

CULTURAL UNDERSTANDING OF NON-TIMBER FOREST PRODUCTS AMONG THE BABUBAN COMMUNITY PEOPLE OF EASTERN NEPAL

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Introduction

This paper presents a short analysis of human-nature relationship among the Bahuban community people of eastern Nepal based on the use of non-timber forest products (NTFPs¹). The paper basically describes perceptions and understanding of different categories of people towards NTFPs based on symbolic meaning and use-value of these products in their lives. In addition, the paper also shortly discusses indigenous practices for NTFPs management in the study area.

Forest is an essential natural resource for human beings especially for those who depend on agriculture and animal husbandry. It commonly provides timber forest products (TFPs) such as timber for construction, firewood for fuel, fodder for animal feeding and leaf-litter for manure. In addition, forest also provides fruits, vegetables, tubers and shoots for foods, barks for fiber, herbs for medicine and so on which are commonly known as NTFPs. NTFPs have multiple usages among the rural inhabitants in Nepal. The most important use of NTFPs are herbal medicines, foods and vegetables, ornaments, fiber/*lokta*, sacred plants for performing rituals and religious activists, raisin/turpentine, leaves, and grasses, etc.

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¹ NTFPs are defined as all the biological materials that are derived from forest other than timber (Edwards, 1993/ 1996, Gurung, 2001 and Chaudary, 2001). NTFPs are also known as minor forest products (Hertong, 1997), non-wood forest products (Chandrasekharan, 1998).

People's perception may be varied towards NTFPs. Different cultural people generally give meanings to NTFPs differently on the basis of their use value and symbolic interpretations (Geertz, 1988). Therefore, it is essential to understand the cultural perspective of different people to understand the use of NTFPs in socio-cultural context of a particular community.

In rural setting of Nepal, different caste/ethnic, religious, and occupational group may have different perceptions and understanding towards the NTFPs. Such perception and understanding are developed by human beings in course of time of human development through trial and error methods to cope with their surroundings. In anthropological sense, such perceptions and understanding are called 'cultures' which are followed by members of a society. Thus, anthropologists interpret culture as means of mediators between human beings and their environment/nature (Steward, 1955 and Ingold, 1992). In other words, culture prescribes the way of exploitation of the environment including NTFPs.

This article is based on the fieldwork carried out from January to February, 2002 in the Bahuban community of Irautar VDC of Ilam district in the eastern Nepal. Moreover, I frequently visited the field and talked to the key informants for understanding their perception regarding NTFPs until 2007.

Cultural Construction of Resource: A Framework of Analysis

The ecological anthropology is one of the dominant approaches/subfields that emerged in anthropology for understanding the relationship between human population and their environment. The classical ecological anthropologists pointed out that the environmental factors are prime factors for shaping culture whereas other approaches emphasize on the cultural possibilism and vice versa.

In anthropology, a turning point took place in mid-1950s with the emergence of new approach, cultural ecology by the contribution of Julian Steward and later followed by other anthropologists like Marvin Harris, Roy R. Rapport, and Andrew P. Vayda with some modifications. However, all these approaches explain human-nature relationship from

outsider or observer's point of view, which is commonly known as etic perspective in anthropology. Meanwhile, the contributions of Charles Frake, Harold C. Conklin and Brent O. Berlin helped develop new methodological program for conducting fieldwork. This approach criticizes the former approaches and describes human-nature relationship from insider's perspective, participant's point of view or local people's perspective which is known as emic perspective in anthropology. This approach concentrated itself for better understanding of people's perception towards their environment (Milton, 1997, McGee and Warms, 2004).

The understanding of people towards their environment (biotic and abiotic) has also been different through time and space. Moreover, it also varies from culture to culture, from society to society and even within family members at a given time in the same space. Ortner (1989) noted that the variability may exist in the relationship between actors and their cultural universe, at every level – between individuals, across the spectrum, and across time. In the past, for instance, people generally understood resource as a gift of nature to fulfill their basic needs of human beings. Believing on this concept, many societies in the world worship the earth as mother or goddess. In this sense, Shiva says that earth bestows gifts on humans who, in turn, do not suffocate her generosity (1992). With the emergence of industrialization, commercialization and colonialization, people's perception towards earth and resource is converted into container and raw material for trade and industry respectively (ibid).

Human beings do not use all things or objects available in nature as resources. Nature is seen by humans through a screen of beliefs, knowledge, myth and purposes rather than the physical present of nature (Rappaport, 1979 and Parkin and Carrol, 1992). People, therefore, convey their cultural imagination to utilize resources. In this regard, Shalin says utility of the things or plants will depend upon its incorporation within a system of symbolic values (cited in Ingold, 1992). The object/plant is nothing itself but it becomes use-value i.e., resource only through a system of culture and cultural understanding of human beings. Plurality in culture and cultural practices determine the relationship between local people and their surroundings. This way, people's interaction with nature, can be understood only with reference to their cultural maps of nature

(Nasheim, 1995), that is called use-value or symbolic meaning given by human beings (Ingold, 1992). Similarly, people in different social positions will obviously have different relationships to a given cultural form—different interpretations of it, different feelings about it, different sense of its meaningfulness (Ortner, 1989). People's understanding, their interpretation, meaningfulness and relationship, therefore, with NTFPs may be varied among different socio-cultural groups within the same community.

