

## Regeneration of Forest Resources Based on Tribal Enterprise: An Approach towards an Eco-Friendly Environment

*Regeneração de recursos florestais baseada no empreendedorismo tribal: uma abordagem dirigida a um ambiente ecológico*

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**Electronic version**

URL: <http://journals.openedition.org/eces/2735>

DOI: 10.4000/eces.2735

ISSN: 1647-0737

**Publisher**

Centro de Estudos Sociais da Universidade de Coimbra

**Electronic reference**

Buddhadeb Chaudhuri and Chandreyee Roy, « Regeneration of Forest Resources Based on Tribal Enterprise: An Approach towards an Eco-Friendly Environment », *e-cadernos CES* [Online], 28 | 2017, Online since 15 December 2017, connection on 19 April 2019. URL : <http://journals.openedition.org/eces/2735> ; DOI : 10.4000/eces.2735

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**REGENERATION OF FOREST RESOURCES BASED ON TRIBAL ENTERPRISE:**

**AN APPROACH TOWARDS AN ECO-FRIENDLY ENVIRONMENT**

**Abstract:** Due to deforestation, there is a growing trend in India, that the Government has started planting eucalyptus and other varieties of trees under the afforestation programme for their commercial value. This has caused the disappearance of traditional forest trees and has triggered the change of the total eco-system of the forest in the eastern part of India. As leaf plates and bowls are made from the leaves of *sal* trees, the use of these plates and bowls can draw the attention of the Government towards the importance and economic value of the *sal* trees. This can definitely encourage the Government and the forest officials to plant more *sal* trees than eucalyptus trees, if the former are now regarded as “commercial plants”. Such practice can directly help indigenous people to sustain their livelihood, preserve the traditional craft and prevent the deforestation in this region as well.

**Keywords:** eco-friendly, forest policy, indigenous entrepreneurship, indigenous people, tribal crafts.

**REGENERAÇÃO DE RECURSOS FLORESTAIS BASEADA NO EMPREENDEDORISMO TRIBAL:**

**UMA ABORDAGEM DIRIGIDA A UM AMBIENTE ECOLÓGICO**

**Resumo:** Devido à desflorestação, tem havido na Índia uma tendência crescente de plantação de eucaliptos e outras variedades de árvores por parte do Governo, sob o programa de florestação, que tem em conta o seu valor comercial. Isto provocou o desaparecimento de árvores tradicionais e desencadeou a mudança do ecossistema total de floresta, na zona leste da Índia. Como os pratos e tigelas de folhas são feitas com as folhas das árvores *sal*, o uso desses pratos e tigelas pode chamar a atenção do Governo para a sua importância e valor económico. Isto pode encorajar definitivamente o Governo e os funcionários florestais a plantar mais árvores *sal* do que eucaliptos, por serem agora consideradas “plantas comerciais”. Esta prática pode ajudar diretamente os povos indígenas a manter o seu sustento, preservar o artesanato e evitar também a desflorestação nesta região.

**Palavras-chave:** ecologia, política florestal, empreendedorismo indígena, povos indígenas, artesanato tribal.

## INTRODUCTION

In India, it is a well-known fact that the forest dwelling scheduled tribes are residing on their ancestral lands from times immemorial. They are integral to the very survival and sustainability of the forest eco-systems. The most interesting aspect of tribal economy is that though a majority of the tribal population depends on agriculture, yet they do not depend on it exclusively. Their economy is also based on forest collection and it is considered as a significant occupation among the tribals. Collection of dry leaves is a very common practice among the Santhal and Ho tribes residing in the eastern part of India. They not only collect these leaves but also make nice plates and bowls out of these dry leaves which bears a great traditional value of the Tribal Art and Culture. These dry leaves are easily available in the forest and are a great means of income generation among the tribals. These inexpensive materials can be collected almost throughout the year and can become a dependable source of income for the tribals in this region. Such kind of tribal arts were very famous in the past which is gradually becoming obsolete in due course of industrialisation and urbanisation. However, we need to rejuvenate this practice as these materials are very eco-friendly, easy to use, a great piece of art to the urban people and most importantly it can be a crucial source of subsistence for the tribal economy.

