



## **Traditional hunting tools of Santhal (Satar) community of Jhapa district, Province No.1, South - East Nepal**

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### **Abstract**

Santhal or Satar community is a unique ethnic group of eastern Nepal. Despite the small population (0.19 % of the total population of the country), they have rich cultural and hunting practices. This study conducted in Jhapa district, which lies in Province No. 1 of eastern Nepal. The present study helps to describe the traditional hunting tools with photographs, the way of using them, find the average number of annual killings and to study their psychology behind hunting rituals. No any previous research works done about the hunting tools of Santhali people yet in east-Nepal. The method of study was the survey method. Regular field visits made three days a week for the period of three months. Sampling areas and respondents selected by purposive sampling method. Altogether 13 types of traditional hunting tools used by Santhali people observed during the survey. Among them 7 types of tools used for fishing, 5 types of tools for hunting mammals, 2 types of tools used for hunting and trapping birds and one type of tool for hunting reptiles. Most of their hunt include Indian hare, jungle cat, golden monitor lizard, mongoose, squirrel, flying fox, white-breasted waterhen, birds and fishes. Approximately, 40-60 Indian hares and 2500-3000 individuals of rats hunted by each group of Santhali hunters in a year. Rat meat is the main source of animal protein of their diet.

**Keywords:** Satar, Santhal, Jhapa, Hunting tools, Tribe

### **1. Introduction**

The Santhal (Satar) community, one of the most excluded ethnic groups in Nepal, is concentrated in Jhapa, Morang and Sunsari districts in Eastern Nepal (Ban and Rajbanshi, 2016). The population of Satar community was 51,735 that represent only 0.19% of total population of the country. More than 97% of Satar people live in eastern terai region of Nepal (NPHC, 2011). Besides Nepal, they are native to Indian states like Jharkhand, Assam, West Bengal, Odessa, Bihar and other countries like Bangladesh and Bhutan ("Santal people", In *Wikipedia*, n. d). The dark-skinned, curly-haired and stoutly built Santhals also called themselves 'Hor'. Hunting is the tradition of the Santhali, so it has become their way of living.

Major subclans of the Satar are Kisku, Murmu, Hemram, Soren, Hasda, Mardi, Tudu, Besra, Baske, Mardi, etc. (HMG, MOC, 2031 as cited in Subedi, 2014). Bow and arrows are their favourite hunting weapons. They prefer to live in the peripheries of forests. Everything in nature from living things to non-living things, from natural phenomenon to calamities have a sacred touch for them, and hence, are symbolic representations of divine strength. Wildlife becomes part of most of their cultural practices and rituals. In the fifth and sixth day of their annual festival of 'Papni' called 'Hakukatkam' and 'Sakrat' respectively, Santhali females along with their children go outside to catch fish and crab from nearby

streams, ponds, and rivers. Similarly, at the day of Sakrat all Santhali males from village gather, carry their traditional hunting tools and move away from home in search of the hunt (H.B. Murmu, personal communication, January 25, 2019). The study was conducted in different parts of Jhapa districts inhabited by the majority of the Santhal community. Santhali culture directly connected to wildlife. Their food supplement directly or indirectly depends on wildlife. Their culture values emphasize them to kill wildlife. They hunt small mammals such as hare, field rat, pangolin, various species of birds, golden Monitor lizard, turtles, and fishes. This study may help to understand the traditional way of life and hunting rituals. No previous research has been work done yet about hunting tools of Santhali. The present study helps to describe traditional hunting tools with photographs, the way of using them, find the average number of annual killings, to study their psychology behind hunting culture and to access hunting effects on wildlife. This study may help the policy maker to make rules and regulations that can solve the ethical problem and management of hunting culture. Santhali people belong to the Austro-Asiatic group of human families. They have their own unique religion and culture. They are animist and have a religious belief that objects, places and creatures all possess a distinct spiritual essence or supernatural power. They sacrifice animals to their gods. Their ancestral deity is 'Thakurjiu' and their paternal guardian deity is

'Maranburu' (Motherhood Care Nepal, 2008). Majority of Satar people are engaged in farming and wage labour. Their favorite foods are rice and pork. As the Santhals like to live near forests and rivers, hunting and fishing are their favourite occupations. They speak a 'Santhali' language belonging to the Munda family. Santhali community has a sacred spiritual place known as the 'Jaher'on their village where a series of annual festivals take place. Santhali language written in 'Oichiki' script and spoken by 6.4 million people in Nepal, India, and Bangladesh. It has become the first Indian tribal language to get a Wikipedia edition in its own script (Bhattacharya, 2018).