Using this conceptual framework, this paper attempts to seek human-nature relationship through the use of NTFPs among Bahuban villagers of Ilam district, in eastern Nepal, based on the culture and cultural perception of different caste/ethnic, religious and occupational groups. The use of NTFPs is seen here as a 'symbolic meaning' and 'use-value' in the life of local people in general. In addition, the paper also seeks the local/indigenous management practices of NTFPs.

The Study Area

Irautar VDC is one of the 49 VDCs of Ilam district, located in the southeastern part. The village is heterogeneous in term of its caste/ethnic composition consisting of *Brahmin*, *Chhetri*, *Newar*, *Sunuwar*, *Gurung*, *Rai*, *Magar*, *Lapcha*, and *Damain*. The *Brahmin* and *Chhetri* are the dominant population in the study area which consist of 30.30 percent. The second largest group is *Sunuwar* (20.07%), followed by *Rai* (17.29%), *Gurung* (17.29%), *Magar* (8.36%), *Lapcha* (4.47%) and *Damain* (1.3%) respectively. Hindu is the dominant religion (45.24%) in the study area which is followed by *Brahmin*, *Chhetri*, *Newar*, *Magar*, *Rai*, *Sunuwar*, and *Damain*. The second largest religion is *Kirant* (29.76%) practiced by *Sunuwar*, *Rai*, and *Magar*. Similarly, *Gurung* and *Lapcha* followed the Buddhism which covers 21.43 percent and Christians constitute 3.57 percent (who are mostly *Rais*).

Majority of Bahuban people depend upon agriculture and animal husbandry and very small population is also dependent on other activities such as services, tailoring, business and wage labour. Using the adaptive strategy, the agriculturists are also involved in other occupations such as wage labor (38.27%), craft (23.46%), carpentry (13.58%), service (8.64%), trade and business (7.14%), priestly work (2.47%), and tailoring (1.23%).

Inverntory of Forest Resources in Bahuban

Bahuban is in tropical zone of the inner Tarai located in less than 1000m elevation from the sea level. Different varieties of evergreen trees, creepers, shrubs, herbs and colourful flowers are available in the forest. The villagers categorize the forest products broadly into two categories i.e., TFPs and NTFPs. The TFPs are further classified into four sub-categories i.e., timber for house construction and agricultural equipment making, fodder for animal feeding, leaf-litter for animal bedding and manure, and firewood for fuel. Similarly, NTFPs are categorized broadly into 4 sub-categories: medicinal plants, edible plants, domestic items making plants and plant use for ritual and religious performance (see detail under the heading of relation of people with NTFPs).

Saal (Shorea robusta) is the dominant tree species. *Barro (Terminalia bellirica)*, *Budhidhagero (Woodfordia fruitcosa)*, *Chanp (Michilia champaca)*, *Harro (Terminalia chebua)*, *Jamuna (Syzygium cumini)*, *Karam (Adina cordifolia)*, *Kaymuna (Syzygium cerasoides)*, *Khamari (Gmelina arborea)*, *Kimbu (Morus alba)*, *Kutmiro (Litsea momopetala)*, *Malato*, *Rajbriksha (Cassia fistula)*, *Sirish (Lbizzia lebbek)*, *Tanki (Bauhanian purpurea)*, *Thekikath (Erithrina arboriscens)*, etc. are among other available TFPs species of study area. Moreover, some of the products like barks, leaves, fruits, roots, etc; of these TFPs are also used as NTFPs in the study area (see detail in next heading). The dominant bushes are *Angeri (Lyonia villosa)* and *Banamara (Eupatorium adenophorum)* which are staple leaf-litter in Bahuban. Similarly, *Ashare (Lagerstroemia parviflora)*, *Phul-dhagero**, *Simali (Vitex negundo)*, etc; are other bushes and shrubs available in the forest which are commonly used for firewood.

There are several varieties of non-timber products found in the surrounding forests of Bahuban. The commonly usable medicinal plants are *Amala (Emblca Officinalis)* *Apamarga (Achyranthus asperal)*, *Ban-Ghiraula**, *Bheise-kanda (Rosa brunonii)*, *Hadajod/Chokatajod**, *Chandmaruwa**, *Jethimadhu (Ghucyrrhiza glabra)*, *Kali-niguro (Dryoathyrium broyanum)*, *Sikari-Lahara**, *Titepati (Artemisia)* etc. Likewise, the normally used edible plants are *Aanp (Magnifera indica)*, *Aiselu (Rubus ellipticus)*, *Bantarul**, *Bayar (Zizyphus mauritiana)*, *Chatela (Momordica cochinchinensis)*, *Chyau**, *Chiuri (Bbassia*

butyracea), *Gante**, *Gurbo* (*Alcea rosea*), *Kafal* (*Myrica esculenta*), *Kurilo* (*Asparagus officinarum*), *Niguro**, *Sisnu* (*Urtica dioica*), shoots of wild bamboos, etc.

