

Traditional agricultural knowledge among the Nicobarese of Nancowry group of Island

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Abstract

The practice of agriculture in any island bears the impression of traditional wisdom which is coming through generations. Sometimes it gets modified through external influence but larger characteristic feature of island farming remains. The *Nicobarese* of Nancowry group of islands are the inhabitant for centuries. The economic wellbeing and everyday life of *Nicobarese* is primarily depended on coconut, areca nut, banana, jackfruit, pandanus, and pig herding. The management of this primary activity is subjected to their age old traditional knowledge. At the same time this knowledge about agriculture is not only confined to their economic activities, but exhibited in various forms viz., material culture, customs and traditions, food habits, ethnic boundaries, geographical nomenclature, language etc., Now a days this traditional agricultural wisdom is being slowly replaced with modern technology and ideas which are perceived by the tribal and conservationist as exploitative in nature and have had adverse affects on the available natural resources. Despite of this fact, still the *Nicobarese* of these islands depend on this knowledge to a great extent in obtaining their livelihoods and their culture centered on it.

Introduction

Study of traditional knowledge assumes significance to understand how a group of people living in a place over a period of time have adapted to varied environments, derived their livelihood, survived natural disasters and understood the natural process around them. This also brings to light how the heritage of these communities had cultural linkage with the surrounding natural resources to live in harmony with nature. In other worlds these studies focused mainly on exploring how traditional knowledge and institutions could contribute to sustainable development. In this context it is very important to study the traditional knowledge of Nancowry group of island located South of Andaman Island between Bay of Bengal and Andaman Sea for optimum utilization and management of dwindling natural resources in these islands (Velmurugan et al. 2016).

The Nicobar island is a chain of twenty two Islands stretching from 9° 17′ 48″ North latitude and 92° 42′ 15″ East longitude of the Bay of Bengal are an integral part of Indian Union. The *Nicobarese* one of the major indigenous community inhabiting in the different group of islands followed by the Shompen tribe which is restricted to interior part of Great Nicobar Island. The

entire Nicobar is divided into three geographical regions known as northern, central and southern group of islands for administrative convenience. Car Nicobar Island is the northernmost which is divided by Little Andaman with 10 degree channel. The central group consists of Chowra, Teressa, Bompuka, Katchal, Kamorta, Nancowry and Trinket islands. Whereas Pulo Milo, Little Nicobar, Kondul, and Great Nicobar are belongs to southern group of islands. The *Nicobarese* of all these islands are similar in physical appearance, food habits, and other material and non material cultural traits. But each island has its own identity in terms of origin folktales, language, material traits, and island specific rituals evolved over a period of time in isolation (Syamchaudhuri, 1977).

Therefore, the present study attempted to understand the traditional knowledge of management of natural resources (crop, soil, animal resources) to derive their livelihood by the *Nicobarese* of central group of islands. It was observed that the *Nicobarese* still maintain their traditional knowledge even after their conversion to Christianity and Islam in the post tsunami scenario.

Methodology

The present study was aimed at understanding the traditional knowledge of agricultural practices and



management of land resources by the *Nicobarese* of Central group of islands particularly Nancowry Island (Fig. 1). In order to collect the data, qualitative and quantitative techniques were used by field visits and literature survey. These are mainly participant observation, case study, key informant interviews, group discussions, and non-formal interviews using a detailed checklist. Further detailed questionnaires on existing resource classification, categorization, and perception of climate, soil and water were used. Data from secondary sources such as books, articles, published reports, Census reports, and government documents have also been collected and compiled to source the relevant information.

