

FPRDI-ITTO PROJECT PD 15/96 Rev. 2(M,I)

Study No. 4

Market Research and Market Information on Non-Wood Forest Products

Terminal Report

Study Leader: E. C. Cortiguerra Co-Researchers: C. C. Garcia



Project Leader: A. P. Mosteiro Asst. Project Leader: A.B. Ella



Forest Products Research and Development Institute
Department of Science and Technology
College, Laguna 4031, Philippines



International Tropical Timber Organization
Yokohama, Japan

FPRDI-ITTO Project PD 15/96 Rev. 2(M,I)

**UTILIZATION, COLLECTION AND TRADE OF TROPICAL NON-WOOD
FOREST PRODUCTS IN THE PHILIPPINES**

Study No. 4

**MARKET RESEARCH AND MARKET INFORMATION ON
NON-WOOD FOREST PRODUCTS**

TERMINAL REPORT

Study Leader: E. C. Cortiguerra
Co-Researcher: C. C. Garcia

Project Leader: A. P. Mosteiro
Asst. Project Leader: A. B. Ella

STUDY COMPLETION REPORT

A. Study Identification

Project Title : Collection, Utilization and Trade of Tropical Non-Wood Forest Products in the Philippines

Serial Number : PD 15/96 Rev 2 (M,I)

Study Title : Market Research and Market Information on Non-Wood Forest Products

Study Leader : Emelyne C. Cortiguerra

Co-Researcher : Carolyn Marie C. Garcia

Duration : Thirty (30) months

PART I. SUMMARY

Non-wood forest products like bamboo, rattan, vines, twigs, palms and resins abound in different regions in the Philippines. Since the early times these resources have been used in producing housewares for domestic or household use. These raw materials have been found to be good alternative materials for wood and are now used in the production of handicrafts and furniture.

Products from these raw materials have found their way to the global market. The increasing demand has put pressure on the sustainability of these minor forest products. Processing of non-wood forest products generates income and provides livelihood to forest dwellers, to the traders and to the workers of different processing centers. In the Philippines, this activity is described as a cottage industry in rural communities. It involves men and women performing different tasks. The male-dominated jobs are those concerned with procurement of raw materials, raw material preparation which involved primary processing of raw materials (drying, scraping, cutting, framing activities) and finishing. The women-dominated jobs are weaving and finishing as well.

Processing of non-wood forest products helps in the upliftment of the quality of life of the people dependent on them.

This study provides information on markets and marketing practices on non-wood forest products in selected areas in the Philippines. The study was done through surveys conducted in communities near the Industries Development Corporation (IDC), the Nagkakaisang Tribu ng Palawan (NATRIPAL or the United Tribes of Palawan), in Surigao Development Corporation (SUDECOR) and San Jose Timber Corporation in the provinces of Aurora, Palawan, Surigao del Sur and Samar, respectively.

Primary data were collected through interviews of collectors on the forest dwellers who mostly belong to the indigenous peoples or indigenous communities, the traders, concessionaires, middlemen, and the processors who supply finished or semi-finished products to exporters.

The study assessed the marketing system of non-wood forest products. It hoped to provide some recommendations in improving marketing systems at the gatherers level down to the other chain of distribution. This study identifies some strategies to help improve marketing system on non-wood forest products.

2. Study Achievements

a) Outputs Achieved

Information on marketing and markets for different non-wood forest products were gathered in four selected areas in the Philippines. Prices were gathered at each point of the distribution channels. End products and their prices were also documented.

Non-wood forest products covered by the project were bamboo, rattan, buri, almaciga resin, sabutan, pandan, vines, twigs, ferns and honey.

b) Specific Objectives Achieved

Marketing information covering markets or market outlets, prices, marketing arrangements and end-uses of non-wood forest products were documented through survey questionnaires, photographs and video production. Additional information on non-wood forest products were gathered from published articles.

c) Contribution to the Achievement of Development Objective

Non-wood forest products are important sources of income to forest dwellers and to commercial processors who are concerned on sustainability of their resource base to be able to respond to the needs and wants of customers. The study output is hoped to be disseminated to forest dwellers, community organizers and end-users. To forest dwellers, this will give them an idea on how to maximize benefits from collected non-wood forest products. For end-users, it will give them the idea on how to improve marketing of non-wood forest products and maximize the benefits derived from them.