The Bahuban people also use several plants for arranging ritual and religious activities which are *Apamarga* (*Achyranthes bidentata*), *Bar* (*Ficus bengalensis*), *Ban-kola* (*Musa sapientum*), *Betalauri**, *Bel* (*Bengal quineel*), *Bhalaya* (*Semicarpus anacordium*), *Bhim-Sen-Pati* (*Buddleia asiatica*), *Bhorla* (*Buheni vahlii*), *Dudhakeshar* (*Hedychium coronarium rose*), *Dumri* (*Ficus racemosa*), *Jhankri- syauli/Kaaulo* (*Machilus odoratissima*), *Kaulo* (*persea udorantissima*), *Koiralo* (*Bauhimia variegata*), *Kukur-daino* (*Smilax menipermodes*), *Musore-katush* (*Castaropsis tribuloidas*), *Nagabeli* (*Ycopodium clavatum*), *Paniamala* (*Nephrolepis cordifoli*), *Pipal* (*Ficus religiosa*), *Sunakhari**, *Sunkeshar* (*Hedychium coronarium Koenig*), *Swaami* (*Ficus rumphii*), *Totela* (*Oroxylum indicum*), etc. There are also other plants such as *Ban-bas* (*Dendrocalamus hamiltonii*), *Bhorla* (*Bauheni vahlii*), *Marcha-Mane**, *Salimo/Sabai grass* (*Themeda triandra*), *Sareto**, etc; which are used for preparing domestic items like rope, leaf-plates, bamboo baskets, and yeasts.

Relationship of People with NTFPs

Plurality in terms of caste/ethnic, religious and occupational structure is the socio-cultural reality of Bahuban community. These various groups of people have their own socio-cultural practices and perceptions on the use value about NTFPs. As Ingold states that all things or objects are not resources themselves without giving them symbolic meaning and use-value by people in their socio-cultural life (1992). I also found the same in the study area that all plants, particularly NTFPs available in forests, are not resources for all categories of people. In Bahuban, normally different caste/ethnic, religious, occupational and age group people give meanings to the available natural resources of their surroundings based on their socio-cultural practices, perceptions and use-value in day-to-day life. Therefore, the natural resources are not just "objects" but are socially and culturally defined values (Zimmerman, 1951 cited in Lino Grima, and Berkes, 1989, Ingold, 1992, Chhetri, 1999).

The people of Bahuban are using barks, leaves, fruits, roots, flowers and creepers, shrubs, and grasses for different purposes. On the basis of the use value, they classify available NTFPs into four categories; medicinal plants (*Jadibuti* or *Ausadhi ko rupama prayog hune biruwa*), edible plants (*Khana hune biruwa*), plants for domestic uses (*Gharayesi Prayog ka Biruwa*), and sacred plants used for religious and ritual activities (*Sanskarma Prayog Hune Biruwa*). Each of these is described below in greater detail.

Medicinal Plants and Their Use

There are 37 kinds of herbal plants commonly used in the study area. Among the 84 households, 69 percent use these plants for curing different human diseases such as fracture, cut-wound, dysentery, fever, pneumonia, cough and cold, irregularity in menstruation, pyorrhoea, asthma, gastritis, diarrhea, urinary problem, eye cataract, sinusitis and so on. The plants are also used for curing the similar kinds of animal diseases. But the dose of the medicine for animals is more than human beings. Similarly, they also apply some medicinal plants as pesticides for removing or killing harmful insects from their agricultural fields. However, all households do not use the medicinal plants. Out of the rest 31percent households, 11 percent do not believe in the curing properties and 20 percent households state that they do not have any knowledge about medicinal plants and their use.

In the study area, the traditional healers like *Baidhya* and *Dhami-Jhakri* are the authentic users of medicinal plants. Authentic in this sense that the general people have faith on them as knowledgeable persons about the use of herbal plants. Indeed, in my field observation, I also found that these persons have sound knowledge regarding the name of medicinal plants, their use and availability. They are also familiar with dose, frequency of use and its use period for various diseases.

In Bahuban village, sometimes the traditional healers use more than one herb for curing a single disease and a single herb can be used for different diseases. For instance, bark of *Khamari*, *Kutmiro*, *Kapase**, *Karam*, *Jamuna* or whole part of *Sikari-lahara**, *Hadjor/Choktajor* or root of *Hadachur*, *Bhaise-kaande* are used for curing fracture of the bone. Normally, *Baidhya* and *Dhami* prepare paste of bark/root of those

plants and put the paste in the affected area of the body and bandage for 15 to 22 days by the nature of fracture. Similarly, the paste prepared from the root of *Bhaise-kaande* or *Hadjor* is used for curing the cut wound. On the contrary, *Titepati* is used for healing various diseases like irregularity in menstruation, gastritis, headache, fever, and bleeding from nose and for the protection of agriculture products from harmful insects. Thus, the herbs can be applied for healing different diseases.

