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# Microfinance Practices and NWFPs Value Additions for Sustainable Environment: w.r.t. Andhra Pradesh, India

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## Abstract

A Forest Living Community (FLCs) family in the study area, on an average, required Indian National Rupee (INR) 37533 (US \$ 75 approximately) for their survival. Out of this 36.4% amount is sourced from agriculture activities, 20% from NWFPs sale, 23.6%, agriculture labour activities, and about 20% amount is coming from Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) works activities. When FLCs require microfinance for NWFPs value additions and other needs, they can access it from Self-Help Groups (SHGs), moneylender, relatives and friends, banks and governments. FLCs required microfinance for subsistence, health, education, marriage, and pilgrimage purposes. Microfinance plays a key role in Non-Wood Forest Products (NWFPs) value addition, adopting Eco-Friendly Technology (EFTs), and cost - benefits of such NWFPs value addition to FLCs. The amount of income coming from NWFPs harvest and sale can be increased by way promoting NWFPs value additions using Eco-friendly Technology (EFT).

**Keywords:** NWFPs, microfinance, environment, forest, value additions

## 1. Introduction and statement of the problem

Forest living communities (FLCs) essentially depend on forests for meeting their basic needs of food, cloth, shelter and other essentials. FLCs get direct income through Non-Wood Forest Products (NWFPs) harvest and trade sale. Commonly the FLCs sell their NWFPs harvest without value addition, which results in less income, if FLCs make value addition to the harvested NWFPs their income can be increased by 400%. To undertake NWFPs value addition the FLCs require microfinance assistance and eco-friendly technologies. If they are provided with microfinance to meet their basic needs and procuring eco-friendly technologies, the FLCs can undertake NWFPs value addition for increasing their income level. Therefore the main purpose of this study is appreciates prevalent microfinance practices, NWFPS value additions and EFTs that are available to the FLCs to enhance their income level and reduce drudgery of FLCs that gradually lead to arrest environmental degradation [1–3] and up keep of natural resources.

## **2. Mainstream microfinance institutions**

In India major sources of microfinance are (a) organized sector (banks, government agencies [4] etc.) and (b) un-organized sector (money lender, traders relatives, friends etc.) The former is regulated by government bodies like Reserve Bank of India (RBI), banking regulation act etc., and the later has no formal regulatory bodies. Microfinance falls under the primary sector and they are supposed to meet specific pre-decided targets.

## **3. The SHG-bank linkage phenomenon**

### **3.1 Model-I: bank – SHG - members**

In this SHGs are formed by group members themselves, after surviving for six months the SHG can link itself with a bank close to the group members and deposit their entire saved amount into the bank account. The bank sanctions credit/loan to the SHG four times to the groups saved and deposited amount e.g. the SHG saved INR 1000 and deposited into bank savings account, the bank sanctions an amount INR 4000 as credit, thus total amount INR 5000 is available to the SHG for onward lending to the group members.

### **3.2 Model-II: bank - facilitator agency - SHG - members**

The second groups are formed by NGOs (in most of the cases) or by government agencies. The groups are nurtured and trained by these agencies. Government or other community-based organizations to take the lead in forming the SHGs, and then provide savings and credit facilities by the banks. Even after the linkage with banks, these facilitating agencies continue interacting with the groups. Most linkage experiences begin with this model with Non-Government Organizations (NGOs) playing a major role. This model has also been popular and more acceptable to banks, as some of the difficult functions of social dynamics are externalized.

### **3.3 Model - III: bank – NGO - MFI (micro-finance institute) - SHG - members**

Due to various reasons, banks in some areas are not in a position to even finance SHGs promoted and nurtured by other agencies. In such cases, the NGOs promoted and nurtured the groups and also act as financial intermediaries. First, they promote the groups, nurture and train them and then approach banks for bulk loans for on-lending to the SHGs. The banks lend to these intermediaries for onward financing to the groups or their members.

Study area selection:

**Rationale of selecting,** Atmakuru (Atmakur) /Kurnool, Pembri (Nirmal) /Adilabad, Polavaram (Eluru) /West Godavari in Andhra Pradesh these forest divisions are bestowed with NWFPS abundantly.

## **4. Methods of NWFPS value additions**

When the researcher undertook research study survey in the select geographical area, the investigator observed and noted the below outlined NWFPS value addition systems. These value addition systems can be categorized into two [5] different value additions system: i) Manual system, adding value to NWFPS conventionally

by FLCs e.g. stitching leaf plates with bamboo nails and ii) technology supported system, doing value NWFPs with the help of EFTs e.g. stitching leaf plate with the help of sewing machine.

**Grading:** dividing all harvest (collected NWFPs) into various type considering the harvest color, weight, size, appearance, etc. This grading will help the harvester to seek enhanced price for different grades.