### 1. DEFINITION OF INDIGENOUS PEOPLE AND ETHNIC MINORITY

There is no simple or precise definition of “indigenesness” that applies equally well to all countries. Studies by two United Nations legal experts, José Martínez Cobo (1984) and Erica-Irene Daes (1994), both focused on aboriginality (being the first on the land), cultural distinctiveness, and self-identification as “indigenous”. The International Labour Organisation (ILO), in its Convention on Indigenous and Tribal Peoples, 1989 (No. 169), has adopted essentially the same three criteria. The ILO defines “tribal peoples” separately as persistently culturally-distinct, marginalised societies regardless of their aboriginality. According to the ILO, indigenous peoples and tribal peoples should have exactly the same special legal rights. The terms “indigenous peoples”, “indigenous ethnic minorities”, “tribal groups”, and “scheduled tribes”, describe social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process (World Bank, 1991). Indigenous peoples are kinship-based, non-industrialized societies that have traditionally relied on hunting, fishing, gathering, herding or gardening for their food, fuel and materials. They have tried to remain locally self-sufficient, and resist assimilation.

The United Nations working definition of Indigenous People is as follows:

[...] those people having an historical continuity with pre-invasion and pre-colonial societies consider themselves distinct from other sectors of the societies now prevailing in those territories or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations, their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples in accordance with their own cultural patterns, social institutions, and legal systems. (ILO, 1989)

Article 1 of the International Labour Organization's (ILO) Convention Concerning Indigenous and Tribal Peoples in Independent Countries (Convention 169) has defined tribal and indigenous peoples as:

1. This Convention applies to:
  - a) tribal peoples in independent countries whose social, cultural, and economic conditions distinguish them from other sections of the national community, and whose status is regulated by their own customs or traditions or by special laws or regulations;
  - b) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or by geographic region to which the country belongs, at the time of the conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status retain some or all of their own social, economic, cultural and political institutions.

## **2. DEFINITION OF INDIGENOUS ENTREPRENEURSHIP**

Entrepreneurship and enterprise development take on different forms, and are motivated by a variety of factors. Over the past two decades there has been a proliferation of research investigating entrepreneurial behaviours in both Western and non-Western industrialised economies (Paredo *et al.*, 2004). Indigenous entrepreneurship is associated with creating, managing, and developing new ventures by Indigenous people for the benefit of Indigenous people (Hindle and Lansdowne, 2005). Entrepreneurial benefits to Indigenous people may extend from economic profits for the individual to multiple social and economic advantages for entire communities. Underpinning these benefits are strong desires for self determination and the preservation of heritage (Anderson 1999; Hindle and Lansdowne 2005). Indigenous people prefer to develop entrepreneurial strategies originating in, and controlled by, the community (Anderson *et al.*, 2004) and with the sanction of Indigenous culture (Robinson and Ghostkeeper,

1987). Indigenous entrepreneurship has two important dimensions. First, there is a growing recognition and acceptance that Indigenous people are the original land and natural resource owners, resulting in the establishment of Indigenous enterprises. Second, Indigenous entrepreneurship provides the potential for unlocking economic wealth and enabling empowerment of, and prosperity for, a disadvantaged population sector. It has the potential in the long term to reduce the dependency of some Indigenous people upon welfare payments. As such, many governments see Indigenous entrepreneurship as at least a partial solution to their economic disadvantageousness (Townson, 1995).

### **3. THE EMERGENCE OF FOREST BASED TRIBAL ECONOMY**

An analysis of tribal economy clearly demonstrates the dependence of the tribals on land and forest. The agriculturists depend on land directly while the day labourers indirectly. Similarly, the food-gatherers, hunters and even those groups practicing handicrafts depend on forest indirectly. At least as a secondary source of income, forest is very important. Traditionally, they have enjoyed and used forest and forest products for their survival (Pachauri, 1991).

Although indigenous people have used Non Timber Forest Products (from now on NTFPs) for centuries, social scientists have only recently discovered their importance. Ethnographies describing indigenous uses of NTFPs have existed for many years, but attempts to assess their socio-economic values are quite recent. Ancient writings record a variety of uses for plants. Whereas wood products have become major international commodities in modern times, NTFPs rank among the oldest traded commodities. Ancient Egyptians imported gum Arabic from Sudan for use in paints and the mummification process. International trade in sandalwood oil dates back to the 12th century AD (Iqbal, 1993). Even today, half of all dispensed medical prescriptions owe their origin to vegetation occurring in forests (Prasad and Bhatnagar, 1991).