In my observation, traditional faith healers do not always collect medicinal plants. There is a strong belief among the healers in the study area that medicinal plants are effective if they collect such plants on Tuesday and Saturday. This practice and perception regulates the behaviour and management of NTPFs.

The use value of medicinal plants is not same in all times. It changes due to the change in people's perception and attitude. Medicinal plants, therefore, are not 'herbs' for all categories of people in all times. In the case of Bahuban, different people have different perceptions regarding herbs. Some perceive them as just a 'neutral object' whereas other take them as 'resource' due to their socio-cultural perceptions and use value in their life. Here, I have presented a fieldwork observation to support my argument.

Box.1 Trend of the Disappearance of the Use of Herbal Medicines among the Younger Generation People

During my fieldwork, one day I sat with Magar-Ba, who is nearly 80 years old, in his veranda and began a conversation regarding the use of herbal medicines. During the course of chatting, he informed that the use practices of medicinal plants were almost stopped among the young generation people in the study area due to the easily available modern medicines and therapy practices. After hearing his opinion, it made me more interested to know the perception of the younger generation. The next day, I asked a question about knowledge of medicinal plants to the school children but found a readymade answer, "We do not know. You better ask this question to our grand-father". When I asked the same question to young people, who were between 30 to 40 years' of age, they replied, "We know some of the medicinal plants and their use practices but do not believe in medicinal plants and use modern medicines because they are more effective".

Against this backdrop, I can conclude that there is a variation in cultural perception regarding the medicinal plants among the different age categories of people. The relationship between actors and their cultural universe may change over time, evolving into new interpretations, new feelings, new sense of meaningfulness – or meaningless (Ortner, 1989). In the case of Bahuban, the available various wild plants have medicinal value for older generation but would be nothing for younger generation. Moreover, the younger generation is steadily losing the knowledge associated with medicinal plants on the one hand and on the other hand, they cannot not pay any attention for their protection what the older generation had and did. Here, I have presented a case that is related to negligence of executive committee¹² for the protection of NTFPs in the community forestry.

Box.2. Negligence of Executive Committee for the Protection of Herbal Plants

One day, I visited the southern part of community forest with some executive members where they had planted several varieties of plants species such as fodder species [like Malato, Tanki, Kimbu, Stailo*, Dinanath*, bamboo], fruits species [like banana, mango, jack-fruit, and guava] and cash crops species [like bamboo and broom grass] in an approximately 20 hectares of forestland by clearing and burning the existing bushes and shrubs. In my observation, I found that the committee had great pride of their deed. A few days later, I met a traditional faith healer from a Rai group who used to collect medicinal plants from the surrounding forests and prepared herbal medicine. After that, we began to talk about the situation of the surrounding forests and its products including NTFPs. He claimed that the executive committee had destroyed all kinds of NTFPs including the herb plants in the name of forest protection by clearing, thinning and pruning, new plantation and agro-forestry activities in the forest.*

From this narration, we can see that shrubs and bushes are ‘nothing’ for some people but they have great ‘medicinal value’ for others like the traditional faith healer. Therefore, one can easily guess that different people have different perception regarding the available plants. Some perceive them as just ‘neutral objects’ whereas others take them as ‘resources’ for their socio-cultural and use value in their life (see Chhetri, 1999 also).

Use of NTFPs for Domestic Purpose

In the study area, more than 70 percent households use barks of creepers and bushes for preparing ropes, leaves of creepers and trees for making leaf-plates and covering the *Ghums* (skeletons of bamboo-raincoat). Similarly, they use bamboo for making baskets, winnow-fans, leaf-raincoats, mattresses and so on. Some of the households also use *Sabai* grass (*Salimo/Khar*) for roofing houses and cowsheds. In my observation, I also found that some ethnic groups (who offer local brewed beer/alcohol to their ancestral gods/goddess in rituals performances) also collect *Marcha-mane* for preparing yeast (which they use for making home-brewed beer/alcohol).

Wild-bamboo is famous for *Choya* in Bahuban. In the study locale, it is used for making skeletons of leaf-raincoats, baskets, mattresses, winnow-fans and ropes. However, *Sunuwar*, *Gurung* and *Rai* people only use *Choya* from wild bamboos. These people prefer to use wild-bamboo rather than others due to their perception that it lasts longer. Similarly, they use the *lokta* of *Sareto/Thakre** (a kind of bush plants like broom-grass) for preparing rope which is used to tie the circle of winnow-fans and baskets. According to them, winnow-fan tie with *Sareto's* rope is in higher demand in local market than tie with plastic rope.

In the study area, I also observed that all caste/ethnic and religious people use leaf-plates for offering foods to their gods/goddesses. The leaf-plates are particularly required to offer the food and other items to their ancestors during the period of recitation of *Puran*, celebration of *Dashian*, *Tihar*, *Saptaha*, *Chabang*, *Sakela* and life-cycle rituals. They collect leaves of *Bhorla*, and *Saal* for making such plates.

