

1 **Assessment of Traditionally used Wild Edible Plants for its Impact** 2 **on Health and Livelihood of the Ethnic Communities of Tripura.**

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ABSTRACT

5 Tripura is the third smallest state of India. It is the home of 19 tribal ethnic communities. The
6 local peoples of Tripura widely consume the wild plants as vegetables in their daily diet to fulfill
7 their nutritional need and sometimes as traditional medicine too. A survey was carried out in
8 different parts of Tripura among the 19 ethnic communities of the state. The selection of the
9 survey area was carried out based on the presence of tribal communities. During the field survey
10 a total of 61 species of wild edible plants which are being as their traditional food and medicinal
11 purpose by indigenous communities of Tripura were identified, and the same belonged to 34
12 family and 53 genera. Out of 61 species 25 are annual and 36 are perennial. Herbaceous plants
13 make up the highest proportion of edible plants followed by trees. The ethnic communities of
14 Tripura largely depend on the wild vegetables and thus require sustainable management of the
15 resources by some control on their harvest and use of the wild edible plant resources.

16 **Key Word: Wild Edible Plants, Health, Livelihood, Ethnic Communities of Tripura.**

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BACKGROUND:

19 The Wild vegetables are an important source of food, not only in the rural parts of Tripura but
20 in the whole world. Wild edible plants refer to species that are harvested or collected from
21 their wild natural habitats and used as food for human consumption. They provide staple food
22 for indigenous people, serve as supplementary food for non-indigenous people and are one of
23 the primary sources of cash income for poor communities (Ju *et al.*, 2013). At present, about
24 90 % of global food production comes from less than 30 species and more than 85–90 % of
25 total caloric intake is obtained from 12 domesticated species (Misra *et al.*, 2008). In future this
26 can be a reason of unbalanced pressure on agricultural food sources. The majority of the
27 edible plants are neglected which grow naturally in the wild and do not have to be tended
28 before producing edible parts (FAO, 1988). Wild vegetables and spices were important
29 source of food for mankind before the dawn of civilization. Cavemen in the forests also
30 depended on these vegetables and spices and passed on valuable information of its utility
31 from generation to generation (Chakraborty and Chaturvedi, 2015). Wild edible plants play

an important role in ensuring food security and improve the nutrition in the diets of many people in developing countries (Ju *et al.*, 2013). The tradition of using wild food is at risk of disappearing throughout world (Kidane *et al.*, 2015; Upreti *et al.*, 2012). Northeast India including Tripura is very rich in plants especially herbs because of plenty of rainfall and availability of dense forest. The state is rich with the traditional knowledge existing with the 19 tribal communities. The rich endowment of edible resources in forest kept the tribes of Tripura confined in living traditionally in forest areas. Over 9,500 wild plant species are used by ethnic peoples for meeting the varied requirements have been recorded so far. Out of which 7,500 wild plant species are used by tribal's for medicinal purpose, about 950 are found to be new claims and worthy of attention of developed as alternative source of food that the world would need in near future (Upreti *et al.*, 2012). Research on wild food plants is still active even during the present day. Such research is carried out in many countries and continents (Strymets *et al.*, 2015; Jain and Tiwari, 2012; Rasingam, 2012; Jadhav *et al.*, 2011). In the Indian subcontinent, 9500 wild plants are used for food, medicine, fodder, fiber, fuel, essence, cultural and other purposes by over a 53 million tribes belonging to 550 different communities (Angami *et al.*, 2012). Ethnobotanical studies on wild food plants associated with tribal communities of central India, Tamil Nadu, Maharashtra, Northeastern India, etc. (Deb *et al.*, 2013; Choudhury *et al.*, 2010; Etkin 2002; Phillips and Gentry 1993) are reported from India. The tribal communities of Tripura use over 41 wild plant species as their food by making different delicious recepies (Deb *et al.*, 2013).

The objectives of present work

To record the traditionally used wild edible woody and non-woody plants used by ethnic communities, economic importance of the species in livelihood of the ethnic communities and the negative effects of these wild plants on the health of the ethnic people.