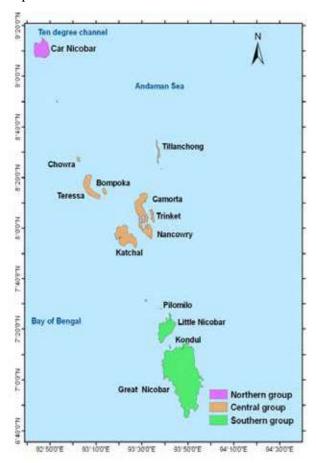


Fig. 1. Location of the study area

Results and discussion Living environment

The Islands receive copious amount of rainfall from both the South west and North east monsoon and measures

around 2750 to 3100 mm each year. The historical climatic data shows that the mean relative humidity is 79%, maximum temperature is 30.2°C, and minimum temperature is 23.0°C. Basically Nicobarese of Central group of islands are agriculturists and herders by tradition as they known to grow coconut and pig for centuries. Though they are educated and mingle with main stream of population, a vast majority of the *Nicobarese* still pursue their traditional occupation of coconut and areca nut plantation and rearing pigs. Some of them have also taken up rearing of goat and poultry. They have fair knowledge about the nature of resources under their possession and the ways to utilize them judiciously for their well being in the fragile island ecosystem. This knowledge might have been evolved in the tribal community by practice and has been passed on by generations.

Agricultural practices

The horticultural plantation is known as pano-o. Generally Nicobarese resort to shifting horticulture particularly mixed vegetable garden. During April-May, they start clearing the old vegetation in the previous garden or forest and began clearing the new plots. After axing down the big trees, they burn it along with dried twigs (Fig. 2). Initially planting of tubers and banana will take place in the cleared plot along with tavok (coconut saplings). Major varieties of tubers like kupeng or takinhi, kunya, kani or nya, it-seaichtahangen, and malayalialu are planted in June. In plantation, kanoh (coconut), laeom (pandanus), ictusa (indigenous cotton), tisa-a (areca nut), chamam (wild arecanut), pubai or sampet (papitha), banana (tayuknog or hipu), kinreai (Jackfruit) suru or firung (pine apple), sealakaroch (wild orange), ronghami (wild fruits), payuoh (wild fruits), kumiyanta (green chilli), hiluli (kind of small size green chilli), siea-tahlava (elongated banana), kööfee (wild clustered apple), limong (wild variety of lemon), thak (katta or wild tamarind), chaf (tamarind) are commonly found. The vegetables like *alithong* (brinjal), *panchalu* (bitter guard), makka or miloh (maize), ridge guard, okra, beans, bottle guard, drum stick, kumda, kundru, lemon, are also cultivated in their plantation.







Dense coconut plantation in Nancowry

Rubber plantation in Katchal

Fig. 2 Land use in Nicobar islands

Land Ownership and Distribution

It is very difficult to determine the size of holding as there are no land records and existence of different types of land ownership. The size of land holdings with proper records are available only for non-tribal settlements in revenue areas while there are no records available in case of both Nicobarese and Shompens. As discussed earlier certain lands are owned by tuhet head for common purposes and some other land collectively by the tribal society. Only usufructuary rights are given to other members of the tuhet. In other words the individual joint families in the concerned tuhet are allotted an area of land or plantation by its *ma-tuhet* (lineage head). Even the homestead and plantation area is identified with their lineage and clan names. In due course of time, the population increased and some new tuhets came into existence having links with original ones. In such cases, new plot to be cleared inside the forest (i.e., shifting horticulture) by all the tuhet members on cooperation basis and make ready for plantation. Till the harvest comes, they were allowed to consume the nuts of their parent tuhet. After harvest of new plantation nuts, it is their moral responsibility to contribute for tuhet as and when required. There is a tendency that the prospective bride or groom with less resources prefer to marry where their in-laws possess large plantation. If any new member increases in tuhet, it is their responsibility to clear more forest and expand their coconut plantation (Mann 2005). Thus the extension of coconut plantation had significant bearing on the rule of residence among the Nicobarese.

In the present study we collected information from household survey, interaction with village captains and from the number of coconut trees under each family. The number of recorded farm holdings of these Islands are 665 with a total land holding of 1643 ha (Table 1) where majority of the holdings are marginal (45.7%) with average holding of only 0.17ha, followed by medium (35.2%). The average land area of medium holdings is 4.86 ha and large holdings account for only 0.8% with average area of 34.45 ha which are government lands. Contrary to the popular belief, the Nicobari society also exhibited inequalities in terms of distribution of means of production and social status. Larger the size of holding higher is their influence on tribal affairs.