There is a concept of 'purity' and 'pollution' regarding the use of plates. The leaf-plates of *Bhorla*, and *Saal* are considered 'pure' to offer the foods and other items to their gods/goddesses in religious and ritual activities. Moreover, they also use leaf-plates to offer foods to their relatives and neighbours in their religious and ritual activities and other feasts and festivals. Moreover, *Saal's* leaf plate is essential for *Brahmin*, *Chhetri*, *Magar*, *Sunuwar*, *Newar*, *Gurung*, *Rai* and *Damain* people during the Tihar festival when sisters offer delicious foods to their brothers.

Regarding the collection and use of NTFPs, the local people follow a rigid traditional belief. Local people believe in the *Sharan*¹³ and they do not collect available forest products during that period. It is believed that *Sharan* is an inauspicious period for harvesting the resources. If they harvest, they would be destroyed by fungus and would not last longer. Similarly, people normally harvest wild-bamboo on *Kartik-Mangsir* (November-December). Bamboos are fully matured and do not reproduce new shoot at that time. Moreover, it is also believed that bamboo harvested at that period cannot be destroyed by fungus and can last longer. This cultural practice has been contributing to manage the continuous exploitation of the NTFPs by the local population.

In the study area, people have different uses of their products. Most of the items like yeast, leaf-plates and ropes are used for their own purposes. However, some of the items, for instance, bamboo-baskets, winnow-fans and leaf-raincoats are sold in their surrounding villages and local *hat-bazzars* by *Sunuwar*, *Rai* and *Gurung* people.

In Bahuban, I observed that most of wealthy households use corrugated sheets for roofing their houses and cowsheds whereas poor use thatching grasses. These people collect thatching grasses either from surrounding villages or from forests. On the other hand, some wealthy people, having the livestock, collect *Sabai*-grass as fodder for their animals. In my study area, one poor *Brahmin* household who had recently migrated from hill was found to be using *Sabai*-grass for preparing the ropes.

Edible Plants

Edible wild plants are plenty in the surrounding forests of Bahuban. The local people identify 27 kinds of edible plants like *Aanp*, *Aiselu*, *Ban-kera*, *Chiuri*, *Jamuna*, *Kafal*, *Ban-bas*, *Sisno*, *Bayar*, *Chatela*, mushroom, *Gurbo*, chili and so on. These plants are used for several different purposes. *Anap*, *Bayar*, *Ban-kera*, *Kafal*, *Churi*, and *Jamuna* are consumed as fruits. *Ban-bas*, *Chatela*, *Cyau*, *Niguro*, *Gurbo*, etc; are used as vegetables.

On the basis of use, Bahuban people categorize edible plants into three groups, namely, fruit, vegetable, and spices. Furthermore, fruits

are also sub-categorized into four sub-groups: common fruits, pickle preparing fruits, oily fruits and liquor preparing fruits based on their end uses. Similarly, vegetables are also categorized into three sub-groups; shoot-vegetable (*Thosa-tarkari*), fruit-vegetable (*Phal-tarkari*) and leaf-vegetable (*Pat-tarkari*). Moreover, the wild yam is also categorized into three groups such as *Ban-tarul* (wild yam), *Byakur* (cush-cush yam), and *Panglang* on the basis of its size. The people collect wild yams during the *Maghe-sankranti* (the first day of *Magha* month in Hindu calendar).

Edible wild plants contribute a supplementary source of fruits, vegetables and spices among the Bahuban people. Basically, they collect these items during festival occasions and ritual ceremonies. The poor people gather these plants throughout the year whereas rich people collect them at the time of scarcity of the domesticated vegetables, roots and fruits. In addition, the poor people also sell these items in the local *hat-bazaars* for fulfillment of their basic needs.

All kinds of plants cannot be available in all seasons and all parts of the forest. Local people, however, have sound knowledge about the available area and their fruit-bearing seasons. In this sense, local people are called eco-systemic people (Eder, 1990). *Anap*, *Ashare*, *Chiuri*, *Gurbo*, and *Bandar-jhulla** are available in June and July only. Similarly, *Ban-tarul* and *Jirekhorsani* are found in January and February, and *Aiselu* in April and May, *Bayar* in February and April, *Kafal* from March to May. In addition, *Ban-tama* are available from June to August and *Chatela*, *Sisno* and *Niguro* from June to September.

Wild edible plants are not 'just foods' but they signify more than nutritional value. Food including wild edible plants is culture (Oestigaard, 1999). It is closely interwoven with the social relation and culture (Subedi, 2003) and cultural perspective of people in society. In Bahuban, different caste/ethnic groups have different perceptions regarding edible wild plants. The *Brahmins* do not collect and eat mushroom. In this regard, a popular saying, "*bahunle cyau khaosh na cyauko bat janosh*" is common among the Brahmin as well as other caste/ethnic groups. Literally, *Brahmins* do not eat mushroom and do not know its variety. They consider mushroom as *Tamasi*¹⁴ (polluted) food and do not take into their kitchen.

Brahmins believe that mushrooms are spontaneously grown from stale food, rotten things or dead bodies of insects which are considered polluted in Hindu ideology. Moreover, as a *Tamasi* food, mushroom falls under the lowest rank of food taxonomy¹⁵. Thus, for maintaining the sanctity of the high caste in the social fabric of society, *Brahmins* avoid eating mushrooms to maintain their caste status by giving the cultural meaning. Food, therefore, affects and creates identity in human relation.