MATERIALS AND METHODS

STUDY AREA:

The study was conducted in the whole state of Tripura in north-east India. The third-smallest state in the country covers 10,491 km² (4,051 sq mi) and is bordered by Bangladesh (East Bengal) to the north, south, and west, and the Indian states of Assam and Mizoram to the east. In 2011 the state had 3,671,032 residents, constituting 0.3% of the country's population. Indigenous communities, known in India as Scheduled Tribes, form about 30 per

cent of Tripura's population. The Kokborok speaking Tripuri people are the major group among 19 tribes and many sub tribes. The Bengali people form the ethno-linguistic majority in Tripura. Tripura has 8 district and 23 subdivisions. It extends from 22°56'N to 24°32'N and 91°09'E to 92°20'E. Its maximum extent measures about 184 km from north to south, and 113 km east to west. The state has a tropical savanna climate, designated A_w under the Köppen climate classification. The undulating topography leads to local variations, particularly in the hill ranges. The four main seasons are winter, from December to February; pre-monsoon or summer, from March to April; monsoon, from May to September; and post-monsoon, from October to November. During the monsoon season, the south west monsoon brings heavy rains, which cause frequent floods. The average annual rainfall is **2100 mm**. During winter, temperatures range from 13 to 27 °C (55 to 81 °F), while in the summer they fall between 24 and 36 °C (75 and 97 °F). According to a United Nations Development Programme report, the state lies in "very high damage risk" zone from wind and cyclones.

METHODOLOGY

The present study was carried out over selected areas of Tripura. The selection was carried out based on the presence of the tribal community. The identification of the study area was done with the help of The Tribal Research Institute, Agartala, Tripura. The selected areas were:

Sl. No.	Place	District
1	Shidhai Mohanpur	West Tripura
2	Bamutia	West Tripura
3	Bir Chandra Manu	South Tripura
4	Kuwaifung	South Tripura
5	Amarpur	Gumoti
6	Panisagar	North Tripura
7	Chailengta	Dhalai

The aim of the study was to explore, collect, identify, and preserve the wild plants used by tribals as food. The data were collected from the ethnic people through participatory rural appraisal and questionnaire survey. The elder persons, farmers, herdsman, shepherds, housewives, and children were contacted to collect data on uses of plants. Local names, plant

88 part used, method of utilization were gathered from them with regard to each plant. All plants
89 were identified with the help of available literature.

Few glimpses of survey





Female members selling wild vegetables



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RESULTS AND DISCUSSIONS

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Documentation of wild plants

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On the basis of documentation carried out in different parts of Tripura it was observed that the region is rich in wild edible plants. These plants are the precious gift of nature. In Tripura, several studies been conducted on documentation of traditionally used plants by the ethnic communities and it was confirmed that the communities depends on it for their day-to-day life (Phillips and Gentry ,1993). The present survey recorded the diversity of wild plants which have been used as vegetable by all ethnic communities of Tripura and the traditional knowledge of wild plants associated with the ethnic communities of Tripura. A total of 61 wild species belonging to 34 families and 53 genera have been documented from the village and local market survey. It was recorded in this survey that Fabaceae and Araceae are dominating plant Families which used as wild vegetable among the ethnic communities of Tripura.

109 The list of plants along with their local name, life form, growth habit, parts consumed, mode
110 of preparation is presented in Table 1.

111 **Table 1: List of plants along with their local name, life form, growth habit, parts**
112 **consumed, mode of preparation**