### Study area

This study was conducted in Jhapa district, which lies in Province No. 1 of eastern Nepal. Jhapa district situated between the latitude of 26° 38' 49.3368" N and the longitude of 87° 53' 25.7820" E at an average elevation of 117 m (msl). Jhapa borders with Ilam in the north, Morang in the west, the Indian state of West Bengal to the northeast and east ("Jhapa", In *Wikipedia*, n. d). It lies in the foothills of Churia range with fertile land. Geographically, it covers an area of 1,606 km<sup>2</sup>. The study is mainly concentrated on the southernmost part of Jhapa district. The study area was divided into the following five sampling stations from northward to southward (Fig.1):

Table 1 *Geographic coordinates of sampling stations*

Sampling stations	GPS Coordinates
Station 1: Dharampur	26° 38' 49" N, 87° 53' 25" E
Station 2: Shivaganj	26° 35' 24" N, 87° 50' 24" E
Station 3: Panchgachhi	26° 34' 49" N, 87° 50' 25" E
Station 4: Shanamati	26° 37' 12" N, 87° 55' 48" E
Station 5: Mahabhara	26° 30' 0" N, 87° 48' 36" E

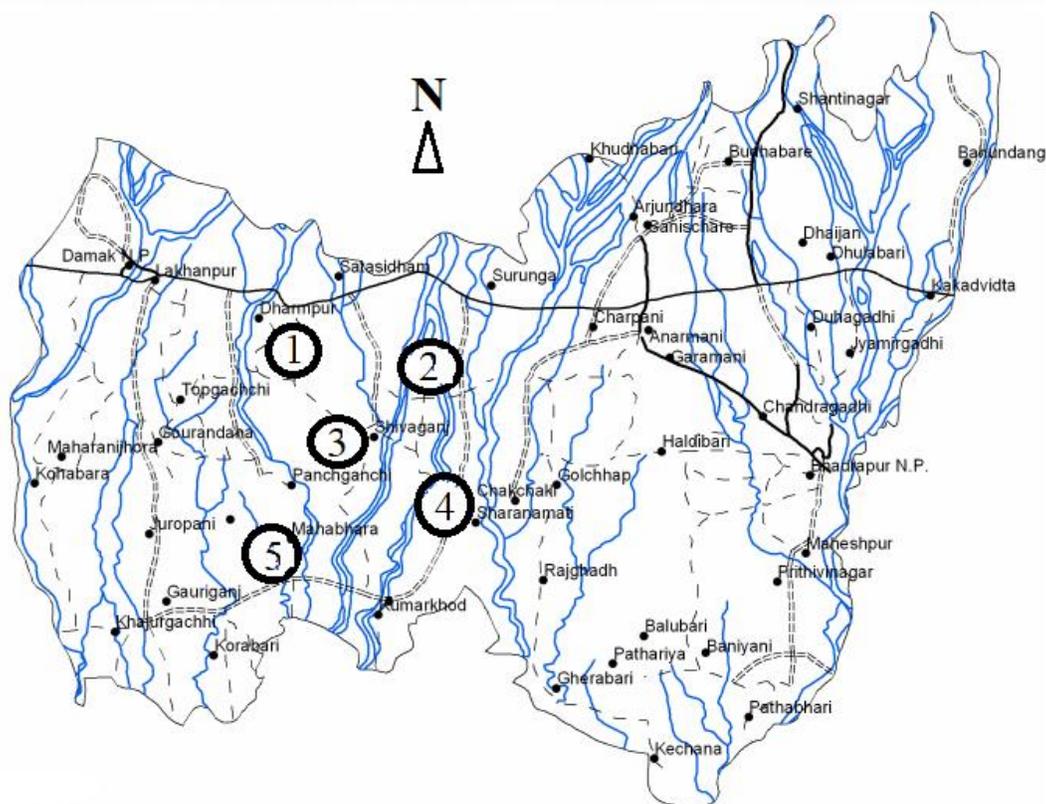


Figure 1. Map of Jhapa district indicating sampling stations.