3. Target Beneficiaries Involvement

Participants in the marketing chain were very accommodating in providing information on markets and marketing system or practices. They gave their time to

answer the inquiries even without prior negotiation with their chieftain or community leaders. For them it was an opportunity to link with other government agencies such as the Forest Products Research and Development Institute (FPRDI) to air their needs so that appropriate technical assistance could be extended to them.

4. Lessons Learned

a) Development Lessons

Aspects of study design which contributed to the success in achieving the development objective

The presence of community development officers in the areas visited and coordination with the right agencies such as the Community-Based Forest Management (CBFM) project of the Department of Environment and Natural Resources helped facilitate data collection.

Factors Which Will Most Likely Affect Study Sustainability After Completion

Slack performance in the trade of handicraft and furniture items in both the local and foreign markets would affect the production sectors. This will have a negative impact to our local producers, as well as the workers and communities dependent on the industry.

b) Operational Lessons

Study Documentation

Questionnaires, photographs and video camera were helpful tools in documenting non-wood forest products during the survey.

Monitoring and Evaluation

Collectors and other indigenous communities involved in non-wood forest products in some areas were inaccessible. Poor road conditions, long distance of travel and unavailability of access roads in steep mountains hindered data gathering in some areas in Palawan.

Quality of Study Planning

The quality of study planning was just right. The researcher still found time to visit other provinces like Laguna and Quezon to survey processors of non-wood forest products.

Actions to be Undertaken to Avoid Variations Between Planned and Actual Implementation

A close coordination with other studies on the schedule of travel should be followed. Linkages with the right government or non-government organization on marketing information should be strengthened.

External Factors that Influence Study Implementation and that Could Have Been Foreseen

Although reconnaissance survey of the sites covered by the study were done in advance, the activity did not cover the location of forest dwellers where actual harvesting and collection of non-wood forest products take place. The logging concessions did not have the trading activities on these product but trade of non-wood forest products were handled outside the concession areas. Identification of communities, traders and processors had to be done during the field visit with the assistance of community organizers or community development officers of the Provincial Environment and Natural Resources Offices.

Harvesting methods were not observed as the timing of visit or data gathering did not coincide with the harvesting season.

5. Recommendations

The following are some recommendations to improve the conduct of future similar studies:

- a. Baseline information on seasonality or timing of harvesting and marketing of non-wood forest products in the identified areas should be made available by DENR;
- b. Data gathering should be conducted for longer period. Field immersions would enable researchers to stay in the community and communicate with gatherers and agents and observe harvesting and marketing practices;
- c. Communication with proper authorities i.e., chieftains and tribal leaders should be done ahead of time so that scheduling of visit will coincide with period of harvesting and marketing.

Part II. MAIN TEXT

1.0 INTRODUCTION

Non-wood forest products are so diverse and a lot of them are of commercial value or have been tapped for commercial use. Non-wood forest products are commonly used by cottage industries in the production of furniture and handicrafts. Statistics showed that 1998 exports of furniture from bamboo, buri, and rattan was 1,820,263 pieces valued at US\$81,225,261.00 FOB. Handicraft export was 14,530,000 pieces valued at \$32,369,283.00 FOB (PFS, 1998)

The dwindling supply of wood to produce a wide array of products has paved the way for the utilization of non-wood forest products for alternative materials. Forest dwellers have discovered ways to use these products for food, shelter, medicines and other household implements. These are a source of subsistence through incentives received from collecting or harvesting products such as rattan, bamboo, vines, twigs, etc. NWFPs are traded through middlemen and are passed on to different channels before they are processed into finished products. The products traded carry with them sets of prices that vary at each stage of the marketing flow. But studies have documented that there are inefficiencies in the marketing system. Of the participants in the marketing flow, the collectors are the least benefited. They perform the most difficult task and yet the most disadvantaged in the trading system. They spent their time and energies to extract the non-wood forest products (Pabuayon (1987), Serrano (1997), Baja-Lapis (2000).

