



## Impact of non timber forest produces (NTFP's) on rural tribes economy in Gondia District of Maharashtra, India

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### ABSTRACT

*The present study was conducted in the tribal area of Goregaon cluster of Gondia district of Maharashtra. Livelihood systems in this districts are complex, primarily dependent on agriculture (including allied activities-livestock, poultry, fishery, etc.) forest, agricultural labour and village artisans. It is more important that the problems of the people of disadvantaged regions like rainfed, hilly and tribal areas be addressed through imparting new skills to the poor and building up durable income generating assets and capacity to adapt to rapidly changing markets. The said district have been so chosen because of poor indices in various areas of development including, amongst others, infrastructure, agriculture, food availability, nutritional health and sanitation and last but not the least economics of the habitants. Study suggested alternate sources of income to the villagers to improve their socio-economic conditions as well as increasing the income level and employment opportunities by effective collection and marketing of non-timber forest product and the same time making villagers come forward for forest protection.*

**Keywords:** NTFP's, Rural tribe's economy, Socio-economic development.

### INTRODUCTION

Non-timber Forest Products (NTFP's) are important tools for addressing poverty issues for the marginalized, forest dependent communities, by contributing to livelihoods, including food security, income, health and sustainable human development[1,2,3]. Globally, an estimated 350 million people mostly in developing countries depend on NTFP's as their primary source of income, food, nutrition, and medicine [4, 5, 6]. These products play a vital role in sustaining the lives of local gatherers, who must increasingly adapt to diminishing resources to stay alive. The uses of NTFP's vary from place to place because of the heterogeneity of the community and different traditional practices by ethnic groups in the country. It is now generally recognized that non-timber forest products (NTFP's) play an important role for local communities in and around forests. These products may be used for subsistence or for sale, providing cash income. There is growing awareness that sustainable forest management should include measures for the effective

conservation and management of NTFP resources in order to meet the actual and future needs of local people [7]. Proponents of the 'NTFP-strategy' pointed to important benefits of NTFP exploitation for local communities, such as goods (food, fodder, fuel, medicine, construction material and small wood for tools and handicrafts), income and employment. Compared to timber, the harvesting of NTFP's seemed to be possible without major damage to the forest and its environmental services and biological diversity. In sum, NTFP's were expected to offer a model of forest use which could serve as an economically competitive and sustainable alternative to logging.

### **Conceptual framework:**

The conceptual framework on which this paper is anchored is the role of NTFP's in improving the livelihoods of the poor in forest fringe communities. The principal premise of the paper is that NTFP's play an important role in meeting the needs of rural communities, especially in the areas of food, medicine, poverty reduction and livelihoods improvement [8]. Non-timber forest products are integrated components of the forestry sector and have been widely recognized as potential resources for promoting sustainable livelihoods, conservation and capacitating development organizations [9]. They play a crucial role in the livelihoods of rural people, especially for those dwelling in the forest and its vicinity [10]. Besides medicinal plants the use of diverse groups of NTFP's is largely ignored by the community and development organizations. At present, medicinal plants are largely being over-exploited. It is therefore high time to explore and promote other NTFP's by not excluding medicinal plants. Sustainable collection, use and commercialization are the main drivers in the promotion of NTFP's for community development, poverty reduction and livelihood socio economic improvement.

## **MATERIALS AND METHODS**

### **3.1. Study locations and characteristics**

The village selected for study on the basis of their backwardness. The study areas were Asalpani, Bagadband and Timezari villages come under Goregaon cluster of Gondia district ( $80^{\circ} 03'$  and  $80^{\circ} 08' E$ ,  $21^{\circ} 08'$  and  $21^{\circ} 13' N$ ). The selected villages in Goregaon cluster are completely surrounded with forest and therefore their most livelihoods depend on their available forest produce after agriculture. Most of the income generated of livelihood in the form of forest.

### **3.2. Data Collection**

The present study is carried out in three villages of Goregaon cluster of Gondia district. These three villages which were selected on the basis of their unique ethnic structure, socio-cultural set up, agricultural tradition, agro-ecological situations and constraints. Baseline survey was conducted in all three villages. The baseline data were collected through well defined pre-tested questionnaires in line with the Monitoring and Evaluation Team of NAIP. Two different questionnaires were used to collect the village profile and farm household profile. Livelihood assessment was done by investigating the people's engagement in activities like collection, harvesting, processing and packaging of NTFP's in the area, and their overall contribution to their total income.