## 2. Materials and Methods

The method of study was the survey method. Regular field visits made three days a week for the period of three months. Sampling areas and respondents selected by purposive sampling method. The main goal of purposive sampling was to focus on particular characteristics of a population of interest, which would best enable to answer the research questions. Geographic coordinates were taken by using Garmin eTrex10 handheld GPS navigator. Random sampling used for the household survey. Altogether 82 households were visited in five sampling stations during the survey. Attempts were made to start the interview in the morning between 0700 to 1100 hrs and in the evening between 1500 to 1700 hrs. Small earthen huts situated on both right and left sides of the road visited alternately for the interview due to limited time. Santhali people, both male, and females of age group 15-80 years interviewed about their hunting culture. Interviews were taken with the head of the households with priority and focus group discussion made with other members of the family as respondents of the study. The qualitative and quantitative data and photographs of hunting tools taken with the help of the Canon 520 HS digital camera. Key informant

interviews also were taken with the head of the Santhali community called 'MajhiHadam', active hunters and elderly people and photographs were taken as a source of evidence.

## 3. Results

Altogether 13 types of traditional hunting tools used by Santhali people observed during the survey. Among them 5 types of tools used for fishing, 5 types of tools for hunting mammals, 2 types of tools used for hunting and trapping birds and one type of tool for hunting reptiles. The following are the description of hunting tools based on direct observation and personal communication during field visits:

### A. Fishing tools

**Chabo (Push net):** It is the Santhali name for the cone-shaped specific fishing tool made up of bamboo and nylon net (Fig. 6a). No others name in Nepali and English language is known till date. It used to trap fish in shallow water.

Conical net is set in bamboo made circular base and the upper end of the net is tied up with rope. Four-bamboo stick gives support between base and tip. Net fitted lower funnel-like end of the tool dipped into the water thrusting by foot. When the fish get trapped into the net then the tool made inverted so trapped fishes slide towards the apex of the tool then rope untied and collect the fish. About 10- 15 small fishes can be trapped at a time by using this tool. They do not need to come out of the water to collect the trapped fish. Usually, a group of 10-20 persons each carrying a tool participated in fishing at a time. They commonly catch *Channa punctatus*, *Channa orientalis*, *Channa striatus*, *Lepidocephalus guntae*, *Macrognathus* spp., *Puntius* spp., Catfish such as *Clarias batrachus*, *Heteropneustes fossilis*, and other freshwater species.

**Kaikui (Fishing gaff):** It is a pole with a sharp hook on the end that is used to stab a large fish and then to lift the fish out of water. It is a long and slender traditional fishing tool made up of iron hook and bamboo shaft (Fig. 6b). The one end of this tool is blunt and fastened with the shaft of bamboo stick whereas the other end has a knife like blade provided with sharp pointed and highly curved hook at its tip. This tool specially designed to kill fishes of Genus *Macrognathus* locally called 'Gainchi'. When Kaikui thrust in and out repeatedly in muddy water in a zigzag way, fishes stuck in the hook. About 4-5 fishes can be caught at a single time by using this fishing tool (H. Murmu, personal communication, 11 April, 2019).

**Saira/Dhoksa (Bamboo trap):** It is a fish trap made by thick and long bamboo up to 2 to 5 m in length (Fig. 6c). It has woven by jute and plastic rope after cutting a thin stick from one end. The wide portion of proximal end regarded as the mouth of Dhoksa. It used to trap the fish during monsoon season. An outlet of water in agricultural land becomes the place to put Dhoksa as a trap. The wide part of this tool put in the opposite direction with the water flow. Fishes enter the bamboo mesh along with water current and were trapped inside the bamboo cage. This tool used to catch both large and small fishes such as *Channa* spp., *Macrognathus* spp., *Monopterusuchia*, *Calarius* spp., *Puntius* spp. and several other species.