Scientific name	Family	Local name	Growth habit	Life form	Part used	Mode of preparation
<i>Acacia nilotica</i> L.	Fabaceae	Kantanageswar/ Gadanarasing	Tree	Perennial	Fruits	Fruits are eaten as raw or mixing with dry fish
<i>Alocasia macrorrhizos</i> (L.) G.Don	Araceae	Mon kachu / borokachu	Herb	Perennial	Rhizome	They are made into carry specially with fish. Rhizomes are boiled with dry fish and chilly
<i>Amaranthus spinosus</i> L	Amaranthaceae	myra / Kata naute	Herb	Annual	Leaves, shoot	Cut finely and boiled. Their leaves are mainly used to make shak without oil.
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	Araceae	Batama	Herb	Perennial	Rhizome	Very firstly raw batama is processed with khar pani and it converted in to small pieces of processed batama. The pieces are fried and eaten with rice.
<i>Amorphophallus bulbifer</i> (Roxb.) Blume	Araceae	Bagduga	Herb	Perennial	Whole plant	Cooked with dry fish
<i>Artocarpus chaplasha</i> Roxb.	Moraceae	Cham kathal	Tree	Perennial	Fruit	Ripen fruit eaten as directly.
<i>Artocarpus heterophyllus</i> Lam	Moraceae	Kathal	Tree	Perennial	Fruit	Raw fruit is used to make labra(mix vegetable)
<i>Asparagus racemosus</i> Willd.	Asparagaceae	Shatamulli	Shrub	Perennial	Young shoots	Fried and consumed.
<i>Bacopa monnieri</i> (L.) Pennell	Plantaginaceae	Brahmi shak	Herb	Perennial	Leaves	Leaves can Fried or boiled with dry fish.
<i>Bambusa tulda</i> Roxb.	Poaceae	Mritinga	Other (Woody Grass)	Perennial	Young shoots	Used to make Gudak simply by boiling it with dry fish and chilly
<i>Basella alba</i> L.	Basellaceae	Pui shak	Herb	Perennial	Leaf, stem, fruit	Boiled with other vegetable and dry fish.
<i>Boerhavia diffusa</i> L.nom. cons	Nyctaginaceae	Punarnava pata	Herb	Annual	Leaves	Fried and consumed.
<i>Cajanus cajan</i> (L.) Millsp.	Fabaceae	Aral	Shrub	Perennial	Seed , flower	Pods are boiled with potato and dry fish to

						make gudok.
<i>Centella asiatica</i> (L.) Urban	Apiaceae	Thankuni	Other (Creeper)	Annual	Leaf	Simply by make a paste with chilly.
<i>Chenopodium album</i> L.	Chenopodi aceae	Dalo bupham	Herb	Annual	Leaf	Fried
<i>Clerodendrum</i> <i>serratum</i> L.	Verbenacea e	Bamunhati	Herb	Perennial	Leaf	Fried
<i>Clitocybe</i> sp.	Tricholoma taceae	Mushroom	Other (Fungi)	Annual	Whole part	Used to make a special recipe called aundru. They like to take fried it too.
<i>Coccinia grandis</i> (L.) Voigt	Cucurbitac eae	Telekochu	Climber	Perennial	Fruits, leaves	By making shag, or by boiling.
<i>Colocasia esculenta</i> (L.) Schott	Araceae	Kochu /Mukhikachu	Herb	Perennial	Whole plant	Curry especially with fish and sometimes simply by make a paste with chilly.
<i>Curcuma zedoaria</i> Rosc.	Zingiberac eae	Holud ful	Herb	Perennial	Flower	Fried form.
<i>Dillenia indica</i> L.	Dilleniacea e	Chalta	Tree	Perennial	Fruit	Fruit is used to make chutney with sugar. Also used with dal.
<i>Dendrocalamus</i> <i>longispathus</i> (Kurz) Kurz	Poaceae	Rupai Bas korul	Other (Woody Grass)	Perennial	Young shoot	Used to make Gudok simply by boiling it with dry fish and chilly.
<i>Dioscorea alata</i> L.	Dioscoreac eae	Chupri alu	Climber	Perennial	Tuber	Curry especially with fish.
<i>Dioscorea bulbifera</i> L.	Dioscoreac eae	Banaalu	Climber	Perennial	Tuber	Curry especially with fish.
<i>Dioscorea esculenta</i> L.	Dioscoreac eae	Suthnialu/ susnialu	Climber	Perennial	Tuber	Curry especiallywith fish.
<i>Dioscorea</i> <i>hamiltonii</i> Hook. f.	Dioscoreac eae		Climber	Perennial	Tuber	Curry especiallywith fish.
<i>Diplazium</i> <i>polypoides</i> Bory.	Athyriacea e	Deki shak	Herb (Fern)	Annual	Leaves	Fried
<i>Eichhornia</i> <i>crassipes</i> (Mart.) Solms	Pontederiac eae	Kachuripana	Herb	Annual	Stem	Fried
<i>Enhydra fluctuans</i> Lour.	Apiaceae	Alencha Sakh	Aquatic herb	Annual	Leaves	Fried and consumed