## **RESULTS AND DISCUSSION**

### **4.1. Socio-economic profile of sample households**

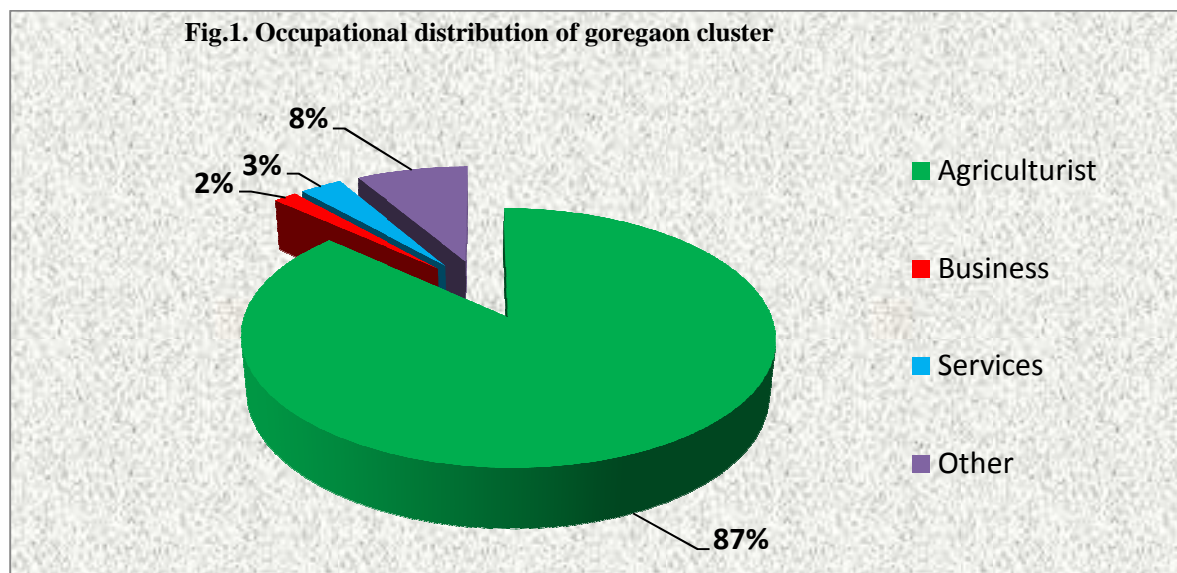
The Socio-economic profile of sample households has been given in table 1.

**Table 1: Socio-Economic profile of sample households**

| Socio-economic status       | Asalpani                | Bagadband               | Timezari                | Average                  |
|-----------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
|                             | No. of households       |                         |                         |                          |
| <b>A. Household (%)</b>     |                         |                         |                         |                          |
| Kutcha                      | 68<br>(60.18)           | 79<br>(80.61)           | 43<br>(56.58)           | <b>190<br/>(66.20)</b>   |
| Pucca                       | 45<br>(39.82)           | 19<br>(19.39)           | 33<br>(43.42)           | <b>97<br/>(33.80)</b>    |
| <b>Total</b>                | <b>113<br/>(100.00)</b> | <b>98<br/>(100.00)</b>  | <b>76<br/>(100.00)</b>  | <b>287<br/>(100.00)</b>  |
| <b>B. Family size (No.)</b> |                         |                         |                         |                          |
| Male                        | 189<br>(31.66)          | 141<br>(29.75)          | 119<br>(32.69)          | <b>449<br/>(31.29)</b>   |
| Female                      | 202<br>(33.84)          | 154<br>(32.49)          | 128<br>(35.17)          | <b>484<br/>(33.73)</b>   |
| Children (Male)             | 105<br>(17.58)          | 98<br>(20.68)           | 62<br>(17.03)           | <b>265<br/>(18.47)</b>   |
| Children (Female)           | 101<br>(16.92)          | 81<br>(17.08)           | 55<br>(15.11)           | <b>237<br/>(16.51)</b>   |
| <b>Total</b>                | <b>597<br/>(100.00)</b> | <b>474<br/>(100.00)</b> | <b>364<br/>(100.00)</b> | <b>1435<br/>(100.00)</b> |