**Kahli (Thin Spear):** It is one of the popular hunting tool which consists of a shaft, usually of bamboo or wood with a pointed head made of up iron. The head may be simply the sharpened end of the long iron shaft itself. The Santhali people use 'Bhala' both as a hunting and fishing tool and as a weapon. The heads

of fishing spears usually feature barbs or serrated edges or may be shaped like a triangle or leaf. This hunting tool found mostly used by Santhali to kill 'Andha Bam' or Gangetic mud eel (*Monopterusuchia*). They made repeated thrusts into the muddy area with the 'Kahli/Bhala' randomly so the spear could penetrate the burrowing eel.

**Hakkujheli (Hand lift net):** It is the common fishing tool used by Santhali people (Fig. 6d). It usually has a rectangle shaped net connected to the diagonally arranged bamboo frame. It is primarily used to catch fish and crustaceans such as prawn, crab. The nets submerged to a certain depth or close to the bottom of shallow water and then lifted out of the water vertically.

## B. Reptile hunting tools

**Chhakka (Pronged bamboo spear):** It is made up of bamboo and iron spears consisting of 17 pointed bamboo arrows collectively fastened to one end of 1-2 m long bamboo shaft (Fig. 6e). It is also called 'Kahali' in Santhali language. The free distal end of each bamboo arrow is fitted with iron spears to make it a lethal weapon. It is used to kill Golden monitor lizard (*Varanus flaviscens*) and soft shell turtles such as *Lissemys punctata*, *Nilssoniahurum*, *Nilssoniangangeticus* etc. with almost 100 percent accuracy. This tool also used for spear fishing as it has the fasted thrust attack of any of the spears.

## C. Mammal hunting tools

**Passi (Snare Trap):** It is one of the simplest but effective traps made by Santhali people (Fig. 6f). A snare consists of a noose made usually by wire or strong string and bamboo or wooden wedge. It is cheap to produce and easy to set in large numbers. It is an anchored wire noose set to catch small mammals such as rabbits and squirrels. The snare of wire attached with a wedge of bamboo. They put the trap by following the animal trails. The wedge of trap nailed into the ground and snare placed at some height above the ground according to the height of the prey. An animal gets trapped by a snare around its neck or the body.

**Kachhad (Thick Spear):** It is a pole weapon with a pointed tip, typically of iron and a long shaft usually of bamboo with a pointed head, used for thrusting or throwing. It is thicker than a fishing spear (Fig. 6g).

According to Santhali, this hunting tool was used extensively in earlier days to kill large mammals like Indian Wild boar (*Sus scrofa*), spotted deer (*Axis axis*) on the occasion of the first day of the new year in 'Jalthal Chrkose Jhadi' (Four miles dense forest).

**Aapuni (Bow and arrow):** Santhali people are a good archer. The bow and arrow is the favourite hunting tool of Santhali people (Fig. 6h). It is an elastic weapon used to hunt prey at distance. A bow consists of a semi-rigid but elastic arc made up of bamboo. Santhali bowstring made by jute or plastic or nylon string which joins the two limbs of Bow. Traditionally, they use bamboo and jute rope to make bowstring. Arrow is a projectile with pointed iron spare and a long bamboo shaft with stabilizer feathers of an eagle and lesser adjutant stork. To shoot, the archer placed an arrow across the middle of the bow, draws the arrow and the bowstring and finally releases the arrow. This allows the limbs' stored potential energy to convert into kinetic energy, which is transmitted via the bowstring to the arrow, propelling it to fly forward with high velocity. It is used to kill small mammals such as flying fox, Indian hare, jungle cat, mongoose, white-breasted waterhen, squirrel and some large birds like eagles, lesser adjutant and some species of owls (Menon, 2016).

**Sitob (Trigger bamboo rat trap):** Rats are the main source of a meat diet for Santhali people. They believe that rat meat is pure among the meat so they also eat gastro intestine part of rat without cleaning it. They use bamboo and rope to prepare this trap. They install rat trap in the trail of mouse mainly at the time of paddy ripen. When the rat crossed the trail, it touches and triggers the bamboo stick then the upper portion of bamboo quickly hit the back of the rat and kills it instantly. The energy is provided to strike is due to the arched bamboo stick. This tool is used to kill house rat, mouse, bamboo rat, and Indian bush rat. It is a very effective rat hunting tool. Therefore, no modification or improvement in the design of this trap felt necessary to date.

