jumps into the trap, it is called '*lafa*'. Using this easily available trap reduces labor.

Fishing is seasonal and often communal. Techniques involve night fishing, seasonal pond draining, and sustainable resource management.

#### 4.4 Festivals and Rituals Significance:

Fishing is associated with festivals such as *Sohrai* and *Baha*. Community fishing strengthens social bonds. Fish plays an important role in:

- **Saharai Festival**- communal eating of newly caught fish.
- **Baha Festival**- offering to forest spirits.
- **Magh Sim**- seasonal thanks giving feast

Thus, fishing connects livelihood with spirituality and cultural identity.

#### 4.5 Potential for Tourism Development:

**Table 3. Traditional fishing practices can be integrated into tourism through:**

| Sl. No. | Tourism Type                                | Possible Activities                                     |
|---------|---------------------------------------------|---------------------------------------------------------|
| 1       | Eco-Tourism                                 | Guided river and pond tours                             |
| 2       | Cultural Tourism                            | Participation in fish festivals and rituals             |
| 3       | Craft Tourism                               | Workshops on making bamboo fish traps                   |
| 4       | Culinary Tourism                            | Traditional fish-based meals and cooking demonstrations |
| 5       | Handicraft Market Development (nets, traps) | Women and youth income generation                       |

Cultural tourism, handicraft workshops, and eco-tourism trails can support sustainable livelihoods.

#### 4.6 Challenges:

Younger generations are shifting away from traditional practices due to modernization and reduced fish resources.

- Declining river flow and water pollution
- Replacement of indigenous tools with plastic or nylon nets.
- Youth losing interest due to migration
- Lack of recognition in development.

#### 5. Conclusion:

Traditional Santal fishing techniques reflect deep ecological knowledge and cultural heritage. Thoughtful integration into tourism can preserve heritage while providing sustainable livelihoods. Community empowerment, environmental care, and cultural respect remain essential. Integrating these practices with tourism can ensure sustainability. Indigenous knowledge systems (IKS) can help preserve Santal fishing traditions while promoting responsible tourism and local livelihood enhancement.

Strategies for Sustainable Tourism: Strategies include-

- Community tourism cooperatives
- Cultural heritage training
- Government and NGO collaboration

- Eco-friendly tourism policy frameworks

## References:

1. Basu, S. (2018). Indigenous Knowledge and Ecological Understanding among the Santals. New Delhi: Tribal Research Press.
2. Ghosh, A. (2021). Traditional livelihood practices and cultural identity of Santal communities in eastern India. *Journal of Tribal Studies*, 12(2), 45-60.
3. Hembrom, T. (2019). Fishing rituals and communal traditions in Santal society. *International Review of Indigenous Cultures*, 7(1), 88-102.
4. Mahapatra, L. K. (2014). *Tribal Heritage and Cultural Tourism in India*. Kolkata: Anthropological Survey of India.
5. Murmu, S. (2022). Bamboo craftsmanship and material ecology among the Santals. *Rural Art and Society Review*, 5(3), 33-57.
6. Panja, S. (1413, Bengali Year). *Banglar Mach Shikar*. Shantiniketan: Rangamati Prakashani, 21-60.