Rural people use NTFPs not only for food, income and farm input, but also for social, cultural and religious functions (Falconer and Arnold, 1989). The intangible, noneconomic roles of NTFPs can be more important and even provide a foundation for the economic roles that development programmes usually address. In many cultures, communities maintain certain areas as sacred groves where harvesting is banned or carefully controlled (Poole, 1993). Harvests are restricted, in such cases, to meet the needs of religious/socio cultural ceremonies. In a village of northern Thailand, for instance, sacred groves form an integral part of an overall community system that combines farm and forest management (Uraivan, 1993).

Among the forest-dwelling communities in the world, Baiga tribals living in Madhya Pradesh, India, collect the largest number of NTFP species. NTFPs are used for daily subsistence and cash needs as well as for religious and cultural uses (Kennedy, 1991). Though forest dwellers' culture was geared to keeping a balance between human and environmental needs, today there has been a transition from a balanced use of forest resources to their overexploitation. Forces that lead to the overexploitation of scarce resources and to deforestation are internal competition and the exploitation of the weaker sections of society; this situation is closely linked to the lack of bargaining power of people because of their low socio-economic status. The same factors seem to operate even in programmes geared to protecting the rights of the local people and minimising their exploitation. Even the commercialisation of forest produce seems to marginalise certain people, especially the lower classes (Fernandes *et al.*, 1988).

The gradual extension of the authority of the government in forest areas and the natural desire of the forest officials to exercise even closer control over the forest and use of forest products deeply distributed the entire tribal economy in a number of places. Quite often the tribals are held responsible for the destruction of the forests. But it has been noted by many that the eco-system was better preserved and the deforestation was not so conspicuous when they were under the control of the tribals. But the forests system, when exploited commercially, resulted in gradual deforestation. Again, quite often the forest products mostly serve the needs of the outside industries or urban areas. In many areas trees having commercial demand are systematically planted under afforestation programmes without considering the local needs. This type of afforestation programme cannot help the tribals economically as those varieties of trees are planted which are of little use to the tribals. This type of forest policy in the context of afforestation programme has already witnessed a number of tribal unrest, tension and conflict in different parts of India.

Thus, there is an urgent need to save neglected traditional knowledge and recognise its importance for development. Native knowledge, long tested and adjusted to local conditions, should be sought and used for the benefit of current development activities. Native knowledge and approaches might be of special value to increase production sustainability and to maintain environmental quality. Many errors that were committed in attempts to develop could have been avoided if more thought had been given to combining native traditions and techniques with scientific knowledge and technologies (Pachauri, 1991). Socio-cultural issues play an important role in ascertaining the success of Small-Scale Enterprise (SSEs) (those enterprises that do not need large scale mechanization or infra structure) and the sustainability of the NTFP resource base.

Factors like ethnicity and social mores have played an important role in making some organisations more successful than others.

#### **4. THE *SAL* LEAF PLATE PROJECT: A SCOPE TOWARDS THE REGENERATION OF FOREST-BASED TRIBAL ENTERPRISE IN INDIA**

##### **4.1. INTRODUCTION**

In India, NTFPs collection, processing and sale is a major livelihood for the people especially the tribals living in and around the forests. Almost 80% of the cash income comes from the collection and sale of NTFPs for the households' dependence on forests. Out of all NTFPs, *Sal* (scientific name *Shorea Robusta*) leave is one of the most important NTFPs collected and processed. *Sal* is so important for tribals that there is a custom of worshipping *Sal* tree among the indigenous communities in India. *Sal* provides multiple products for the livelihood of indigenous community. It was believed that Lord Gautam Buddha was born and attained nirvana under the *Sal* tree.