In some transactions between the collectors and the trader, the unit of exchange can either be in kind (goods or rice) or in cash. The monetary payments have exposed the forest dwellers to the money economy thus these people have enjoyed and tasted the pleasure of having money as a medium of exchange. There is some fear however that because of the money economy, forest dwellers will be tempted to harvest more of the non-wood forest products. But as some researchers have found out, these people observe forest extraction under strong social control which prevents overexploitation.

Non-wood forest products play a significant role in the economic subsistence and ecological balance. Their importance extends up to the export markets as they find their way in high-end manufacturing industries using organic materials.

Market research is a detailed information on end-users of individual non-wood forest products and means of accuracy that markets has to be attained through specific marketing studies. Marketing studies are needed to analyze the flow of raw materials from gatherers of non-wood forest products to primary processing industries. They are also needed to help identify market opportunities and means of accessing the markets for products from primary processing industries (Lintu, 1995).

Lintu (1995) regarded marketing information as a "soft" technology. It requires quantitative and qualitative information regularly, reliably and at the lowest possible cost. It is not limited to only the four key elements of marketing: product,

price, promotion, and place but also the other factors such as infrastructural, legal, cultural, social, economic, political, environment, etc that are related to marketing.

Efficient marketing of our finished products could be realized if an appropriate valuation mechanism of non-wood products from the gatherers down to the end-users could be worked out, adequate farm to market roads, storage, grading and processing practices are present.

This study hopes to provide relevant marketing information on non-wood forest products in selected areas in the Philippines. It presents some recommendations and strategies to improve the marketing system. The study made use of the production-to-consumption approach.

2.0 COLLECTION AND TRADE OF NWFPS IN AURORA PROVINCE

The collection, trade and utilization of non-wood forest products is the lifeblood of indigenous communities in the province of Aurora. The area under study is along watersheds in the Southern Sierra Madre Mountains. The original settlers called the Dumagats or Agtas depend heavily on non-wood forest products and agricultural activities for survival.

The Dumagats share their livelihood practices of extracting non-wood forest products with the migrant Tagalog and Ilocano communities. These indigenous groups are recipients of the Certificate of Ancestral Domain Claim and were also given rights or privileges by the Department of Environment and Natural Resources (DENR) to extract forest products in their ancestral lands but on a sustainable basis.

These people are well-informed about biodiversity conservation through information campaign programs initiated by the DENR and other concerned non-government organizations. They have been empowered and made responsible stewards and co-partners in managing the forest.

Aurora abounds with many non-wood forest products among which are rattan, sabutan, vines and occasionally, native orchids.

2.1 Rattan

2.1.1 Requirements for Granting of Rattan Harvesting Permits

The DENR grants licensees permits to gather rattan provided that requirements are met. The indigenous community can avail of this opportunity given by the government. A rattan licensee applying for an annual allowable cut of 623,000 lineal meters invests about P80,000.00 for licenses, permits, oath fee from the Department as well as the Department of Trade and Industry, and the local government unit. The licensee is also required to submit a feasibility study. This costs P12,000.00 if the study were to be done by a private person. The feasibility study covers a study on the areas where forest products are to be extracted to ensure that the

people do not go beyond the protected areas and forest reserves and that the identified areas for extracting do not infringe on areas of other licensees. It should also include the market and social aspects to reflect the benefits that the licensee and the rest of community will gain from extraction of forest products.

The license also serves as a passport in transporting the products to the different marketing chain. In 1998, the DENR has granted 11 cutting contracts with a total area of 76,330 ha. and allowable cut of 4,953,219 lineal meters.

2.1.1 Market Participants and the Marketing Flow

1. Gatherers

The gatherers belong to different organizations. Among these are the Casiguran Dumagat Association, Samahan ng Katutubo ng Sierra Madre, Samahan ng mga Katutubong Kumikilala sa mga Lupaing Ninuno, Organisasyon ng mga Magbubukid na Agta. They are normally in groups of ten. A leadman heads the group and is responsible for transacting business with the contractors who are either the gatherers association or the raw material trader. The leadman is responsible for the supply of food to sustain the members for a period of one to two weeks. This system is locally called "tabong", the practice of advancing part of the payment for the rattan poles collected either in cash or in goods. The cash advance is deducted from the payment of products collected.