**Tunud (Arrow triggered Crossbow Trap):** It is especially a rat and mouse trap in the similar principle of a bow (Fig. 6i). It is made up of a piece of wood, bow and arrow. Wood is the frame of the trap. Head of wood is carved to a square shape and a hole is made at the base from where rat or mouse enter. Potato and dried fish are used as bait. When rat or mouse enter the hole of trap and touches the bait, the bamboo triggers within a second and arrow strike the mouse.

## D. Birds trapping tools

**Chandelathaa/Lisso (Adhesive glue):** It is the adhesive traditionally extracted from *Ficus* tree. They make small a cut to the bark of *Ficus* plant to extract the latex. The latex gradually solidified. With the help of a stick, a ball like structure of the semi-solid latex was made. Then the latex ball dipped into water for hydration for 10 to 15 days. Finally, the latex heated with pure mustard oil. Then it was stored in a bamboo tube. The bamboo tube filled with Lisso (glue) carried during hunting. Usually, mouse or small chick used as bait to lure raptors like eagles, falcons, kite, harriers and accipiters and others birds such as shrikes and owls (Grimmett, Inskipp & Inskipp, 2000). The bait was placed in the centre, surrounded by the small glued sticks inserted vertically into the surface. When the predatory bird attempt to attack the bait, they touch the glued stick, get stuck in it and unable to fly. This traditional technique plays an important role in effective hunting. Nowadays, rat trap glue is used to trap the birds through the same procedure. But they can also harm non-targeted animals.

**Putamjheli (Dove Cage Trap):** In this trap, the bait used dove itself. It is kept in the principle that the sound of the bait bird attracts the other birds. The call or song of the female dove attract other male or female and they get trapped in the cage. The cage is made up of bamboo stick and jute rope and decorated with the leaves of 'Kadam' plants. When the respondent dove sits in the upper part of the cage. It touched the trigger and the upper portion of the cage closed within a second. Santhali hunters usually catch two types of dove by using this cage trap i.e, Eurasian collared Dove (*Streptopelia decaocto*) and Spotted dove (*Stigmatopelia chinensis*).

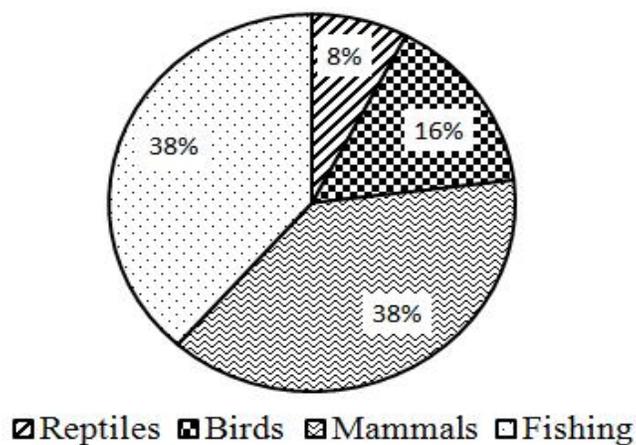


Figure 2. Use of hunting tools by Santhali based on prey.

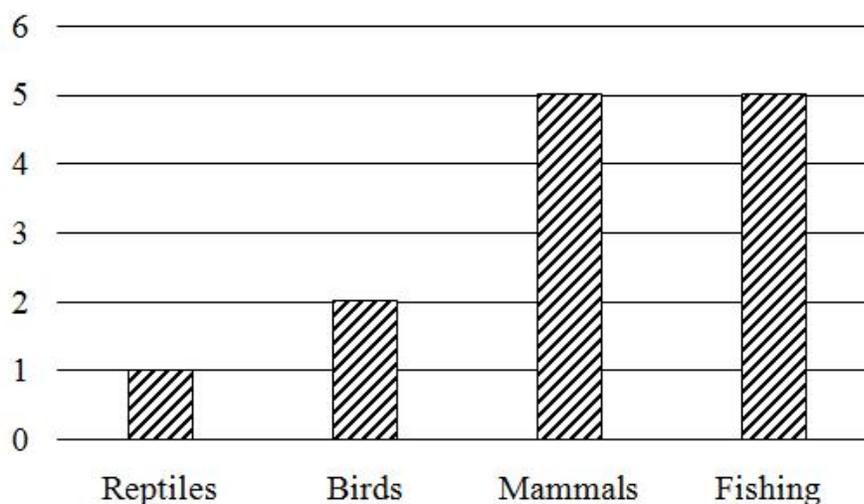


Figure 3. Number of hunting tools used for different animals.