<i>Erygium foetidum L.</i>	Apiaceae	Bilatidhaniya	Herb	Annual	Leaves	Used as spice.
<i>Euryale ferox Salisb.</i>	Nymphaeaceae	Thanjing/makhna	Aquatic herb	Perennial	Tuber and seed	Seeds are eaten as raw and roasted. tuber and seeds are eaten by boiling with dryfish .
<i>Glycosmis pentaphylla (Retz.) DC</i>	Rutaceae	Arai Bwlai	Shrub	Perennial	Leaves	Fried and consumed.
<i>Hibiscus sabdariffa L.</i>	Malvaceae	Mesta	Shrub	Perennial	Flower, Fruit	By boiled with water they make a sour soup and consumed.
<i>Homalomena aromatica Schott.</i>	Araceae	Gandhaki	Herb	Perennial	Whole	Biled with dry fish or Extracting juice and preparing usually with fish.
<i>Ipomoea aquatica Forssk.</i>	Convolvulaceae	Kalmisak/Kalmi.	Herb	Perennial	Leaves	As a vegatable
<i>Lablab purpureus (L.) Sweet</i>	Fabaceae	Shim	Climber	Annual	Fruit (Pods and seed)	Used to make labra.
<i>Lasia spinosa (L.) Thwaites</i>	Araceae	Kanta kochu	Herb	Annual	Leaves, Rhizome	Extracting juice and preparing curry.
<i>Leucaena leucocephala (Lam.) de Wit</i>	Fabaceae	keli kadam	Tree	Perennial	Fruits	Fried
<i>Azadirachta indica A.Juss.</i>	Meliaceae	Neem	Tree	Perennial	Leaf	Fried with chilly and salt and consumed.
<i>Melocanna baccifera (Roxb.) Kurz</i>	Poaceae	Muli Bas korul	Other (Woody Grass)	Perennial	Young shoot	Used to make Gudok simply by boiling it with dry fish and chilly.
<i>Monochoria hastata (L.) Solms</i>	Pontederiaceae	Chirichiri	Herb	Annual	Flower	Making snacks.
<i>Moringa oleifera Lam</i>	Moringaceae	Sajna	Tree	Perennial	Leaves, bark and Fruit	Fruits are boiled and cooked. Leaves are fried and bark is grinded and make paste.
<i>Momordica charantia L.</i>	Cucurbitaceae	Karala	Climber	Annual	Fruit	Fried.
<i>Momordica cochinchinensis (Lour.) Spreng.</i>	Cucurbitaceae	Karkal	Climber	Annual	Fruit	Fried
<i>Musa acuminata</i>	Musaceae	Ram kala/	Herb	Annual	Fruit and	Used in Gudhak as an

<i>Colla</i>		Thorkala			flower bud, shoot	ingredient.
<i>Neptunia oleracea</i> Lour.	Fabaceae	Khari shakh	Herb	Annual	Leaves and stem	Fried
<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Shiuli phool	Shrub	Perennial	Leaves	Fried
<i>Oroxylum indicum</i> (L.) Benth. ex Kurz	Bignoniaceae	Nokka	Tree	Perennial	Fruit	Boiled and cooked.
<i>Oxalis corniculata</i> L.	Oxalidaceae	Amiloti	Herb	Annual	Tender shoots	Boiled with water and sweet potato.
<i>Parkia javanica</i> (Lamk.) Merr.	Fabaceae	Longchak	Tree	Perennial	Fruit	In mixed vegetable which is locally called labra
<i>Polycarpon prostratum</i> (Forssk.) Ashers & Scheweinf.	Caryophyllaceae	Mai shak/ Bukhate	Herb	Annual	Leaf	Fried
<i>Portulaca oleracea</i> L.	Portulacaceae	Nunia sag/Atka bwsali	Herb	Annual	Whole plant	Fried
<i>Sesbania grandiflora</i> (L.) Poir.	Fabaceae	Bak phul	Tree	Perennial	Flower	By making pokora.
<i>Solanum indicum</i> L.	Solanaceae	Bekair/gurkhami/ tit begun	Herb	Annual	Fruit	Boiled with dryfish. Also fried with leafy vegetables.
<i>Solanum nigrum</i> L.	Solanaceae	Putki begun	Herb	Annual	Fruit	Boiled with dryfish. Also fried with leafy vegetables
<i>Solanum torvum</i> Sw	Solanaceae	Brehanti	Herb	Annual	Fruit	Fried
<i>Spilanthes acmella</i> (L.) L.	Compositae	Jingina	Herb	Annual	Flower, Leaves	Boiled to cook gudhok.
<i>Tamarindus indica</i> L.	Fabaceae	Tetul	Tree	Perennial	Fruit	By making chutney with sugar
<i>Typhonium trilobatum</i> (L.) Schott	Araceae	Ghet Kochu /Khargon	Herb	Annual	Tubers and leaves	Fried with dry fish and jackfruit seed.