#### 4.2. Occupational distribution

The occupational distribution showed that in selected villages of Goregaon cluster around 87 percent of the population engaged in agriculture which is major constituents of livelihood occupation, 8 percent households busy in various nonfarm activities (laboures) due to non-availability of land, 3 percent peoples was engaged in services and 2 percent peoples have their own small business figure 1, (i.e. General stores, krishi Kendra etc.).



#### 4.3. Income obtained from Agriculture

The income obtained from agriculture in study villages is Rs. 999775, Rs. 1402400 and Rs. 571540 as well as the contribution of average income per households of villagers is Rs. 8847.57(33.62%), Rs. 14310.20(47.16%) and Rs. 7520.26(19.22%) from Asalpani, Bagadband and Timezari respectively. Agriculture is the prior business in study area because of major source of income to their sustainable socio-economic development (Table 2).

**Table 2: Income obtained from Agriculture**

| Particulars                  | Asalpani          | Bagadband          | Timezari          | Total               |
|------------------------------|-------------------|--------------------|-------------------|---------------------|
| No. of households            | 113<br>(39.37)    | 98<br>(34.15)      | 76<br>(26.48)     | 287<br>(100.00)     |
| Income from agriculture      | 999775<br>(33.62) | 1402400<br>(47.16) | 571540<br>(19.22) | 2973715<br>(100.00) |
| Average<br>(Rs. /Households) | <b>8847.57</b>    | <b>14310.20</b>    | <b>7520.26</b>    | <b>10361.38</b>     |

#### 4.4. Income obtained from NTFP's

Non-timber forest produce is the next major alternative source of income after agriculture in study area because of availability of large scale forest area. The income generated from non-timber forest produce was Rs. 917600, Rs. 917000 and Rs. 499000 which contribute 39.32 percent, 39.30 percent and 21.38 percent with Rs. 8847.57, Rs. 14310.20 and Rs. 7520.26 average income per households from Asalpani, Bagadband and Timezari (Table 4). There is no doubt that NTFP's play a critical role in providing subsistence and cash income to a large proportion of the world's population. Studies from all tropical regions indicate that it is often the poorest households in rural communities that are most directly dependent on NTFP's<sup>[11, 12]</sup>. But in present study the local people were found less aware about the market value of many produce and therefore not able to generate significant income from NTFP's though they offer huge opportunities. Therefore, NTFP's is the next major alternative business to improve tribal's economy in study area.

**Table:3: Plant parts and their uses**

| Sr.No. | Local Name  | Parts Collected   | Use of NTFP's                     |
|--------|-------------|-------------------|-----------------------------------|
| 1      | Charoli     | Seeds-<br>Leaves- | Edible<br>Plate making            |
| 2      | Hirda       | Fruits            | Medicinal Edible                  |
| 3      | Behada      | Fruits            | Medicinal Edible                  |
| 4      | Mahua       | Flowers, Seeds    | Edible, Liquor & oil making       |
| 5      | Bel         | Fruits            | Edible, Medicinal, Industrial use |
| 6      | Aola        | Fruits            | Edible, Medicine, Pickle making   |
| 7      | Tendu patta | Leaves            | Beedi making                      |
| 8      | Mahur       | Leaves            | Plates making                     |
| 9      | Sindi       | Leaves, Fruits    | Broom making, Edible              |
| 10     | Bamboo      | Stem              | Basket making                     |
| 11     | Bhelau      | Seed kernel       | Edible, Medicinal                 |
| 12     | Gum         | Gum               | Edible, Medicinal                 |
| 13     | Tarota      | Leaves, Seeds     | Edible, Medicinal                 |
| 14     | Honey       | Honey             | Edible, Medicinal                 |
| 15     | Palas       | Leaves, Flowers   | Plates making, dye making         |
| 16     | Mushroom    | -                 | Edible                            |
| 17     | Suran       | Tuber             | Edible, Medicinal                 |
| 18     | Sitaphal    | Fruits            | Edible, Medicinal                 |
| 19     | Ranhalad    | Rhizome           | Edible, Medicinal                 |
| 20     | Musali      | Tuber             | Edible, Medicinal                 |
| 21     | Shatavari   | Tuber             | Medicinal                         |
| 22     | Ghoti       | Fruits            | Edible                            |
| 23     | Ber         | Fruits            | Edible                            |
| 24     | Aeroni      | Fruits            | Edible                            |