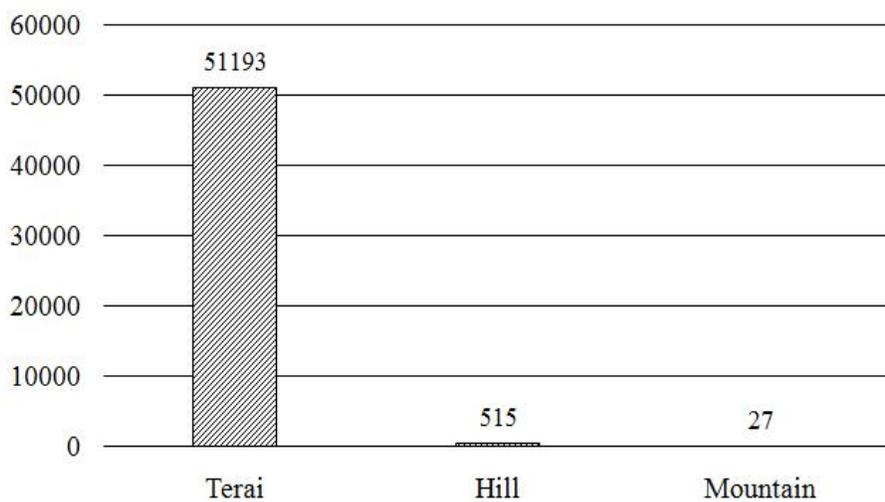


Figure 4. Population composition of Santhali (Rural-Urban area)

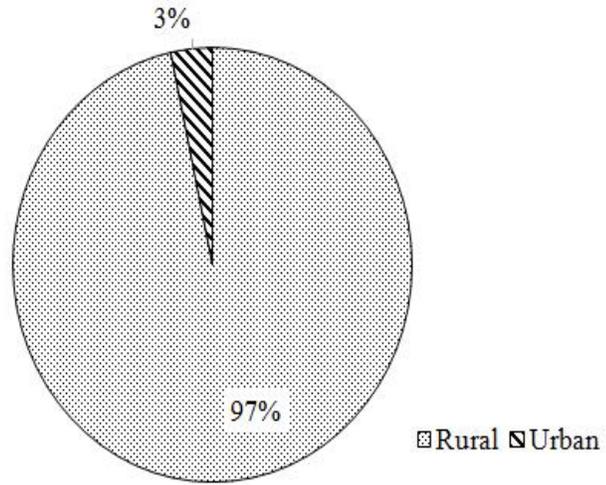


Figure 5. Ecological regionwise population composition of of Santhali (NPHC, 2011)



a.Chabo (Push net)



b.Kaikui (Fishing gaff)



c. Saira/Dhoksa (Bamboo trap)



d.Hakkujheli (Hand lift net)



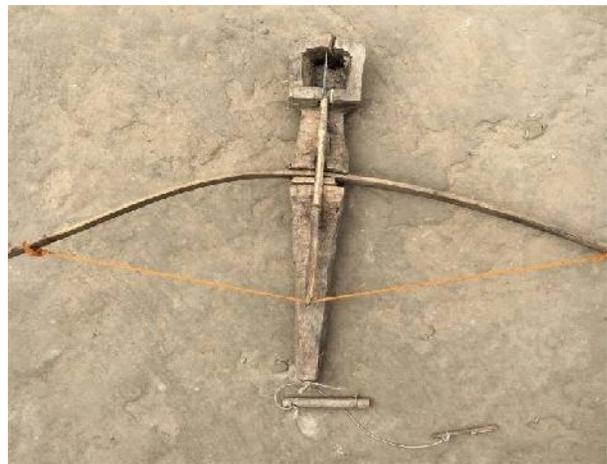
e.Chhakka (Pronged bamboo spear)



f. Passi (Snare Trap)



g. Kachhad (Thick Spear)



h. Aaopuni (Bow and arrow)



i.Tunud (Arrow triggered Crossbow Trap)



j. Sitob (Trigger bamboo rat-trap)



h. Chaidelathaa (Adhesive glue trap)



i. Putamjheli (Dove Cage Trap)