The gatherers bring the poles from the forest to the riverbanks and to the stockyard where classifying/grading or scaling are to be done by the gatherers association.

2. Gatherers Association

In Diteke, San Luis Aurora, there are 35 households or members of the community. The Chieftain serves as the decision-maker and manages the rattan pole trading. Each gatherer is paid according to the volume of products extracted, the size and diameter of the poles. As the marketing arm of the gatherers, the association applies for business permits and links-up with buyers.

At the gatherers association several processes are done. These are sorting and classifying, scraping, splitting and round core production.

3. Raw Material Trader

The raw material trader could be an individual trader who buys rattan poles from gatherers. He gives advance payment to gatherers. A concessionaire interviewed said that for a group of gatherers, he advances

an average of P 20,000.00 for two weeks subsistence for the gatherers' stay in the forest. A trader's initial investment is P 200,000.00 for goods worth P 400,000.00. The trader also does the initial processing such as scraping, splitting and round core production. The products are passed on to provincial traders or directly to processors.

4. Town/Provincial Trader

The rattan poles are brought to the provincial trader who sells rattan to processors or end-users.

5. Converters/Processors

The communities are aware that additional benefits could be gained from converting the raw materials. Income derived from processing of rattan give sustainable returns. Products are produced on made-to-order basis. The members of the communities would benefit more if production is on a regular basis. Production is constrained by the high cost of transportation in moving their products to other towns or provinces and the seasonality of demand for products. Net income earned from converting or processing of rattan are shown in Table 1.

Table 1. Rattan products, their selling price and net income derived by processors (on a per unit basis in Pesos)

Rattan Products	Selling Price	Production Cost	Net Income
a. Furniture	1,800.00	1,125.00	675.00
b. Baskets (25.5 cm. base x 35.6 cm ht)	50.00	32.00	18.00
c. Hammock			
76.2 cm. x 152.5 cm.	300.00	195.00	105.00
101.6 cm. x 152.5 cm.	400.00	210.00	190.00
127 cm. x 152.5 cm.	500.00	220.00	280.00
152.5 cm. x 152.5 cm.	600.00	240.00	360.00

Baskets, hammock are in demand during the months of May to December. Peak production of baskets and furniture is during the months of January to April.

2.1.2 Classification/Grading and Sorting of Poles

The practice of classification, sorting or grading of poles is not standardized. The market participants classify poles by sizes or diameter and not by species. The prices are based on the length and diameter of the species.

2.1.3 Prices of Rattan Poles

Prices of rattan are dictated by the traders. Tumulim species of rattan are available in Casiguran and San Luis. Palasan species are available in Dingalan, Aurora and areas along the boundaries of Aurora and Isabela (Table 2).

Table 2. Prices of rattan poles in Aurora province (in pesos)

Size Diameter (cm.)	Casiguran		San Luis	
	Gatherers	Traders	Gatherers	Gatherers Association
3.6 m., round core 2	-	-	3.50	7.00
1.60	3.00	7.00	3.00	6.00
1.25	-	-	2.00	5.00
1.00	0.40	1.75	1.40	4.00
0.50	0.90	2.00	1.00	3.00
0.40	-	-	0.80	2.00
2.30	2.00	5.00	-	-
splits (50 pcs/ bundle)	7.50	12.00-13.00	-	-

2.1.4 Handling and Transport of Poles

Rattan poles are brought down to the river banks by the gatherers. Old tires are used to float the poles and protect them from getting bruised. Poles are hauled in forward trucks, elf or 10-wheeler trucks. Transportation cost from Aurora to Manila is estimated at P8,000.00 - P10,000.00 for a forward truck and P12,000.00 - 15,000.00 for a 10-wheeler truck. About 25,000 poles of assorted sizes and bundles of split rattan can be accommodated in one truck.