**Washing:** collected NWFPs can be washed with water or can wiped with cloth in case of NWFPs, such as, gums, up rooted herbs, bulbs etc., can benefit NWFPs harvester.

**Sizing:** Harvested medicinal herbs necessitate cutting herbs into different sizes of the harvested herb. This sizing value can be undertaken harvester that benefits them in sourcing better price and increased market.

**Aeration:** after harvesting NWFPs its life (longevity) period can be enhanced especially in case of Mahua (*Madhuca latifolia*) Kullu (*Sterculia urens*), Gooseberry/Aonla (*Emblica officinalis*) this value addition enhances the [6] bargaining power of the harvester and enable him/her to earn more price, which eventually lead to increase income level and better quality of life to the forest dwellers who harvests NWFPs.

**Steaming:** NWFP like Gooseberry/Aonla (*Emblica officinalis*) needs to be deseeded, to deseed the harvested Gooseberry fruits can be steamed, after steaming the fruits will become soft to deseed safely and pulp of Gooseberry can be dried in the sun light seeds can be traded separately. This will have dual benefit of increased price separate trade for pulp and seeds.

**Warehouse:** NWFPs are natural resources, [7] they will come in appropriate season, yet consumption of NWFPs will be done every day. NWFP like Mahua flowers will come in summer season for a couple of months, if the harvester sells it as soon as it is harvested, he or she gets below normal price as everybody may sell the harvested stocks which results increased supply that results in weak bargain power of seller. Alternately the harvest can be stored in warehouse for a couple of months or more which will enable the seller to get better and increased price.

**Breaking:** NWFPs like Mahua seeds, Sal seeds, and sal seeds, Achar (*Buchanania lanzan*) seeds are having upper hard husks that can be broken with sticks to get inner required grains that give the harvester a better price.

**Fastening:** *Bauhinia vahlii* (leaf/*eistar aaku*) are harvested [8]) from large barker which are used as material for making for meals plates, cups etc. which are bio-degradable and eco-friendly. The forest [8] dweller harvest these green leave and sell in loose without value addition. But these loose leaves drying for a couple of days three to four leaves can be fastened with the help of bamboo stick small nails or can be stitched with the help of sewing machine and further with the help of the compressor an edge can be made to make like dining steel plate which give five to six time more price than if sold in as raw leaves.

**Crushing:** NWFPs like soap nuts [9], *Emblica officinalis*, *Terminalia chebula*. and *Terminalia chebula* Retz are hard nuts. These nuts can be crushed with grinding machine or manual crushing implements that will give enhanced prices to the harvester, further the crushed powder can be packed and sold in the local market or distant market.

**Baking:** NWFPs like sal seeds have wings like parts, to make it tradable the wings like part is to be dissected from the seed this can be done by way of baking the seeds in the fire with the fuel wood, which can fetch better price to the forest dweller/harvester.

**Microfinance:** while conducting the research study survey it was learned that, forest dwelling communities sell their NWFPs as soon as they harvested for want of money at low price to fulfill daily needs. If these forest dwellers are provided [1–3] with access to small amount of money (microfinance) to obtain their daily needs, they

can store and add value to the harvested NWFPs that will give them more price and arrests distress sale of NWFP.

## 5. Microfinance practices and NWFPs value additions

This part of the paper outlines microfinance requirements, sources and prevailing other microfinance practices and also FLCs livelihood sources and their augmentation.

As exhibited in **Table 1** Mean household size in the selected forest range places is 4.4 (three to six members) which is in sync with emerging nucleus family system and it is partly to secure Government welfare scheme benefits including ration card, MGNREGA work card etc. To secure survival and daily needs of forest dwellers, they do various income generating activities such as NWFP harvest and trade, artisan labour, public project wages, and sundry other items As exhibited **Table 1**, the forest dwellers are taking up, non-destructive eco-friendly based techniques that facilitate NWFPs value additions, enhanced earnings and better quality of life. In the long run all these contributes for reducing poverty amongst forest dwellers and decreased environmental degradation and increased green forest cover.

From above **Table 2** this can be inferred that mean amount of money needed for forest dwellers in all places of the study for procuring food for all times a day meals and for other daily needs, shopping goods is INR 37533. Out of this INR 13665 is provided by agriculture and allied sources, next INR 8677 is materializing from trading of NWFPs. The remaining amount has been sourced from other activities as shown in the **Table 2**.

**Microfinance activities profile of researched places:** the researcher has made an attempt to profile microfinance activities that were prevalent in the research study places.

**Table 3** exhibits access of microfinance to forest dwellers, it could be observed that Atmakur range, SHG is having access to 51% of microfinance requirements, next comes indigenous banker who extends financial assistance up to 25%,, remaining is purveyed other sources as shown in the **Table 3**. Similarly other ranges accessibility to various microfinance requirements are shown in the above **Table 3**.