Many of Non Timber Forest Produces (NTFP's) are being used by locals for the improvement of their livelihood status; these include leaves, flowers, fruits, branches, gums/resins, roots,<sup>[13,14]</sup>. Factors like total forested area, access, historic use of both target and non-target species and

observation of land use patterns in adjacent areas have a dramatic impact on the forest development as well as extra income during the off agriculture season, which contributes to supply and the sustainable use <sup>[15]</sup>. Present study showed that the forest offers a wide range of goods contributing to people's basic needs. Dependence of the people on various minor forest products in these villages was found to be very high. Several minor forest produces are being used by aboriginals for their day to- day needs and many of them are their income generative sources. It was observed that consumption of these produces are there and parallel used for making many items like baskets, plates making, broom making, medicinal purpose, gum extraction, oil extraction and industrial uses like Agarbatti making, beedi making etc. Total 24 NTFP's has been identified in this region. The plant parts and their uses have been given in the table 3.

The expanding market opportunities for a wide range of NTFP's is not yet a boon to the rural people living close to the resource base. As suggested by Lintu <sup>[16]</sup> it was realized from the present study, effective marketing of NTFP's should be recognized as a major strategy for the sustainable management and utilization of forest resources. Nevertheless, a holistic approach for the domestication and commercialization of NTFP's should also involve the local community at the grassroots level. The capacity building programmes for the local people and local institutions are very important. The abundance of the species in the forests and their potential in the market offer better opportunity for the development of the NTFP's in the district. They therefore hold a potential for poverty alleviation <sup>[17]</sup>. It is urged to grab the opportunities while addressing the challenges for the sustainable management and commercialization of these valuable products. There is no doubt that NTFP's play a critical role in providing subsistence and cash income to a large proportion of the world's population and improvement of their economy <sup>[18]</sup>.

**Table 4: Incomes obtained from NTFP's**

| Particulars                | Asalpani          | Bagadband         | Timezari          | Total               |
|----------------------------|-------------------|-------------------|-------------------|---------------------|
| No. of households          | 99<br>(39.76)     | 87<br>(34.94)     | 63<br>(25.30)     | 249<br>(100.00)     |
| Income from NTFP's         | 917600<br>(39.32) | 917000<br>(39.30) | 499000<br>(21.38) | 2333600<br>(100.00) |
| Average (Rs. / Households) | <b>9268.69</b>    | <b>10540.22</b>   | <b>7920.63</b>    | <b>9371.89</b>      |

## CONCLUSION

This paper reveals that a large number of the poor continue to generate income, food and medicine from the collection and sale of NTFP's. The district harbours an incredible diversity of NTFPs and the population possesses a sound knowledge on plant resources. Despite their potential, the contribution of NTFP's to local economy is still negligible.

Present study suggested that locals are dependent on Non Timber Forest Produces for their daily need and income after agriculture. NTFP's of the study area are broadly species of medicinal importance, edible species, industrial useful species, mushrooms, and honey. It has been clear that from this study that agriculture on an average income is 10361.38 (Rs. / Households) and an average income from NTFP's is 9371.89 (Rs. / Households). It showed that NTFP's collection and selling for extra income has its greater impact on the rural tribe economy of all three villages of Goregaon cluster. Hence there is an urgent need of sustainable management practices along with cultivation programmes.



**Acknowledgement**

The authors are thankful to the Indian Council of Agricultural Research (ICAR), NAIP project unit New Delhi for the financial assistance during survey. We are grateful to the people of the Asalpani, Bagadband and Timezari villages in Goregaon cluster of Gondia district for providing valuable information during the fieldwork.

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