Lapchas do not collect younger shoots of bamboo for vegetable, pickle and other usages. When discussing on the food taboo regarding the shoot of bamboo, one *Lapcha* informant interpreted an oral history. In the past, the ancestor of the *Lapcha* people used to live on the bottom of the sloppy hill. Above their house, there was a large wild bamboo-bush. One day, there was a great landslide and it was not possible to save the lives. But the bamboo bushes saved their lives by controlling stones and soil, that is, the debris of the landslide. Since then, they began to plant wild-bamboo above their house and prohibited to collect the shoot of wild bamboo for pickles and vegetables.

In Bahuban area, all caste and ethnic people have a common belief regarding the collection and use of the green chili. Once upon a time, some of the villagers fetched the green chili from the forest and used them as a spice immediately. After few days, they also went to the forest to collect the chili. At that time, all the chili plants were found dead from where they had collected last time. Thereafter, they gave up using fresh green chili as a spice. Thus, such traditional belief among the Bahuban people helps to protect the available NTFPs i.e., chili in their surrounding forests.

Use of NTFPs for Religious and Ritual Purposes

Bahuban people have great faith in their religion and are used to their elaborate ritual practices. I observed some difference in religious and ritual practices and belief among the people of Bahuban. For instance, the Hindu people performed *Bratamanna*, *Puran*, *Rudri*, *Teej*, *Swastani*, whereas the *Kirant* people perform the ancestor worshipping ritual, *Sakela/Sakewa* (*Udauli* and *Uvauli*), *Chabang*, and Buddhist people mostly performed *Buddha-jayanti* and ancestral worshipping ritual.

Christian people do not practice any kind of ritual in the study area. Those who follow different religions and practice rituals are found rigid in their practices because of their consciousness to protect their own religious identity. As a variation in their religious and ritual practices, one can observe the difference in the use of NTFPs too.

In Bahuban, the Hindus worship some species of plants i.e., *Kush**, *Tulasi (Ocimum basilicum)* and *Pipal* as a symbol of God Vishnu. The Bahuban people use such plants to worship their deities by giving meaning. I also found that Hindu people of Bahuban also worship the banyan plant as a symbol of God Vishnu. One of the informants shared that during the time of catastrophic event, one of the *Rishis*, named Markandya, saw the God Nara-narayan (Vishnu) sleeping as a child on the leaf of the tree in an island. Thereafter, people began to believe that banyan tree is the living place of the god Vishnu. Believing on that concept, the Hindu people of Bahuban still worship the banyan tree as a part of God Vishnu.

Similarly, Hindu people of Bahuban offer the milk mixed with water to the deceased father and mother on the 11th day of the death on 365 numbers of white latex leaf plates. That is called '*Khochha bagaunu*'. The white latex plants like *Dumri and Pakhri** are considered pure in the ritual and other plants are considered impure. The white latex plants symbolize the milk in Hindu society that meaning may be varied in other society. In Ndembu community of Zambia, the milk tree stands for human breast milk and also for the breasts that supply it. Furthermore, the tree gives the meaning of matrilineal relationship i.e., between mother and daughter (Turner, 1976). However, in Hindu society, offering the milk mixed with water on the plants of such tree leaves is offering the milk to the deceased father/mother for a year. That symbolically stands for the unity and continuous relation between deceased parents and their children.

In the study area, leaves and branches of *Pipal*, *Bar*, *Dumri*, *Bhalayo*, and *Chiuri* are commonly used by Hindu people to perform rituals such as *Puran*, *Pooja*, *Bratamanda*, marriage and death rituals, etc. Some other ethnic people like the *Gurungs*, *Rais*, *Sunuwars* and *Magars* identify themselves as Buddhists and Kirats (by religion) and also invite *Brahmin* priests to perform various rituals and use sacred plants which are necessary for performing the Hindu rituals. The worshipping of Hindu gods/

goddesses and performing Hindu rituals through Brahmin priests is common among non-Hindu groups in Nepal (Sharma, 1997). *Rais* invite Brahmin priests to perform *Satyanarayan pooja* (worship of Vishnu). Similarly, *Gurung*, *Magar* and *Sunuwar* also invite *Brahmin* priests for performing various rituals such as naming, marriage, death ritual, *Satyanarayan pooja*, *Rudri* pooja (worship of Shiva), and *Bastu pooja* (worship of house).

In Bahuban, those people, who invite *Brahmin* priest, use *Pipal*, *Bar*, *Aanp*, *Dumri*, *Pakhari** for making *Toran* (sacred garland) in *Bastupooja*. The *Toran* hangs around the house by covering the four walls. The villagers perceive that *Toran* helps to protect the house from inauspicious, evil eyes, fire, thunder, and other unpredictable natural calamities. Similarly, the leaf of *Pipla* and *Bhalayo* are needed during the *Narawan* (naming ritual) for all people including the Christians. All Hindu people and some non-Hindu people invite the *Brahmins* priest to perform naming ritual. The *Brahmins* write the name of newly born child on the leaf of *Pipal* by calculating time-period of birth based on Hindu calendar. It is believed that the name written in the leaf of *Pipal* is not destroyed for a long period. Similarly, the branch of *Bhalayo* is burnt and the ash is smeared in the forehead and other parts of the baby with the belief that it protects the baby from itching.