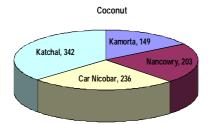
The experience shows that number of coconut trees owned by each household gives reliable information on size of land holding as coconut is an integral part of tribal society. Based on the number of coconut tress owned by individual farm family, size of land holding was inferred and the categorization was done accordingly. The data indicated a wide variation (10-1000 trees) in size of holding with an average of 235 coconut trees per household across the Islands. Majority of the tribal farmers come under marginal category (46%) followed by medium (35%) while only less than 1% are under large category who decides the tribal affairs. The increasing marginal category is mainly due to loss of coconut plantations in natural calamities and increase in population. Owing to this, some of the tribal families were shifted to Little Andaman some time ago.



Size class (ha)	No. of holdings	Area of holding (ha)	Average holding (ha)	% to total holdings
Marginal (<1)	304	51	0.17	45.7
Small (1-2)	42	65.97	1.57	6.3
Semi medium (2-4)	80	218.02	2.73	12.0
Medium (4-10)	234	1136.2	4.86	35.2
Large (>10)	5	172.26	34.45	0.8
Total	665	1643.45	2.47	100.0

Analysis of ownership of coconut trees gives much clarity to the resource availability to each family as it is the major source of income for the Nicobarese. The average number of coconut trees held by a large farmer is 10 times higher than the marginal holders indicating a relatively high inequality in distribution of land in terms of ownership of coconut trees. However, only 5.5% of the households have more than 500 coconut trees which are

normally influential in the tribal society, while 56.9% of them own less than the average of 235 trees. Significant differences were found in average number of coconut trees owned by individual households across the Islands. However, in Katchal mean holding of coconut trees exceeded the overall mean of 235 trees mainly because of loss of lives during tsunami in 2004 (Fig. 3).



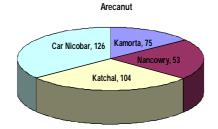


Fig. 3 Average holding of coconut and arecanut trees across the Islands

Hayaken (Tuhet Cooperation)

At the beginning of new plantation, the *Nicobarese* come together and assist in clearing trees in forest, cleaning and sowing works. In Katchal, *hayaken* unites the *Nicobarese* at lineage level irrespective of their present religious background especially during life cycle and annual festivals of that particular *tuhet*. During birth, marriage and death and seasonal festivals of each *tuhet*, the members of that particular *tuhet*, those who are living in other village and Islands are assembled at *gholghar* (beehive shaped community hut) and take part in different works as per the instruction of their headman along with their contribution in the form of pork, roots, tubers, banana, and so on. This lineage unity is instrumental in economic activities ranging from clearing of forest

patches for new garden, fishing, hunting, etc.

It was observed that during which each family member of that particular lineage group has an obligation to participate in required economic activities ranging from plucking and collection of nuts for processing of coconuts, dehusking, extraction of copra from pucca nuts and oil extraction, etc. Initially the task involved is thoroughly discussed with the head of the lineage to request for necessary assistance to accomplish the task. To meet the manpower requirement of the proposed work, members assigned from the *tuhet* attended the works. This sort of mutual cooperation is also evident in dealing with seriously ill patients, relief in the aftermath of natural disasters, making of racing canoe, beehive community hut, making recreation ground for sports, etc (Prasad and Haider, 2009).



Generally all the *Nicobarese* including men, women, children and aged participate in production activities. But in some economic activities, division of work is visible as it demands more physical power. In copra making, the activities ranging from collection and breaking of nuts, arranging in order, collection of fuel wood and burning, extraction of dry copra, storing in gunny bags and carrying them to collection centres are undertaken by both men and women except in peeling off nuts and carrying loads which is solely done by men. In copra making children and aged also participate in some minor works. But the scrapping of *malai*(endosperm or soft copra) for daily need is performed by women at household.

Uyau or Taokoo (Coconut)

Coconut occupies a prominent role in the socioeconomic life of the *Nicobarese*. A glimpse of coconut cultivation and processing is seen in Fig. 4. They attribute that it has some versatile qualities that tender nuts are used for reducing thirst, pucca nuts are used for their own consumption as well as feed for their livestock and extraction of oil for domestic needs, toddy for self consumption, timber and thatch leaves for construction of hutments, use of spathe for decoration during ceremonial occasions, raw material for making brooms, etc. It is estimated that a coconut tree starts bearing nuts after eight years of its planting and had forty years of life span.