<i>Vitex negundo</i> L.	Lamiaceae	Nishindhya	Shrub	Perennial	Leaf, root	By boiling it with dry fish.
<i>Zanthoxylum limonella</i> Alston.	Rutaceae	Bajrang.	Shrub	Perennial	Fruit	Fruit

Out of these 61 species, 36 (59%) are perennial while 29 annual (41%). Their growth habits included tree, shrub, herb, climber and others (creeper, bamboo, fungi etc.). Herbaceous plants make up the highest proportion of edible plants with 30 species (49 %), followed by trees with 11 species (18 %) and climber with 8 species (13 %).

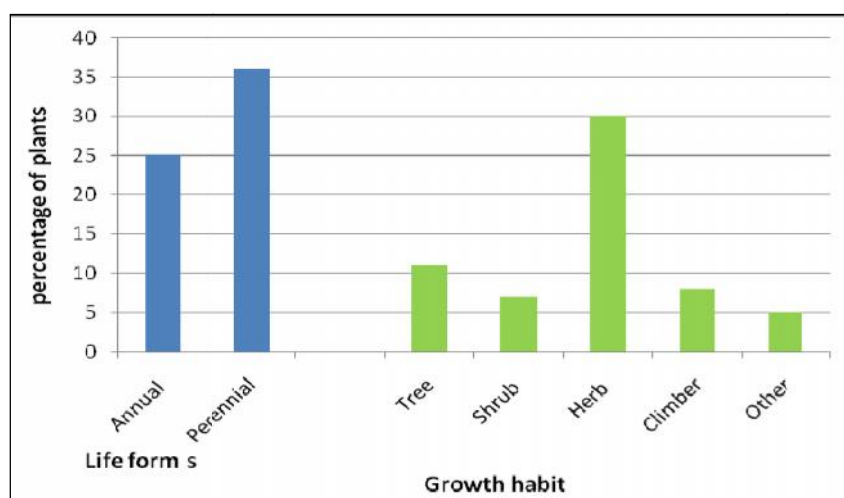


Fig.1: Life form and growth habit of plant species utilized as wild vegetables by ethnic communities of Tripura

All the 61 species are edible. Out of 61 species 18 species are used as vegetable as a whole or their maximum parts are used as vegetable and 41 species have single part used as vegetable.

Among the edible parts, Fruit are dominant with 15 species (35%), followed by leaf 13 species (30%) and most of them are consumed as cooked vegetables that include boil, steam and fry. Previously Deb *et al.*, (2003) reported a total of 41 species of wild edible plants belonging to 36 genera and 22 families of through semi-structured interviews and preference ranking methods among three ethnic groups viz. Tripuri, Molsom and Rupini of Tripura. In a similar work Choudhury *et al.*, (2010) recorded 10 wild edible species of Tripura; Konsam *et al.*, (2009) documented a total of 68 wild edible vegetables belonging to 42 families which are being used by indigenous communities for nutritive and therapeutic purposes in Manipur, NE India and Saikia (2015) recorded a total of 51 wild edible vegetable plants belonging to 33 families in Assam, NE India.