As shown in the **Table 4**, it is observed that the primarily forest dwellers require for family members healthcare that has share of 26%, next is for food that has share of 21.8%, and remaining is for other activities as shown in the **Table 4**.

The investigator had group meetings with the forest dwellers and collected the views that revealed that the forest dwellers are yet to aware fully the benefits of NWFPs value addition, emerging innovative and eco-friendly technologies. Hence,

Forest range & (Division) / District	Amount of financial resources required for household survival *	Household size (No. of persons)
Atmakuru (Atmakur) / Kurnool	36500	4.33
Pembi (Nirmal) / Adilabad	38600	4.54
Polavaram (Eluru) / West Godavari	37500	4.25
Mean	37533	4.37

Sources: Estimated based on field survey 2014.

\*Threshold financial sources need to facilitate subsistence and other survival for forest dwellers in terms of money and money equivalents.

**Table 1.**  
Amount of money required for survival of the forest dwellers.

Name of the range and (division) / District	Income from NWFP		Income from agricultural sources (including subsistence)		Income from MGNREGA		Agriculture labour and other source		Total INR
	INR	%	INR	%	INR	%	INR	%	
Atmakuru (Atmakur) / Kurnool	7154	19.6	13797	37.8	7811	21.4	7738	21.2	36500
Pembi (Nirmal) / Adilabad	7801	19.7	13587	35.2	6832	17.7	10380	27.4	38600
Polavaram (Eluru) West Godavari	7800	20.8	13612	36.3	8175	21.8	7913	21.1	37500
Mean	7585	20.0	13665	36.4	7606	20.3	8677	23.6	37533

Source: field survey 2014.

**Table 2.**  
 Different sources of survival to the forest dwellers.

Name of the range	Atmakuru (Atmakur) / Kurnool		Pembi (Nirmal) / Adilabad		Polavaram (Eluru) / West Godavari		Total	
	Score*	% of score	Score*	% of score	Score*	% of score	Score*	%
Moneylender	17	25.0	21	30.9	16	23.9	54	27.8
Banks/ Government	06	9.0	08	10.3	07	10.4	12	6.2
SHG	35	51.0	27	42.6	29	43.3	91	46.9
Relatives and friends/others	10	15.0	12	16.2	15	22.4	37	19.1
Total	68	100	68	100	67	100	194	100

Source: field survey 2013–2014. Score\* - Individual responses for a particular source for meeting microfinance requirement including multi responses.

**Table 3.**  
 Forest dweller access to microfinance in the researched places.

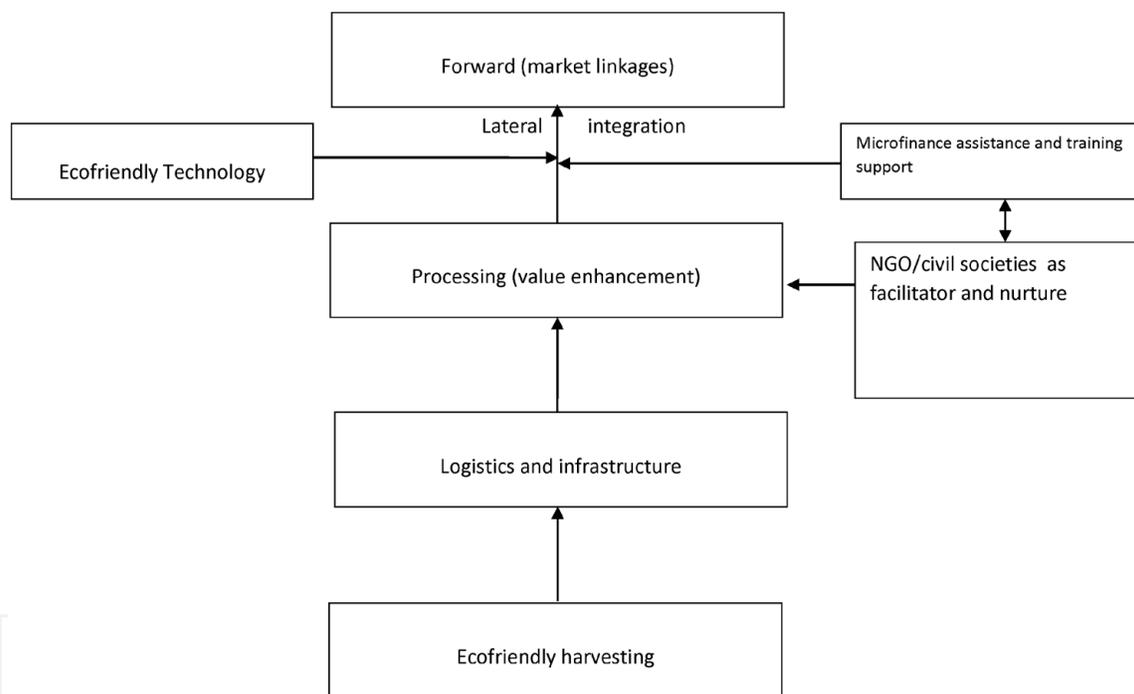
the concerned Government and NGOs should be initiate necessary interventions to create awareness and facilitate NWFPs value additions and also provide market linkages to the value added NWFPs.