2.1.6 Problems in Marketing of Rattan poles and rattan products

1. Lack of transport facilities and roads to transport forest products;
2. Insufficient knowledge in preservative treatment of rattan to minimize rejects caused by stains, water damage and insect attack;
3. Poor quality of workmanship; and
4. Lack of knowledge and skills in converting or processing rattan

2.2 Vines

Vines gathered and traded in Aurora Province are hagnaya or diliman [(*Stenochlaena paluatres* (Burm.) Bedd)] and hinggiw [*Ichnocarpus frustestens* (L.) R. Br.]. Gathering of vines is also a community-based activity. It involves

half of the community in Diteke, San Luis, Aurora. The community can gather a 20,000 kilos depending on the availability of vines and capacity of the gatherers to carry them.

2.2.1 Collection and Marketing of Vines

Traders grant advance payments of P50.00-100.00, per day to, gatherers who spend 2-3 days in the forest to collect vines. A gatherer can collect 3-5 bundles of 12 foot vines. The community collects an average of 2,000 bundles per month with bundle consisting of 100 pieces of vines.

Gatherers are paid between P32.00-35.00 per bundle. Traders sell the vines at a price of P50.00 per bundle of hagnaya or diliman and P65.00 for the white vines. A bundle of finger-sized vines has 80 strands while a bundle of ballpen-sized vines has 100 strands. Minimum length of vines is 12 ft.

Extracting vines from the forest also requires an application for licenses and permits from the local government, the DENR and DTI. The following fees are paid: P 500.00 for application fee, oath fee of P300.00 and a license fee of P3,600.00.

Sorting of vines is done to weed out non-tradable vines that might have been mixed in the bundle

2.2.2 Market Outlets

Vines are delivered to processors of Christmas decorations. Products are formed into figures like reindeer, Santa Claus, Nativity scene (Angels, Joseph, Mary and Baby Jesus). These are transported to Buiacan, Cavite and Metro Manila. A processor of these products is also studying the feasibility of producing the products at the source in San Luis and have them delivered to an exporter. A set of Christmas reindeer is sold at P1,500.00. Angels and Santa Claus and deers are sold each at a price of P50.00 for small size and the bigger ones at P150.00.

2.3 Sabutan

Sabutan (*Pandanus sabotan* Blanco) grows naturally along the highway of Baler, Aurora it resembles the characteristics of a pandan and the edges of the leaves are also thorny.

Sabutan leaves are woven into hats, mats or placemats. The woven hats are exported to the United States, Guam and some parts in Europe by one producer. Other producers cater to the domestic market only.

Split sabutan leaves are sold at P35.00 per kilo. A bundle of sabutan leaves can produce 9-10 hats. A hat can consume 70 strips per hat. Women are

employed on contract basis and paid at a piece meal basis of P16.00-19.00 for labor and materials. Peak months for hat weaving is October to March and lean months are April to September.

During the peak season as much as, 3000 kilos of sabutan leaves are consumed. This can produce 60,000 pieces of hats which are sold at a price range of \$1.60-3.50 depending on design and accessories used.

Problems encountered in converting sabutan

1. High labor cost in Baler, Aurora compared to other hat weaving provinces like the Quezon province. Labor cost in Aurora is twice that of Quezon;
2. Lack of chemical treatment for controlling stains in sabutan leaves;
3. Poor road conditions and transport facilities. This is a deterring factor in having to join trade fairs organized by the Convention of International Trade and Export Mission (CITEM).
4. Poor communication facilities. Buyers find difficulty negotiating purchase orders;
5. Poor market conditions for the past 3 years.

3.0 COLLECTION AND TRADE OF NWFPS IN SAMAR PROVINCE

3.1 Bamboo

3.1.1 Marketing system and marketing flow

The town of Jiabong is the demand center for bamboo where mussel farming is the major industry. Mussels grow on bamboo poles which are immersed in the sea. Marketing of bamboo in this community is a direct production to consumption system. Mussel farmers contact bamboo producers or farmers for the poles he need. The bamboo producer hires gatherers to cut the bamboo poles. At an agreed price, the poles are delivered to the pick-up point agreed upon by the buyer and the bamboo producer. The average expenses entailed in the collection of bamboo poles are:

Labor (for cutting/gathering)	P6.50 per pole
Food	P0.30 per pole
Loading/Unloading	P 3.50 per pole

The number of bamboo cutters depends on the volume of bamboo poles to be harvested. Usually, 1 worker or gatherer is hired for every 100 poles.