Due to its significance, *Nicobarese* never destroy them wherever it is located. In unavoidable circumstances, the palm tree is cut down only after its propitiation. Further certain taboos are associated in dealing with coconut tree in Katchal. It is prohibited to climb the coconut tree for tapping *thady* (toddy) or plucking the nuts by a person who is in a state of intoxication (after consuming liquor). Despite of this, if anyone mistakenly climbs the tree, the yield may be lesser when compared to other normal days. Hence, lot of care is taken before climbing the coconut tree.



Climbing coconut tree



The broken coconut is arranged on the stage and burned from below using coconut wastes



Traditional method of processing coconut



Pressing in *kintantavi-I* for milk and sun drying for extraction of virgin oil

Fig. 4 Traditional knowledge about coconut cultivation and processing



Fanakö ta-òkohek fanakö in-uan (Techniques of Climbing)

There is a traditional way of climbing the coconut tree by making notches within a meter distance on the trunk of palm tree for extraction of toddy. By doing so they can easily climb the elongated coconut tree without any aid. Furthermore, these notches are useful in identifying the toddy extracting trees to nut bearing ones. The majority of toddy tapping trees appears with notches as they can easily sap its juice and come down along with toddy. In case tree is short one, they use *tahaho* (wooden ladder) for *thady* extraction. Use of *seanramat* (rope made from plant fiber) is also another technique used to climb palm tree. In this method, fiber rope is tied to both ankles in circular and climb by moving legs in systematic manner towards up and sliding down.

Kavut(Toddy) Tapping

To understand or test the state of the fruits i.e., coconut in horticultural garden, Nicobarese gave a gentle blow with their pointing finger on either side of the fruit with their little finger. In case the resonance is low, it is considered as kutcha instead resonance is high they consider that the fruit was ripen. The fruits like jackfruit and pandanus are tested with the smell of the fruit. The traditional methods of toddy extraction are referred as lavan by the Nicobarese. They possess copious knowledge of identifying the suitable tree for thady extraction by seeing the inflorescence of different palm trees. Once the tree is selected, they cut the inflorescent regularly to channel its fluid out and tie a coconut shell or container. Every day morning and evening the filled containers are collected and again peel off its outer layer with knife for smooth flow of toddy. Otherwise it is dried in hot sun and block the channel.

Traditional Knowledge of Coconut Processing

Nicobarese are experts in processing coconut into different forms drying of nuts for copra, scrapping kutcha *malai* (copra) for extraction of oil, extraction of fiber for coir, use of shells as firewood as well as for craftwork, and scrapping copra for preparation of traditional *Nicobarese* dishes and puddings, etc. Recently they adopted coir

extracting techniques through the training organized by the Industry Department of Andaman and Nicobar Administration. But it was not in use due to advent of earthquake and giant tsunami waves in 2004. Now they rely on native methods for utilization of coconut as it is mainstay for Nicobarese economy.

The works in horticulture plantation ranging from collection and pooling of fallen pucca nuts, dehusking, breaking of nuts, arranging on wooden stilt platform and exposing them to smoke from the below, and so on are carried out in traditional manner without using any technical aid. At present, the Nicobarese following three methods for extraction of oil from the coconut. Nyanch Harat is a popular traditional method of extracting coconut oil by using chonkankintantavi-i (carved wooden plate) and chonkinykintan (elongated log) with scrapped and fried kernel. The oil extracted through this method is considered as pure and used for medicinal and domestic purpose. Hakuvan is another method of extracting oil from scrapped kutcha kernel by boiling and cooling in the hot sun. In another method, the scrapped malai is mixed with water and crush it thoroughly with hands in a container. Later on the container is kept in hot sun for two to three days. In between they used to collect upper portion of the liquid by hand in separate container in regular intervals. Thus collected muddy loaded oil is filtered and again kept in hot sun. Later on it is stored in glass bottles.