**Figure 1** an integrated network that is envisaged and as shown in the **Figure 1**, all stakeholders should collaborate, cooperate and coordinate to achieve the integrated objective. Providing livelihoods to forest dwellers is a comprehensive issue and strong integration and involvement of all systems (lateral integration, forward/market linkages) and stakeholders including forest dwellers Public Policy makers, Government, NGOs/Civil societies. Enhancing livelihoods and ensuring welfare to the poor forest dwellers is a Global concern in general and India in particular. This is a challenge and to be addressed together, fastening all stakeholders' involvement in the evolution and execution of the envisaged policy. As shown in **Figure 1**, integrated linkages to all these entities must be promoted as strategic measure to secure

Name of the range	Atmakuru (Atmakur)Kurnool		Pembi (Nirmal) Adilabad		Polavaram (Eluru) / West Godavari		Mean value of study area
	Score	% of Score	Score	% of Score	Score	% of Score	
Subsistence	18	21.7	21	22.3	17	21.3	21.8
Health	22	26.7	26	27.7	19	23.8	26.0
Education	09	10.8	05	5.3	04	5.0	7.0
Pilgrim	10	12.0	13	13.8	12	15.0	13.6
Marriage	15	18.0	19	20.2	17	21.3	19.8
Others	9	10.8	10	11.7	11	13.6	12.0

*Source: field survey 2013–2014.*

**Table 4.**  
*Forest dwellers microfinance required for various activities.*



**Figure 1.**  
*Networking of NFWP processing, microfinance, EFT, logistics and infrastructure [10].*

the intended goal of providing subsistence requirements. Eco-friendly NFWPs value additions [11] necessitates eco-friendly technologies which will rendered numerous benefits including reducing environmental degradation, deforestation yet, enhanced income to the forest dwellers. Technological and Scientific research institutions may shoulder the responsibility for promoting conventional [12] NFWPs value addition techniques.

## 6. Conclusions and suggestions

Average amount of money required for FLCs in the study area for procuring food items to 3 square meals a day and for other daily needs, cloths etc., is INR 37533. Out of this INR 13665 is provided by agriculture and allied activities, next

INR 8677 is materializing from trading of NWFPs. The quantum of money that can be earned by way of trading NWFPs may be enhanced through appropriate value additions with the help of eco-friendly technologies, which will have multiple benefits including enhanced self-employment, raised income yet reducing environmental degradation and increased forest cover, better flora and fauna health.

It was observed about 47% of microfinance assistance is provided by Self-Help Groups, yet indigenous banker is providing about 28% of total requirements of the forest dwellers. It is deduced that self-help groups will act as purveyors of microfinance requirements of the forest dwellers.

It is observed that the primarily forest dwellers require for family members healthcare that has share of 26%, next is for food that has share of about 22%. Group meetings with the forest dwellers revealed that the forest dwellers are yet to aware fully the benefits of NWFPs value addition, emerging innovative and eco-friendly technologies. For example if AONLA (*Emblica officinalis*) sold in raw form as tender fruit they may get say INR 50 Kilogram (Kg.) if they make value addition in form boiling the AONLA fruits remove the seed and dry the pulp in the sunlight now the price of the dried AONLA pulp can be sold @ INR 200 after making provision for process loss and overhead. Hence, the concerned Government and NGOs should - initiate necessary interventions to create awareness and facilitate NWFPs value additions and also provide market linkages to the value added NWFPs.

Dedicated linkages tagging all concern parties to be evolved to facilitate increased income level of forest dwellers. These integrated linkages with all concern entities must be promoted as strategic measure to secure the intended goal of providing subsistence requirements. Eco-friendly NWFPs value additions necessitates eco-friendly technologies which will rendered numerous benefits including reducing environmental degradation, deforestation yet, enhanced income to the forest dwellers. Technological and Scientific research institutions may shoulder the responsibility for promoting conventional NWFPs value addition techniques.

Effective development plans to facilitate increased earnings and better quality life to the forest dwellers must incorporate measures for better threshold logistics which can link forest dwellers value added NWFPs reach the distant market to get remunerative earnings. Yet there should provision for microfinance that encourages the forest dwellers to become micro-entrepreneurs. Involvement of voluntary organization to support NWFPs value addition, imparting training, and helping forest dwellers to market their value added NWFPs.

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