The species of bamboo used are locally called as “kabughayan” and “patung”. The productive area for mussel farming in Jiabong is estimated at 8.1370 hectares. Estimated production for the first to the third quarters is 887.50 metric tons while fourth quarter production of mussels is estimated to reach 300 metric tons.

The demand for bamboo poles in 1997 is expected to reach 19,740 poles. This is the total requirement of mussel farmers along the Maqueda and Villareal Bays in Jiabong, Western Samar.

In 1997, the projected gain from mussel farming is P2.5 million pesos for the entire mussel farming community (Municipal Agriculturist, Jiabong, Samar).

3.1.2 Prices

Prices of bamboo in Jiabong, Samar vary with size or diameter. Diameter is measured by using round containers as reference. Poles having a diameter of 10 cm are priced between P15.00 - 20.00 and poles with diameter 6 cm is sold at P10.00 each.

3.2 Rattan

3.2.1 Rattan Collection and Trade

Of the 22 rattan permittees in Samar, only two licensees are actively in the trading business. They are a husband and wife team. The husband takes care of the rattan pole business in the eastern side of Samar while the wife takes care of the western side. Sources of rattan poles are San Juan de Buan and Borongan in Eastern Samar.

Rattan poles are gathered or collected by an organized group of cutters. Species collected are kalapi, tumalim and olisi or commonly known as “palasang bato”.

Gathering of rattan is done by cutters. When a sufficient volume is collected, the poles are loaded in the truck and brought to the stockyard of a concessionaire. The poles are then delivered to furniture and handicraft producers in Manila and Cebu traders. The traders in Manila or Cebu sell in bulk or retail to furniture or handicraft producers.

3.2.2 Marketing Expenses

The following are the expense items incurred in marketing of rattan poles.

Hauling (10-wheeler truck)	- P22,000.00
Freight (per pole)	- 1.00
Arastre (per pole)	- 0.20 - 0.25
Coast Guard (unrevealed)	- gets paid once a month

The licensee spends an average of P 500,000.00 for the delivery of 20,000 poles to Cebu. Forest charges for the annual allowable cut and reforestation trust fund is P0.20 for rattan poles with diameters of ≤ 2 cm and P0.50 for poles with diameters of ≥ 2 cm. For palasan however, the forest charge for rattan poles with ≤ 2 cm is P0.50 and ≥ 2 cm is P0.85.

3.2.3 Prices of Rattan Poles

Price difference exists between buyers in Manila and Cebu. The reason is that Cebu buyers are more strict in the quality of poles delivered. Higher prices would anyhow offset rejects in the poles delivered. Table 3 shows the pricing system of rattan poles in Samar. Prices are based on size or diameter of poles. One pricing system applies to all species of rattan.

Table 3. Prices of rattan poles in Samar (in pesos)

Species	Size/ Diameter (cm.)	Gatherers	Traders	
			Manila	Cebu
Palasan	2.2	8.50	13.00	14.00
Kalapi	2.5	10.50	15.00	17.00
Tumalim	3.2	26.50	35.00	45.00
Olisi	2.8	16.50	27.00	28.00
	1.6	3.00	6.00	11.00
	1.9	6.50	11.00	13.00

3.3 Almaciga Resin

At the time of the study, only two almaciga resin licensees were actively engaged in almaciga trade. Almaciga collection and trade in Western Samar follows the system of cash advance payment commonly practiced in the collection of NWFP's. The concessionaire gives advance payments to the kapatás who uses this to buy consumables needed by gatherers during their stay in the forest. The value of these consumables is deducted from the final payment for the resin collected.

Concessionaires in Samar ship almaciga resin directly to varnish producers in Cebu which has a thriving basket ware industry. Almaciga resin is processed into varnish used by these handicraft producers.

Almaciga resin is bought from the kapatas at an average of P8.50 per kilo and is sold to varnish producers in Cebu for P13.00 per kilo. The concessionaire incurs a transportation cost of P 0.90 per kilo of resin and pays a forest charge of P1.00 per kilo.