Similarly, in the study area, the Hindu believers also commonly use leaf of *Bel* tree to worship God Shiva. They offer leaves of *Bel* tree to god Shiva in different rituals such as *Rudri* and *Swastani*. It is believed that if someone offers a leaf of *Bel* tree to the Shiva, he/she can get the emancipation from the sinful deed. Similarly, the *Newar* people perceive *Bel* as symbol of god Vishnu which is needed in their initial marriage ritual called *Ihee*. They marry their daughter with the fruit of *Bel*, symbol of the god Vishnu, before their menarche. Thus, the *Newar* women never become widow after the death of their husbands (Nepali, 1965).

Rishi Panchamee Pooja is a ritual performed by the Hindu women where all women gather in the bank of river and wash their body with soil and clean their teeth and vagina with 65 numbers of twigs and leaves of *Apamarga*.

I also found the meaning for using soil of different places and the

twigs and leaves of *Apamarga* for bathing their body. According to the local belief of the Hindus as elsewhere, first three days of menstruation period of women is considered polluted. Therefore, the polluted women have to distance themselves from pure matters including other individuals. Thus, it is prohibited for women to touch males, gods/goddesses, green fruit plants and visit the religious places during her polluted period. If it happens unknowingly, a most serious sin is committed in their religious life. Therefore, the women believe that brushing teeth and cleaning their vagina by twigs and leaves of *Apamarga* helps them to be emancipated from such unknowingly committed sin.

The *Rai* people commonly used *Chibung (Koiralo)*, *Tarawobung (Sunkeshar, Dudhakeshar)*, *Lolowa (Paniamala)*, *Wahi (Musore-katush)*, *Amlabung (Sunakhari)*, *Nagatungpu (Betalauri)*, and wild-bananas while performing the rituals; *Sakela/Sakewa*, *Chabang* and ancestor worship. There is a mythical and oral history regarding the use of these plants in their rituals.

Chabang is one of the most important rituals arranged during the *Koiralo* flowering season. The word *Chabang* is composed of two Kirant syllables 'Che' and 'Bang' meaning water and god, respectively, meaning 'god of water'. To perform this ritual, they gather different varieties of wild plants such as *Koiralo*, *Sunkeshar*, *Dudhakeshar*, *Paniamala*, *Sunakhari*, *Betalauri*, and wild-bananas. Among them, *Koiralo* is essential and compulsory.

One of the informants shared that during the time of creation of living beings including human beings, Sungnima and Parohang¹⁶ were traveling throughout the world. At that time, Sungnima saw a beautiful white flower in the forest. Then, she requested her husband for that flower. He also put down those flowers with bow and arrow and offered to her wife. Then, Sungnima decorated her body with the flower of *Koiralo* including other flowers like *Sunkeshar*, *Dudhakeshar*, *Paniamala*, *Betalauri* and began to perform the worship of nature for the creation of living beings. Thereafter, *Rai* people began to believe that such plants are the ornaments of the mother creator. Believing that concept, the *Rai* people of Bahuban still use these plants while performing their ritual. In *Rai* community, *Sunakhari* is essential in marriage ritual. They decorate the bride head with *Sunakhari* flower that is called *Siliseli*.

The leaf of wild-banana is essential to perform various ritual and religious rites among the *Rais* in Bahuban. They use it to offer foods and drinking items to their ancestral deities. One elderly person told an oral history regarding the symbolic value of leaves in their group. During the creation of human beings, Parohang was angry with Sungnima and converted the greenery world into a desert. Then, she moved hither and thither in search of food and water but in vain. At last, she reached the bushes of wild-banana. Thereafter, she cut leaves and stems and drank latex that came out from banana's tree. Consequently, she survived herself. In this way, *Rais* gave their symbolically constituted meanings to the banana tree. That is, it stands as a 'life-giver' to their mother creator, Sungnima, who gave the birth of *Rai* people.

Kirant believers also commonly use branch of *Musore-katush* tree in *Sakela* ritual. It is a ritual of nature worship. Before starting the ritual, they establish a place for ancestral deity where some branches of *Musore-katush* are planted by giving the meanings. It is believed that after the creation of living beings in the world, *Thaspung-diwing*, father of witch doctor, arranged *Sakela* ritual. At that time, *Thaspung-diwing* and his disciples began to sing and dance. Meanwhile, the temperature surprisingly increased and disturbed them. Thereafter, *Thaspung-diwing*, who had a supernatural power and enchanted *mantra* upon the branches of *Musore-katush* tree. Consequently, the branches spontaneously grew up and provided shadow to the participants and then they completed their ritual. Believing this mythical history, Kirant people still plant *Musore-katush*'s branch while performing *Sakela* ritual. That is, *Musore-katush* tree is the symbol of shadow provider among the *Rai* people.