Cultivation in Orchard

The tribes of Nicobar Islands practise natural farming and known to possess wealth of information which they pass on to the next generation. As far as Nicobarese are concerned, besides coconut plantation they have three types of gardens for growing fruits and vegetables. It helps to fulfill dietary, economic and social needs of different cultures in the islands (Gillespie *et al.*, 1993) and provide them with supplementary food, fruit, fodder and fuel. The cultivation of yam and other horticultural crops in the plantation area is regulated by seasons and hence *Nicobarese* depend on their traditional calendar for undertaking cultivation and other economic activities. The seasons are broadly divided into *sikehagö* (summer season) *sung* or *yuuch* (rainy season) based on wind



direction from the sea (Table 2). They rotate consumption of variety of foods in certain season due to non-availability

of certain resources and hence alternative subsistence is procured based on their traditional economic calendar.

Table 2: Hinruolo-kahe (Seasonal Calendar) of the Nicobarese

Sikehagö (Summer season)						
SI.No.	Chinget (Native month)	English month	Economic Activity	Associated Rites		
1.	Ranch	January	<i>Vini-i-panò-o</i> (Bush cleaning and firing)	Kinaň ha-un (pig sacrifice)		
2.	Inetö	February	Insolooaap (weeding)	Kalongpanò-o		
3.	Linuiyo	March	Hachuhha-un (fencing)			
4.	Fineno	April	<i>Hakon panô-o</i> (Dibbling plants)	Nyòk chon, panò-o		
5.	Tineuyö	May	<i>Vito-an panò</i> (late gardening works)	Ha-ing kak		
6.	Tinfulö	June	Ha-ing kak			
		Sung or Yuuch (I	Rainy season)			
7.	Sinatö	July	Yuch tamkak			
8.	Hinevhöre	August	Hatuilo potra			
9.	Minchuötore	September	Kuralkulufak			
10.	Sinömö	October	Saints Day(Saints day)	Church-ka-badadin		
11.	Minchutore	November	Totmayak(All Souls day)	Tinòtmanak		
12.	Mana-an	December	Kinioh			

In *sikehago*, *Nicobarese* restrict consuming certain foods like *kanang* (crab), *thak* (*katta*), *laeom* (pandanus), lemon, sea fish, *pò* (sugarcane), and so on. In *yuuch*, they venture in sea for fishing with *tanam* or *miya* (spear) in out-rigger canoe collectively to mark the breach of prohibition of those restricted foods. As such major food collection is undertaken in rainy season. From *ranch* or *Sung* onwards *Nicobarese* harvest *kinreai* (jackfruit) from their garden as well as in the forest. Its seeds (*kulal*) are preserved for consumption in rainy season after thorough roasting.

It is seen from the table that cleaning of previous crop and wastage starts at the far end of February and it is continued till April end. Planting of yam, papaya, tubers and plantain of different varieties along with vegetables mentioned above are done in the month of May after rains. The method of *Nicobarese* cultivation is simple and no technology or major implements are involved. All the works in plantation are carried out on mutual cooperation without hiring any labour. It is being facilitated by

their institutional framework known as *hayaken*. The *Nicobarese* do not have systematic pattern of plucking ripen coconuts and making copra. It is attributed to their easy way of living and widespread of plantation. Only fallen ripen nuts are gathered and used for feeding their stock regularly in their plantation. Whenever the need arise, then only they venture into plantation for making copra and oil preparation.

Kinlong Ha-un (Pig Slaughtering)

The major livestock in Nicobar Islands comprised of pig (76%) and goat (18.2%) which are reared in extensive open semi-feral system by the tribal community with no intension of business (Zacharia, 2012). Spatial differences in livestock population across the islands were observed with largest population of pig and goat found in Car Nicobar Island. It was observed that whenever the forest is cleared for new plantation, *Nicobarese* offer a grand feast by slaughtering pigs to garner the cooperation of the massive economic activity. Wherein the pigs already



exist in homestead area were caught and slaughtered for the proposed feast. The remaining pigs are left in *tavat* (inner forest) for not causing destruction to the budding plantation. In general, every village and islanders observe *Kinlong haun* whenever the pig population exceeds the limit of Nicobarese population. It testifies the homeostasis mechanism of Tsumba Marringi.e., ritual killing of domestic pigs to maintain ecological (Rappaport. 1963).

