Non-Timber Forest Produces for Livelihood Security

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Introduction

Forests provide significant social and economic benefits at all level, especially in developing countries. Economics of people living in forest has traditionally been dominated by subsistence agriculture. However, non-timber forest products (NTFPs) play vital role among the tribal people and provide a source of subsistence, income and livelihood security (Peters *et al.* 1989; Hegde *et al.*1996). The broad term "non-timber forest resources" (NTFR) or "non-timber forest products" (NTFP) refers to natural resources collected from forests apart from sawn timber. Chamberlain et al. (1998) provides a definition: non-timber forest products are plants, parts of plants, fungi, and other biological materials which are harvested from within and on the edges of natural, manipulated or disturbed forests. NTFP may include fungi, moss, lichen, herbs, vines, shrubs, or trees. Forest is an important renewable, natural resource, which greatly influences the socio-economic development in any rural community (Ghosal, 2011). NTFPs like fuel-wood, medicinal plants, wild edible vegetables, house building materials etc. are an integral part of day-to-day livelihood activities, especially for tribal people (Sarmah *et al.* 2006).

The harvest of NTFPs remains widespread throughout the world. People from a wide range of socio-economic, geographical and cultural contexts harvest NTFPs for a number of purposes, including but not limited to: household subsistence, maintenance of cultural and familial traditions, spiritual fulfillment as well as physical and emotional well-being, scientific learning and income (Kala, 2013). Other terms synonymous with harvesting include wild-crafting, gathering, collecting and foraging. NTFPs are used in industries for different variety of activities.

The Present Plights and Importance of NTFPs

NTFPs provide important products for local, national and international markets. These markets are growing rapidly and steadily (Wilkinson & Elivitch, 2000). Non timber resources have great potential for enhancing sustainable rural development and diversified economic growth, cultural endurance, and environmental health. Few NTFPs have low cash values and hence are used for consumption, rather than for sales whereas rest NTFPs have highly commercial value. NTFPs are significant especially for poor, because they are available at low cost on common property lands. They are used by 3 people because they have less alternative access to food and income. In a country like India, which has more than half of its population in rural areas and a large tribal population reliant on forest produce for their sustenance, NTFPs play a major role (Sawhney and Engel, 2003).

Types of NTFPs

The important NTFPs of economic value in India can be categorized as following:

1. Grasses, bamboos and canes
2. Tans and Dyes
3. Oils
4. Gums and Resins
5. Fibres and Flosses
6. Leaves
7. Drugs, spices and poisons
8. Edible products
9. Animal products

Role of NTFPs in livelihood security

At global level, more than two billion people are dwelling in forest, depending on NTFPs for subsistence, income and livelihood security (Vantomme, 2003). NTFPs are considered to be important for sustaining rural livelihoods, reducing rural poverty, biodiversity conservation, and facilitating rural economic growth (Global NTFP partnership, 2005). An estimated 80 % of the

population of the developing world uses NWFP (Non-Wood Forest Products) to meet some of their health and nutritional needs (FAO, 2008). It is an important source of income for the poor in many developing countries. In addition, several opportunities for improved rural development are linked to NTFP (Adepoju, 2007). In India over 50 million people are dependent on NTFPs for their subsistence and cash income (Hegde *et al.*, 1996). This provides 50 % of household income for 20 to 30 % of rural population particularly for tribal. Potentially around 3000 species of forest products are found to be useful, but only 126 have developed marketability (Maithani 1994). Around 50 % of forest revenues and 70 % of forest based export income of the country comes from NTFPs. Thus it can be depicted that NTFPs form one of the mainstays of income and sustenance for many tribal communities (Rao, 1987; Gauraha, 1992; Chopra, 1993; Mallik, 2000). Forests are associated with socio-economic and cultural life of tribals in India. These tribal groups inhabit wide ecological and geo-climatic conditions in different concentrations throughout the country. Tribal livelihood systems vary considerably between different regions as also among the various ethnic groups, depending on ecological, historical and cultural factors. These tribal communities largely occupy the forest regions since time immemorial, living in isolation from the mainstream life, maintaining harmony and a symbiotic relation with nature. The collection of NTFPs by tribals was primarily for meeting their subsistence needs. Over time, these NTFPs acquired commercial value resulting from huge trade transactions and income levels due to rising demand. Trade in NTFPs can act as an incentive for forest conservation by providing a source of income from resources that might otherwise appear to have little financial value (Cottray *et al.*, 2003).

Constraints in development of NTFPs for Livelihood

The tribal communities living on the edge of the forests have developed a unique system to make sustainable use of food and biomass for their survival. In the absence of assured supply of these NTFP, particularly food products, tribals migrate to urban and semi-urban areas to meet their basic needs. In spite of such a critical demand for these products, no serious efforts are being made to enhance the productivity of these NTFP and ease the supply of these commodities for local communities. Furthermore, in spite of severe shortage of NTFP, most of the local communities are reluctant to procure commodities such as fuel wood, charcoal and forage from alternate sources, due to poor buying power and chronic poverty.

With regard to the other two categories of NTFP such as medicinal herbs, aromatics, dyes and oilseeds, there has been a good demand for many commodities, not only in India but from all over the world. Systematic collection, value addition and marketing can help in enhancing the cash income of the local population and promoting international trade. However, there is a significant gap between the demand and supply situation. Generally, the demand for these products has been fluctuating due to the availability of alternatives, which are cheaper, although inferior in quality. As the NTFP collectors are located in remote areas, a large number of middlemen are involved in taking the products to processors and consumers. In such a situation, the NTFP collectors neither receive correct information about the product demand and uses nor do they get a fair price to even cover their labour charges for the collection of the products. These problems should be taken into consideration while developing a strategy for promotion of NTFP for providing sustainable livelihood to the local communities.