In Bahuban, Hindus and Kirants perform ritual and religious activities to earn 'religious merits' in their 'after life' whereas Buddhists do not believe in it. Buddhists have followed the ideology of Buddha to get rid of the cycle of rebirth. In this regard, there is no need of wild plants in their religious life and all plants are taken, theoretically, as a part of ecosystem. However, their understanding of all plant species is not same. That means, some plants like *Bar*, *Kush*, *Jamuna*, *Pipal*, *Saal*, bamboo and mango are taken as holy trees in Buddhist religion because various events of Buddha's life are directly interconnected and interwoven with these plants. For instance, Buddha got first knowledge

about life under the *Jamuna* tree. Similarly, the four events i.e., the birth, the enlightenment, the spreading out of enlightenment and *Mahaparinirvana* (salvation) in Buddha's life took place under the *Ashok**, *Pipal*, *Bel*, and *Saal* trees. Moreover, Buddha spent most of his life under the mango tree and bamboo bushes between the period of leaving the palace and attaining enlightenment of life. Believing in this concept, the Buddhist people also perceive the *Ashok*, *Bar*, *Bel*, *Jamuna*, *Kush*, *Pipal*, *Saal*, bamboo and mango trees symbolically meaningful in their religious life.

Hindu and Buddhist religious people give different meanings to the same NTFPs. For instance, I have already mentioned that Hindu people perceive *Bar*, *Pipal*, *Kush* and *Bel* as symbols of Gods whereas Buddhist understand these things differently. The plant of *Kush* is taken as *Bodhi Ghansh* (grass of enlightenment), that is, Buddha attained enlightenment after sitting on the mat of *Kush*. Similarly, *Bar*, *Bel* and *Pipal* are taken as *Bodhi-briksha* (trees of enlightenment). In this way, the people's understanding on NTFPs is varied according to variation of cultural background. In this regard, Milton (1996) says that culture and cultural variation are not just matters of different symbols with similar meanings but different ways of expressing the same things.

Likewise, *Magar*, *Sunuwar*, *Gurung*, *Rai*, *Lapcha* and *Newar* are keeping flowers of *Totela*, stalk of *Nagbeli*, whole part of *Kurilo*, and vein of *Kukurdaino* on the lintel of their main door. It is believed that these plants play the role of protector so that the evil spirits do not enter the house. Similarly, some *Brahmin/Chhetri* are also found to keep these plants on lintel of their main door. All habitants of Bahuban have same meaning for using these plants.

Local Strategy for the Protection of NTFPs

Local people are taken as eco-systemic people because they actually live as a part of eco-system rather than just exploiters of the natural resources (Eder, 1997). They are not only the consumers of resources but guardians too (Milton, 1996, Stevens, 1999). They have held a set of articulated knowledge and belief system regarding the protection of the resources. In the case of Bahuban, locals have started different protection activities of NTFPs for the last few years as depicted below.

1. *Sareto*, *Kali-niguro*, *Choktajod/Hadjod*, *Sikari-lahara*, *Chandmaruwa*, *Kurilo*, etc; are also decreasing in the forest land due to the open grazing of the domesticated animals and over-exploitation by the local people in the forest area. For the last one and half decades, Bahuban people have been domesticating these valuable NTFPs in their private lands, particularly in the kitchen gardens.
2. The general trend of the protection of some of the useful NTFPs in the agricultural land like *Totela*, *Amala*, wild bamboo, *Bhalayo*, *Simali*, etc; is laudable.
3. Some religious trees (*Bar*, *Pipal*, *Bel*, etc.) brought from the forest and neighboring areas have been planted in private and public lands by the high caste Hindu people. These plants are considered 'sacred' plants and needed in their religious and ritual performance.
4. A general trend of protection of medicinal plant is that the local shamans do not introduce medicinal plants to their clients. Rather, shamans collect these items carefully once or twice a week by considering the auspicious days. Such activities of shamans on the subject of exploitation of the medicinal plants minimize the ecological impacts of human exploitation of medicinal plants.
5. They do not harvest NTFPs such as wild bamboos, and *Sareto* when they are premature, particularly during the rainy season. They collect these plants in November and December only when they are mature.

Conclusions

All naturally available 'objects' are not 'resources' for all categories of people. These objects only become resources while people use them to fulfill their needs by interpreting the symbolic meanings, functions and use-value in their socio-cultural and religious life. However, all NTFPs have not same use-value for all categories of people. There is caste/ethnic, religious, social class, and age-group specific difference in NTFPs' use. Therefore, people's interaction with nature (NTFPs) can be understood only with reference to culture and cultural perspectives.

The local people have strong social sanction and traditional belief regarding the use of locally available resources. Such social sanction

and traditional belief help to protect over and continuous exploitation of resources. Moreover, the nature of plurality in cultural practices and perceptions regarding the use of resources among the different caste/ethnic, religious and occupational groups of people creates a symbiotic relationship. Such plurality in cultural practices on the subject of plant exploitation minimizes the adverse ecological impacts of human exploitation on resources.

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