Betal and Pan Leaves

Majority of the *Nicobarese* are found chewing *betal* nut along with tobacco, lime and pan leaf during leisure and working times. As such they procured some of the items from their natural surroundings and rest from the market. Of course the native or wild variety of nut and leaves are pungent when compared to those available in markets. The below mentioned two varieties are available locally and preferred during feasts.

Big SizePan Leaf called Roilong is a wild creeper which are big and thick. It is used for chewing along with areca nut and lime and considered to be pungent in taste when compared to the leaves available in open market. Similarly Small SizePan Leaf called RoiHaei is a wild supari creeper small in size and not thick unlike roilong it is also used for chewing purpose by the Nicobarese along with areca nut and lime.

Payuoh (Edible Wild Fruits)

It is a seasonal fruit and available in April-June every year. *Nicobarese* perform a ritual by sacrificing a hog or cock before plucking first fruits. The fruits are collected by those who are having these *payuoh* trees and distribute to their relative who are invited for this occasion.

Sabbalin (Lemon Grass)

It is an elongated grass available throughout Katchal. It is in ginger taste and used like spice in preparation of chicken, mutton, fish, vegetable, and in hot beverages. A bunch of tender grasses are added to tea decoction while boiling to enrich its taste. Sometimes, they used it for making non-vegetarian soups prepared with fish, pork and chicken.

Traditional Receptacles

Nicobarese use natural objects such as bark, coconut and arecanut spathe, dry coconut shell, bamboo stem, wild leaves with slight modification as receptacle for serving the food and drinks. With the contact with outsiders very few elites using the modern disposal plates and cups in Katchal. But by and large majority them still depend on traditional receptacles made from the natural objects are used as receptacles during feasting and ceremonial occasions. The following varieties of leaves are used as receptacles by the *Nicobarese* whenever they require.

The round and big size leaves collected from *rui* tree (*Roi Kinrul*) are used as receptacle for serving food to guests and also for packing food items to carry distant places. Further, the kutcha leaves are used as wrappers for boiling pandanus, processed tubers, banana, etc., in a huge container.

The receptacle prepared with the help of half dried coconut spathe and *Rafoh* (arecanut spathe) is slightly cut into plate size and preferred for serving ceremonial food during ritual occasions (*Tö Siöp Roita-òkö*)

Knowledge of Wild Tubers and Roots

Nicobarese have different terms for different varieties of tubers available in these islands. Some of the varieties are planted on their own and some are naturally grown in the forest. The tuber known as kunya is available throughout Nicobar followed by other varieties mentioned below. Tahangin is a widely available tuber in Katchal which is known as 'kunyaaalu'. In case raw tuber eaten without processing, it causes itching on tongue and the body. Sabudhan is also a widely grown tuber in their plantation area. It is popularly known as 'malayaliaalu'. Kupeng or takinihi is a black color tuber and used for consumption after processing. Other varieties of tubers found in the study area are mainly lechlong, vian or junglyaalu, ukov, tihaňlöo, kayun or walanj, etc. Taving is a kind of root and its availability is limited to particular places in the forest.

In these islands the shelf life of tubers is very limited in hot humid conditions of Nicobar Islands, hence they should be stored in a cool dry place and should be free



from dampness. The tribals use bamboo baskets/barns (Fig. 5) for storing the tubers of sweet potato or *Nicobari alu* for seed as well as consumption purposes at later time. The yam barn is very common in Nicobar to store the tubers. Basically it consists of ring walls of vertical

pieces of bamboo, each 5-10 cm in diameter, one meter high and set about half meter diameter. The vertical wall is often made of split bamboo. It is the experience of Nicobarese that the structure reduces the risk of attack by termite. Inside the barn the tubers are kept individually and arranged vertically to allow maximum air circulation.