4.0 COLLECTION AND TRADE OF NWFPs IN SURIGAO DEL SUR

Surigao del Sur communities belong to the most depressed areas in the Philippines where poverty rate is very high. Most of the people living in the areas were once employed or depended on logging concessions some 20 years back. People were displaced as a result of the closing down of some logging concessions in the province.

Rattan, vines and ferns are abundant in the province of Surigao del Sur. These are gathered by different tribal organizations and private or individual permittees. There are 21 rattan licensees in Surigao del Sur which could be reached for rattan pole gathering.

4.1 Rattan

4.1.1 Marketing system and marketing flow

One concessionaire interviewed gave a description on the marketing system on rattan. Gatherers collect rattan poles in the forests of Surigao del Sur. The area known to be abundant in rattan is in San Miguel. A group of 10 gatherers are contacted to collect rattan. These gatherers belong to a tribal group, the Manobos. It would take the gatherers about 15 days to collect a truckload of rattan. This has a capacity of 2,000 poles.

Gatherers are given advance payment in goods or in cash which is later deducted from the full amount of the rattan collected. Payment is made after quality control or classification has been done. Rejects from source are estimated at 10% of the volume of poles. This rate is due to the exposure of the rattan poles to elements for a long time. Poles are delivered to the concessionaires stockyard for treatment and further processing before delivery to buyers or traders in Cebu.

The concessionaire spends an average of P100.00 for gasoline and oil and P300.00 for labor cost in hauling the poles. A scraper is hired to scrape the skin of rattan poles. The concessionaire spends P0.35 for each pole scraped. The scraper earns an average of P70.00 for the whole day of scraping about 200 poles.

The poles are set on a wigwam for drying before preparing them for delivery. A prophylactic treatment practiced to prevent decay of poles is by soaking rattan poles in a boiling solution of kerosene and oil.

The poles are shipped to traders in Cebu. For a shipment it is estimated that 70% of the rattan poles are less than 1 inch diameter and 30% has a diameter greater than or equal to 1 inch.

4.1.2 Classification/Grading System

There is no standard classification procedure for rattan poles but by checking the poles whether there are pinholes, stains, and water damage. A lot of rejects are experienced during the rainy season and during the month of December. Slightly stained poles are remedied by turning this pole into splits or round core.

4.1.3 Prices of rattan poles

The licensee/trader sets the buying price of poles. In buying rattan poles from the gatherer, the price is dependent on the size or diameter and the species. Table 4 shows the prices of rattan from the gatherers level.

Table 4. Price of rattan poles paid to gatherers, Surigao del Sur

Species	Size/diameter (cm), 8 meters length	Selling Price
Kalapi	3.2	P7.00
Tumalim	3.2	6.00
Palasan	3.2	6.00
	2.8	6.00
	3.8	6.00

The concessionaire prefers to sell the rattan poles to provincial traders using straight-buying system. In this way, he would have a better income from the sale of rattan poles. Only one price for all species and sizes or diameter is offered. The average price is at P11.00. Losses from rejects could already be offset at this price. Green or unscraped poles however command a higher price and could be sold at P22.00 per pole for mixed sizes and species.

In Cebu, the kalapi species is given a higher price. It sells at an average price of P26.00 per pole for a 3.2 cm." diameter.

Rejects are sold to local producers in Surigao del Sur at the following prices:

Table 5. Prices of rejected rattan poles, Surigao del Sur

Size/diameter (cm.)	Price
2.5 and up	P5.00
2.2	11.00
1.9	10.00

4.2 Other NWFPs in Surigao del Sur

The province does not have much of a cottage industry to speak of. But some communities are starting to organize a livelihood program to augment their income. Community-based processing is done in Babuyan, Carrascal and Lanuza, Surigao del Sur. Among non-wood forest products processed are different kinds of vines and fern locally called Agsam.

4.2.1 Vines

A community under the assistance of the Community-Based Forest Management Program of DENR is a mountain village called Babuyan. Vines such as nito, hagnaya or diliman and baleskarons are gathered by members of the community and are sold to processors within the province.

Volume of raw materials consumed has not been recorded. Thus, impact of their utilization remains to be monitored.