In spite of huge forest resources and abundant production of NTFP, most of these products are not optimally utilised by the local communities. In case of non-edible oilseeds such as Neem, hardly 20% of the total production is collected and utilised while the remaining quantity is wasted. With regard to aromatics, dyes and medicinal plants, there has been total neglect about their utilization in general, barring a few species, which have been over exploited. It is therefore necessary to understand the problems of NTFP and develop a strategy to optimise their collection and utilisation.

The products like *Terminalia bellerica, Terminalia chebula* and *Emblica officinalis* are available in plenty and they have good demand in the local market. Nevertheless, the tribals are finding it very difficult to collect the available NTFP due to poor price realisation and hurdles faced by them due to adverse Government policies. Furthermore, the collection of these products alone will not be able to provide them sustainable livelihood. Realising the above problems, BAIF has initiated the promotion

of NTFP in selected locations in Maharashtra (Thane, Nandurbar and Nashik districts) and Gujarat (Valsad and Navsari districts) in India. These districts located in the Western Ghat hill ranges are dominated by different types of tribals. As in other parts of the country, these tribals who were mainly dependent on NTFP for their livelihood, have also been deprived of their income due to denuding forest resources and poor price realisation for NTFP. In the absence of alternative sources of livelihood, BAIF has promoted the establishment of agri-horti-forestry on the degraded lands owned by these tribals, while arranging the collection of locally available NTFP as a supplementary activity.

Fruits, leaves, nuts, gums, mushrooms, roots, tubers etc. are important source of food from the forest species. For tribals, these forest products are important sources of emergency food during scarcity. Most of these plants find popular utilization throughout the country. The tribals collect these food in their respective seasons and besides their own consumption, they sell them in the local markets too. The range of food used by local communities varies from locality to locality depending on the availability of resources.

NTFPs collection for livelihood security in Indian scenario

Non- Timber Forest Products play a vital role in livelihood of people in and around the forests (Quang, 2006). Studies in India have revealed that, NTFPs provide substantial inputs to the livelihoods of forest dependent population, many of whom have limited non agricultural income opportunities (Chandrashekaran, 1994; FAO, 1991). About 70 % of the NTFP collection in India takes place in the tribal belt of the country (Mitchell *et al.*, 2003). It would be seen from the literature that the NTFP based small scale enterprises provide up to 50 % of income for 20 to 30 % of the rural labour force whereas 55 % of employment in forestry sector is attributed to the sector alone (Joshi, 2003). Therefore collection of NTFPs was a major source of income and employment for forest dwellers. For instance, tendu leaf collection was observed to provide about 90 days of employment to about 7.5 million people every year in India (Mistry, 1992).

Conclusion

Non-timber forest products (NTFPs) or non-wood forest products (NWFPs) have been considered as minor forest products in many countries. Production and consumption of NTFPs have never appeared as resources of great economics and ecological importance at macro level, but contribute a minor share to the national economy in comparison to commercial timber. However, at micro level, tribal people living in and around forests for centuries have recognized NTFPs as important forests resources. Non-timber forest products refer to all biological materials other than timber, which are collected from natural forests for human use. A study was conducted by Chaudhury (1986) who recorded over 500 plants as being significantly used by the tribals as food, dyes, tannins, drugs, narcotic, drinks, housing instruments, weapons, fibers and medicine etc. NTFPs may provide local job opportunity to two million people every year and contribute significantly to rural economy as more than half of the products are consumed by the tribals living in and around the forest area to meet their basic needs. Thus, the role of NTFPs is very important in the livelihood security of people living in and around the forest areas. Thus, on the one hand, the systematic harvesting of NTFPs will increase employment opportunities among forest- dwellers and on another hand, it may also reduce their over dependence on timber collection which might be efficient to resolve the problem of dry-deciduous forest degradation. 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 in the tribal communities (Shit and Pati, 2012).

It is likely, however, that as forest people broaden their livelihood portfolios, certain aspects of aboriginal forest based culture are likely to be lost. In order to protect forests and forest culture, it is necessary to identify and promote the regeneration of those plants which provide different types of NTFPs, as well as those species which are used primarily for timber production. This will help forest people to maintain their indigenous culture through the harvesting of NTFPs without destroying the resource base. India is a developing country where millions of people are still living at the forest fringe areas and depend on forest products for their livelihoods. The conservation of both forests and forest-based culture coupled with the scientific

harvesting of NTFPs thus can create an attractive opportunity for resource poor forest dependent villagers. In the end, it can be said that presently NTFPs are receiving more and more importance as it is becoming clear that their management can help in creating more employment and income generating opportunities to the socio-economically downtrodden forest communities. With the increasing of scientific and sustainable harvesting of NTFPs, the poverty can be reduced to some extent. Since there is immense potentiality of NTFPs in various forest areas of the south-western part of West Bengal, therefore the economic value of NTFPs should receive proper consideration from government as well as non-governmental bodies. Thus, on the one hand, the systematic harvesting of NTFPs will increase employment opportunities among forest dwellers. At the same time, it will also reduce their over dependence on timber collection which might be efficient to resolve the problem of dry-deciduous forest degradation (Ghoshal ,2011).

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