Figure 6. Photographs illustrating traditional hunting tools of Santhal

#### 4. Discussion and Conclusion

Nepal is a country of multicultural, multi-religious, multilingual, pluralistic and mosaic society. Santhal or Satar community is a unique ethnic group of eastern Nepal. Despite their small population of only 0.19 % of the total population of the country, they have rich cultural and hunting practices. More than 97% of Satar people of the country live in the eastern terai region of Nepal (NPHC, 2011). Still they are using traditional hunting tools made by themselves. Research shows that they prefer to speak their own mother tongue and conscious of their tradition and rituals. Till date, they have preserved their traditional hunting tools is an example of their devotion to their cultural aspect. They mainly use locally available materials such as bamboo, iron, and jute to make various types of hunting gears. They are skilled and transfer their hunting knowledge to their offspring and other members of their community.

The modern 21<sup>st</sup> century does not create a large difference in the lifestyle of Santhal people. Killing of birds by using bow and arrow, a catapult, capturing birds by the use of poison baits and the use of the poisonous plant to kill fish were also seen as hunting practice of some Santhali people. When Santhali get wounded during a hunt, the religious leaders practice divination and witchcraft and apply some herbs in the wound (Adhikari, 2011). Despite their unique culture and tradition, they have been dominated, neglected and excluded from the educational, political and economic sectors as well as social welfare. Some fishing and hunting practices such as use of the poison to kill fish can cause potential harm to fish other aquatic creatures and water pollution as well. Use of

spear to stab soft-shell turtles without seeing them causes harm to other endangered turtle species. During the survey, Santhali people also found using more hunting tools such as throw net, catapult, fishhook but these not described here considering these as non-traditional hunting tools.

The hunting culture of the economically weak santhali people helps to fulfill the source of animal protein to their diet by consuming their hunt. Most of them still have to depend on hunting for their daily subsistence. Research shows that Santhali people they do hunt only for meat and refreshment. In fact, hunting in group strengthened their social bond and bind them in harmony. Hunting is deeply related to the religion and culture of Santhali people (Khadka, 2008). They kill the hunt and offer its blood immediately to their supreme deity for the welfare of Santhali community (Baski, 2019). They have an orthodox belief that if anyone or some of the family members are not happy for any other member of the family while going for a hunt, it is considered bad sinister. However, it encourages mutual harmony which facilitates hunting. Santhali hunters also take their pet dog with them in capturing their prey during the hunt. Approximately, 40-60 Indian hares and 2500-3000 rats hunted by each group of Santhali hunters in a year (C. Tudu, personal communication, 15 April, 2019). The santhali people of *Jhapa* rural municipality-6 *Simalbari* and *Kisau* village of *Shivasatakshi* municipality sampling station number 2 and 4 respectively found involve in hunting a large number of Indian hare (*Lepus* spp.) Fishing practice by using traditional tools like *Chhakka*, *Kaikui* and *Chabo* were found by Santhali community of *Sarnamati* village living near *Kankai* river (sampling station 3). No such type of hunting tools was seen in

the Santhali of Dharampur area (station 1) and Shivgunj (station 2) areas. Ratmeat is the main source of meat of Santhali people's diet, followed by meat of jungle cat, Indian hare, golden monitor lizard, mongoose, white-breasted waterhen, birds and fishes.

Today's majority of Santhali people depend upon agriculture for their livelihood. Still, hunting is the part of daily life of some Santhali people. They are economically poor. They hunt for their livelihood rather than amusement. However, the effects of hunting on wildlife have not been accessed in this study. Government of Nepal has also recognized Santhali as a separate indigenous community. Despite hunting is their cultural practice and source of meat, the government of Nepal has banned them to hunt in the jungle. Constitution of Nepal has given the right to protect the culture and tradition of each and every citizen of the country. In this respect, the hunting culture of Santhali people should be managed without affecting wildlife and nature. Providing means of livelihood other than hunting help to control hunting and rehabilitate them. During the field visit, everytime when they are questioned 'why do you hunt?'. All the respondents replied the same, 'religious practice'.

## Acknowledgments

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