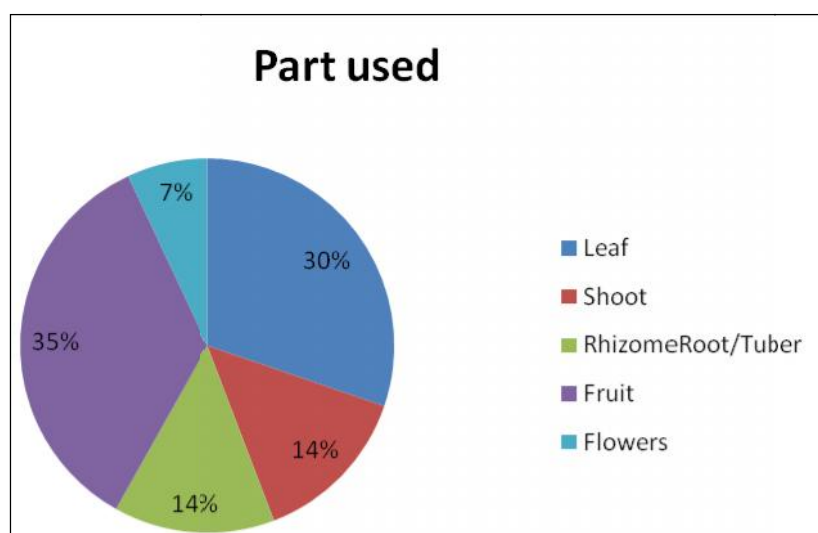


Fig. 2: Plant part Used by ethnic communities of Tripura

Traditional knowledge

Based on the survey it has been visualized and recorded that the ethnic communities use most of the wild plants as traditional herbal medicine. During the survey it was recorded that 41 species have traditional medicinal values (Table 3).

Table 3- Species recorded with traditional medicinal values

Scientific name	Medicinal values	Community
<i>Acacia nilotica</i> L.	Fruits are eaten to take preventive measure against measles and small pox.	Tripuri and Halam
<i>Alocasia macrorrhizos</i> (L.) G.Don	The rootstock is cooling agent, used in inflammations.	Mog, Tripuri
<i>Amaranthus spinosus</i> L	Leaves are eaten for constipation problem	Jamatia
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	It is highly nutritional.	Kuki
<i>Artocarpus chaplasha</i> Roxb	Seeds are used in purging of bowels. Bark is grinded and used in removing pus.	Tripuri
<i>Asparagus racemosus</i> Willd.	It gives stamina, enhances fertility in both male and female.	Tripuri, Halam
<i>Azadirachta indica</i> A.Juss.	It is used in treatment of allergy, malaria, fever, small pox, diabetes etc.	Preferred by all the communities.
<i>Bambusa tulda</i> Roxb.	The decoction of roots taken internally to promote flow of urine.	Halam
<i>Basella alba</i> L.	It helps to cure constipation problem.	
<i>Cajanus cajan</i> (L.) Millsp.	This plant is boiled to extract the juice which is used in curing jaundice, oedema, urinogenital disease, scanty and burning micturation. It helps to reduce gas and acidity problem.	Tripuri

<i>Centella asiatica (L.) Urban</i>	Paste prepared from leaf is taken in Jaundice, Cough and gastritis.	Tripuri
<i>Chenopodium album L.</i>	It is medicinally used in stomach problems locally used as liver tonic. It is a anti aging tonic.	Tripuri, Noatia
	Leaf juice is taken in Digestive, Dysentery, Gastritis problem.	Chakma
<i>Coccinia grandis (L.) Voigt</i>	It is antifungal, helps in healing of oral ulcer, itching etc. leaves are helpful for curing diabetes.	Orang, Tripuri
<i>Colocasia esculenta (L.) Schott</i>	Latex of Stem is used to treat Bee or ant bite	Chakma
<i>Curcuma zedoaria Rosc.</i>	The decoction of rhizome is prescribed to increase sexual vitality.	Tripuri
<i>Dillenia indica L.</i>	Fleshy calyx is used for stomach disorder	Garo , Tripuri
<i>Dioscorea alata L. , Dioscorea esculenta L. , Dioscorea hamiltonii Hook. f.</i>	It is very nutritive and increases weight.	Munda, Bhill , Halam , Tripuri
<i>Dioscorea bulbifera L.</i>	It is used as the curer of piles, dysentery and apply to ulcers. It is very nutritive and increases weight.	Tripuri, Chaimal
<i>Enhydra fluctuans Lour.</i>	It is diuretic, useful in skin, neural disease and in isomenia.	Tripuri, kuki
<i>Euryale ferox Salisb.</i>	Very nutritious.	Bhill
<i>Hibiscus sabdariffa L.</i>	It is used in dysentery, diarrhea and high blood pressure.	Uchai
<i>Homalomena aromatica Schott.</i>	Paste of fresh rhizome is applied on body to treat inflammation.	Tripuri
	Leaves are good in digestive disorder.	Halam
<i>Lasia spinosa (L.) Thwaites</i>	Paste from tender leaves is made for external use in burns. Rhizome is also useful in gastric and stomach problems.	Tripuri
<i>Melocanna baccifera (Roxb.) Kurz</i>	Alkali water prepared from it used in stomach trouble and it is an anti-malarial medicine.	Mog
<i>Monochoria hastata (L.) Solms</i>	Extract of leaves is used in curing boils and the plant is used as an alternative medicine to correct bodily disorder of nutrition, in tonic, cooling. It is also used as medicine in jaundice and laxative.	Chakma
<i>Moringa oleifera Lam</i>	Bark is useful for cough and cold. Leaves are also medicinal.	Tripuri
<i>Momordica cochinchinensis (Lour.) Spreng.</i>	Juice prepared from bark is taken with Sugar for Jaundice.	Chakma
	The fruit is bitter, useful for skin diseases.	Tripuri
<i>Musa acuminate Colla</i>	Fruits are used for chronic dysentery. The flower and shoot increases the hemoglobin and iron level in blood.	Tripuri , Reang