##### **4.2. IMPORTANCE OF *SAL* TREE**

*Sal* is found in the forests of India, Bangladesh, Nepal, Bhutan, Pakistan and China. In India *Sal* trees are rich resources of the forests of Assam, Bengal, Orissa, Jarkhand, Shivalik hills in Haryana, Eastern Ghats, Eastern Vindhya and Satpura in central India. The *sal* forest of Jharkhand is regarded as the world's widest *sal* forest.

*Sal* is used as a caulking for boats, and a fuel for lamps, dried *sal* leaves of *sal* are used widely in temples and ceremonies as plates and cups for eating food. *Sal* trunk is used for both fuel wood as well as making household furniture and it is resistant to rot. *Sal* seeds are used to produce edible oil. The leaves of *sal* tree are also used as plates for eating food. The indigenous people collect these *sal* leave and stitch them into plates and cups.

In India there are many *sal* leaf plate and cup making clusters mainly in the states of Bengal, Orissa and Jarkhand. *Sal* leaves are collected and supplied to the traders. The traders process them by using stitching and pressing machines and package them into bundles and supply them to different parts of the country. In some places State Governments has also set up some processing facilities through their tribal marketing corporations but in a small scale. *Sal* leaf plates and bowls are mainly used to serve food in temples, hotels and marriage and other ceremonies. *Sal* leaf plates and bowls are also widely used and consumed in the states like Gujarat, Delhi, Rajasthan, UP, Bihar, Bengal, Orissa and North Eastern states. The demand for *sal* leaf plates and bowls is increasing not only in India but in other countries as these are eco-friendly.

### 4.3. MAIN ACTORS AND THE PROCESS OF SAL LEAF PLATES AND BOWLS PROJECT

The main cluster actors include primary collectors, Agents (*cycle wallahs* – three-wheel cycle move by human labour *and* Middlemen) and traders (medium and big).

Indigenous women are the primary collectors. Sometimes they are accompanied by their children. Collectors use very long sticks during winter (September to January) season to pluck the leaves as leaves during this period are beyond their reach. Rest of the season the collection of *sal* leaves become much easier as they can collect leaves from the lower part of the tree and the fallen leaves from the ground. Generally, twigs with 4 to 5 leaves are plucked and then the leaves are separated from the twigs. The practice is not to disturb the young leaves or buds. Usually these women and children go to the forest around 10 or 11 a.m. and come back before the sun sets. However, it is important to mention that the collection of *sal* leaves may vary in different indigenous communities and the villages of various parts of India.

The following table (Table 1) explains the seasonality of collection, processing and sale of the products based on a pilot study at Jamunashole village in West Midnapore region, West Bengal, India:

**TABLE 1 – Seasonality of Collection, Processing and Sale of *Sa*/Leaf Plates and Bowls**

Months \ Product	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Trend of Leaf Collection												
Stitching of Plates and Bowl Materials												
Processing												
Trend of Sale												

Source: Field-work.

The process of drying the leaves is most important aspect of *Sal* leaf plate making process. The leaves collected from the forest are first kept in an open space for 3-4 hours for drying. The time should not exceed more than this as it could reduce the flexibility and quality of the product. These dried leaves are kept in open air throughout the night to gain some moisture which helps in avoiding breakage while stitching. The drying place is usually located either in the front or back of the house and is made up of mud and cow dung. Most households face extreme difficulty in the rainy season and having no option collectors undertake distress sales in this season. The leaves plucked for plates are first

stitched and the flat plates are dried for 3-4 hours. These stitched leaves will become the raw material for making leaf plates and bowls by pressing. These plates are kept pressed throughout the night under some heavy load so that they take a flat shape. Again, this process may vary from community to community and villages to villages. Here it is important to mention that for every 1000 plates, villagers earn Rs. 90/- (around 1.4 US\$) during the pick season otherwise they earn Rs. 75/- for every 1000 plates.

The flat shaped plates are generally transported by cycle-*wallah* to the nearest town or *haat* (market). Generally, the traders are in regular contact with the village level agents who procure and sometimes store the unfinished plates on behalf of the traders. These traders then distribute these plates and bowls to the other cities in India.

Processing units use electric pressing machines to convert the stitched leaves into bowls and plates. The flat shaped plates are pressed on a hot dye which helps to give sufficient tensile strength and proper shape of a plate and bowls. Sometimes, these machines are being provided by the government in the villages itself otherwise these unshaped plates are transported to the places where these pressing machines are available.