Fig. 5 Storage bins used by Nicobarese

To extract big size tubers, *Nicobarese* cut the branches of plant first till it reaches one feet height from its trunk. Then two to three persons hold it and shake thoroughly the plant towards its front and back. Whenever it uprooted, they cut roots from its trunk and collected into gunny bag. The same place is again ploughed with hand hatchet till the soil loosens thoroughly. There one piece of tuber is dibbled and fenced with one feet of the cut branches. This marking assist in prevent from stepping on it or sometimes as a protection from their livestock. After extraction, two persons carry the tubers either in baskets or gunny bag to plantation house. There they arrange these tubers systematically in the cane or bamboo bin erected on stilt inside the house. It is generally nearer to their kitchen, so that the problem of moisture is overcome with its smoke and air circulation from its bottom. Two or three tubers are placed on roof top as a symbol that the offering to their ancestors or spirits. The women engage in extraction of small tubers by digging the soil around the plant and plucking with hand. The extracted ones are pooled at one place and shifted to house.

Knowledge of Wild Vegetable Leaves

Nicobarese can recognize a wide variety of consumable wild leaves in the forest. Even the leaves grown on the banks of streams, estuaries, and their backyard are also consumed after processing. The *kutcha* coconut milk

is used as additive in preparation of vegetable leaves. The below mentioned leafy vegetables are commonly identified by the *Nicobarese* in the study area.

Roitakappuis a kind of wild vegetable leaf found on a wine plant and found profusely in the forest. The leaves are plucked and eaten after thorough roasting on frying pan. It is used as vegetable mixed with fish along with coconut milk. Other wild leaves consumed by the Nicobarese are mainly tilfung, vurong (kattabaaji orleaves of hibiscuscannabinus) roiturilö or tivilö, roikucho-ön, roinya-ön, sajnabaaji, naalibaaji, roitukapo, roi chon roikumda and turai, tukabu or linkong (meetabaaji or sweet leaves), roilimpop, roiparethi, kuvat, roi likol.

Conclusion

In spite of outside contact and planned introduction of technologies, the *Nicobarese* still maintain the reminiscences of their traditional knowledge and it is reflected in both material as well as non-material cultural aspects like traditional stilt houses inside their plantation, outrigger canoes, worship of fetishes, maximal lineage groups, joint family, village and lineage Councils etc. The knowledge which is acquired from their fore fathers are still used in coping the disasters, food production, utilization of both terrestrial as well as aquatic resources. Simultaneously continuation of traditional economic activities in agricultural activities ranging from copra



making, cultivation of different varieties of pandanus, banana, yam and tubers, collection of wild vegetable leaves, are possible with the application of their age old traditional knowledge which is passed from generations together to the *Nicobarese* of Central Nicobar Islands. Therefore, the skills of the local should be encouraged in the light of modern technological development, provide them solutions where ever they lack behind, and address to a specific problems.

References

- Gillespie, A.R., Knudson, D.M., & Geilfus, F. (1993). The structure of four homegardens in the Peten, Guatemala. *Agroforestry Systems*, 24:157–170.
- Mann, R.S. (2005). Andaman and Nicobar tribes restudied: Encounters and concerns. Mittal Publications, New Delhi, India. p.208

- Prasad and Haider, (2009). Traditional Knowledge Systems among the *Nicobarese* of Katchal, Nicobar Islands, India (*Unpublished report*, AnSI., Kolkata).
- Rappaport, Roy A.R. (1963). *Pigs for the Ancestors*. New Haven: Yale University Press.
- Syamchaudhuri, N.K. 1977. *The Social Structure of Car Nicobar Islanders: An Ethnic Study of Cognition*, Anthropological Survey of India, Kolkata.
- Velmurugan, A., Swarnam, T.P., Dam Roy, S. and Zamir Ahmed, S.K. (2016). Unravelling the tribal farming of Nicobar Islands, p. 141.
- Zacharia, G. (2012). Scope of integration of animals in integrated farming system for Nicobar Region. In: Training Manual on "Integrated farming system for livelihood security in Nicobar Islands (Swarnam.T.P., Velmurugan, A., Pandey,S.K. and Geroge,Z, eds.), Central Agricultural Research Institute, Port Blair.