<i>Neptunia oleracea</i> Lour.	Juice of the stem and roots are used for jaundice purposes.	Tripuri
<i>Nyctanthes arbor-tristis</i> L.	The leaves have been used for arthritis, fever, and as a laxative.	Kuki
<i>Oroxylum indicum</i> (L.) Benth. ex Kurz	Edible tender fruit acts an anti-flatulent and as a reliver of colic.	Boro
	Bark is used in diarrhea and dysentery. Powdered bark is used acute rheumatism.	Jamatia
	Treated for the weakness due to low blood pressure.	Tripuri
	Juice prepared from bark is mixed with Sugar and taken to treat Jaundice .	Chakma
<i>Oxalis corniculata</i> L	It helps in to increase food crave after fever.	Lusai
	It is considered medicinal in dysentery and blood pressure.	Reang
<i>Polycarpon prostratum</i> (Forssk.) Ashers & Scheweinf.	Whole plant is useful in case of malarial fever.	Tripuri
<i>Sesbania grandiflora</i> (L.) Poiret.	Flower in headache, dimness of vision.	Chakma
<i>Solanum indicum</i> L	It is used in worm infection, skin diseases, cough etc.	Garo
<i>Solanum nigrum</i> L.	It kills intestinal worms.	Tripuri
<i>Spilanthes acmella</i> (L.) L.	Whole plant is useful to cure toothache	Tripuri
<i>Tamarindus indica</i> L.	It is digestive, used in cough, fever, rheumatism etc.	Boro
	Ripen fruit are directly taken for Headache, High pressure	Chakma
<i>Typhonium trilobatum</i> (L.) Schott	It is diuretic.	Kuki
<i>Vitex negundo</i> L.	Juice of the leaves are used in arthritis	Chakma
<i>Zanthoxylum limonella</i> Alston.	Roots are used in dysentery and piles; Flowers are used in diarrhea, fever and lever troubles; leaves are used as tonic.	Reang

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145 Upetry *et al.*, (2012) have also reported a similar finding. Phillips and Gentry (1993) reported
146 that WEP knowledge is gained early in life and increases with age. Wild vegetables and

medicinal plants are the gift of nature for the ethnic communities because the poor hilly peoples can collect the vegetable from the forest and it is free of cost which they couldn't otherwise afford to get from the market due to their socio-economic condition. The vegetables help to upgrade the nutritional need of the ethnic communities. But during the survey it was found that few wild vegetables also have negative impact on health of the peoples. The lists of the wild vegetables which have negative impact on health are listed in Table 4.

Table-4. Some forest products have negative effects on the health of tribal peoples.

Health Problems	Causative wild vegetables
Skin problems, allergy	<i>Alocasia indica</i> , <i>Colocasia esculenta</i> , <i>Dioscorea sp</i>
Pain in joints	<i>Erygium foetidum</i>
Gastric problem	<i>Artocarpus heterophyllus</i>
Itching in mouth	<i>Colocasia esculenta</i> , <i>Alocasia indica</i>
Sleeping tendency	Shoot of <i>Bambusa tulda</i>
Loose motion	Raw fruit of <i>Tamarindus indica</i> , <i>Alocasia macrorrhizos</i>
Sometimes poisonous	<i>Clitocybe sp.</i>

CONCLUSION

The Utilization of wild plant resources and its popularity in day-to-day life of people in urban areas has been declining in recent years due to loss of cultural practices. It is seen that people from present generation have migrated from their native place to urban areas. Many people of the ethnic groups from present generation have started having food in hotels/restaurants belonging to other communities which has led to their change in taste and preferences. Urgent need to maintain and popularize this important source of non-conventional food is needed so as to keep the traditional knowledge intact. For this steps need to be taken at the policy level by the government for their sustainable use and management.

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