#### **4.4. ECONOMIC, SOCIO-CULTURAL AND ENVIRONMENTAL VALUE OF SAL LEAF PLATES AND BOWLS**

The *sal* leaf plates have great value in the society. Moreover, it is a good source of income among the indigenous people. It also helps to revive the traditional culture and knowledge among the indigenous people. These items are very much environment friendly and even helps to preserve the ecosystem of a traditional forest.

Indigenous households at Jamunashole village in West Midnapore, India, use *sal* leaves to produce plates and bowls. In selling the final product, the household receives an additional amount of income, known as “value-added”, above the value of the raw inputs. In the study region, some households participate in such value-added production activities by turning *sal* leaf into plates and bowls. The main factors constrain of such “value-added” production is quite labor intensive and require training in traditional skills. Thus, such kind of production has great traditional and social value. The hand-processed plates are sold to traders who resell them to hundreds of *sal* plate manufacturers in different parts of India. The annual estimated turnover of the *sal* plate industry is Rs. 70-80 million in Eastern India (Mahapatra *et al.*, 2005). The pilot study in West Midnapore region, India revealed that the art of plucking leaves from the forest in different seasons, knowledge of drying leaves and the skills of stitching leaves and give them plate and bowl shapes are handed over from generation to generation among the indigenous people. Such knowledge and skill help to generate substantial cash income for the indigenous community. The study also showed that the monthly income of the

indigenous people of Jamunashole village is much higher than the villagers who were not depended on forest resource collection or plates and bowls making activities. Thus, it is important to mention that the collection of *sal* leaves from the forest and making plates and bowls with them is an important source of income for the indigenous people (Malhotra *et al.*,1991).

These disposable plates and bowls are generally used for serving food. Thus, these plates and bowls are mainly used in India during festivals and weddings. These plates and bowls are completely Eco-friendly and chemical free, bio-degradable and hygienic. They do not have any artificial smell and very light in weight. The appearance of these items is very natural and attractive as well. Thus these qualities of *sal*-leaf plates are much better than the existing disposable plates available in the market, made out of plastic, thermocol and paper plates. It is a well-known fact that plastic and thermocol plates are not bio-degradable and adversely affect on environment. On the other hand, paper plates are bio degradable but it destroys trees which is equally harmful for the environment. It has a potential demand at places like marriage halls, hotels, high end food chains, temples etc.

Due to deforestation, there is a growing trend in India, that government has started planting eucalyptus and other varieties of trees under the afforestation programme for their commercial value. This has caused the disappearance of traditional trees in the forest and has triggered to change the total eco-system of the forest in the eastern part of India. As these *sal* leaf plates and bowls are made by the leaves of *sal* trees, use of these plates and bowls can draw the attention of the government towards the importance and economic value of the *sal* trees (Pachauri, 1991). This can definitely encourage government and the forest officials to plant more *sal* trees than the eucalyptus trees which are now regarded as “commercial plants”. Such practice can directly help indigenous people to sustain their livelihood and to prevent the deforestation in this region as well (Tewari and Campbell, 1995).

## **CONCLUSION**

From the above discussion, it can be mentioned that the contribution of unique knowledge of *sal* leaf plates and bowls making is a very important income source among the indigenous people. Other than the importance of economic value, it has already been seen that the socio-cultural value of these products are also very important. Due to industrialisation and urbanisation process, people are becoming more technology savvy and the traditional indigenous knowledge is gradually becoming obsolete. This *sal* leaf making initiative definitely helps to preserve and revive the indigenous wisdom and skills.

As it has already been mentioned that the product is very much eco-friendly and biodegradable and it can be a strong competitor of the thermocol plate making industry and paper plate industry for its eco-friendly nature. Thus, this is a high time for this forest based indigenous entrepreneurship, to attract the attention of the researchers, retailers and the government officials. Policy makers should be made aware of the nature of historical and cultural patterns of the use of these items. The plight of the poor, particularly the indigenous people, can be improved by mobilising proactive participation and realising equitable benefits in the trade of these items. There should be policies to promote *sal* leaf plates and bowls production which would differentially benefit tribal villagers and help to preserve the environment.

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