Table 6. Prices of non-wood forest products

Non-wood Forest Products	Selling Price
Agsam (split)	P 25.00/100 pieces a bundle
Nito (3 m long)	40.00/100 pieces a bundle
Split rattan (4 m long)	50.00/100 pieces a bundle
Baleskaron	40.00/100 pieces a bundle

Mixed vines of 250 bundles are used to make 500 pieces of baskets and trays. Purchase orders for the products are distributed to members of the community who want to earn more. Products are sold on weekly basis. The community provides the labor and are paid at a rate of P40.00 per item produced.

The marketing agent supervises the production and provides the needed raw materials. He passes the finished products to traders in the market and a souvenir shop in Cabadbaran, Agusan del Sur. He adds a mark-up price of 30-50% to cover transportation expenses and personal income. Products are sold at the following prices (Table 7).

Table 7. Selling prices of products produced by the Babuyan community-based livelihood project

Product	Selling Price Per Unit
Baskets	P30.00 - 40.00
Trays (25.5 cm x 2.5 cm x 10.2 cm)	40.00 - 70.00
Wall decorations	30.00

4.2.2 Agsam

Agsam is a giant fern growing abundantly in Lanuza, Surigao del Sur. Agsam splits are processed into fashion accessories by the Lanuza Agsam Craft Development Cooperative. It is being assisted by the Department of Trade and Industry Provincial Office. Still in its infancy, the cooperative has 30 members and everyone is involved in the craft of agsam weaving.

Agsam is bought from gatherers in splits of about 3 meters long for P20.00 - 25.00 per bundle of 200 pieces. It is woven into headbands, bracelets, necklaces, hair clips and belts.

Each member produces his own set of products. The products are pooled for marketing or delivery to market outlets. The marketing agent, a member of the association takes charge of pricing the products. Each member gets his share of income from the sale of his products after payment has been made by the buyer. Market outlets are Margie's Handicraft, a souvenir shop in Cabadbaran, Surigao del Sur which showcases products from the CARAGA region, department stores or malls in Davao and Cebu cities.

Problems encountered in processing of non-wood forest products as enumerated by the two organizations are:

1. Lack of transport facilities to bring products to market outlets;
2. Lack of skills and technical know-how in processing of non-wood forest products for high valued products;
3. Lack of financial requirements to purchase necessary equipment to improve workmanship;
4. Lack of market information and linkages to improve capability;

5.0 COLLECTION AND TRADE OF NWFPs IN PALAWAN

Palawan has been considered the country's last frontier as a diversity of flora and fauna species are found only here. It has the country's largest remaining area of tropical forest consisting of lowland and mountain rainforests, monsoon forests and mangrove along its coast.

Palawan has a population of 600,000 people, majority of whom are migrants of mixed ethnic origins. In-migration has been steadily increasing brought about by the lure of rich natural resources (land, forest and marine) and an increasing service sector demand of the tourism industry. There are three main ethnic groups: the Bataks with households numbering around 400 and inhabiting the northern central part; the Tagbanuas with households numbering 7,000 inhabiting the central part and the larger groups of the Palawan estimated at 30,000 households inhabiting the southern part of the island (De Beer/Mc Dermott 1996 as cited by Banua, 1998).

The influx of tourists has contributed to the upliftment of the quality of life of the people of Palawan. Tourists have shown interest on the indigenous wares of the tribal groups of the Palawan, Tagbanua and the Batak. This has encouraged the indigenous communities to produce their wares on a commercial scale. This has propelled the development of the handicraft industry in Palawan and to utilize the forest resources like rattan, bamboo, vines, twigs and other minor forest products available in the province (DTI-Palawan).

Practically all of the indigenous communities in the province have depended on the collection, trade and utilization of non-wood forest products for subsistence. Another equally important forest resource is almaciga resin. Extraction of resin started since 1940's in the different municipalities in Palawan. Almaciga resin extraction has helped a lot of people earn additional income from the activity.

DENR records show that the list of licensees/permittees include not only private individuals but organized groups as well comprising of members and non-members of tribal communities.

5.1 NWFPs in Areas Covered by NATRIPAL

5.1.1 The NATRIPAL (Nagkakaisang Tribu ng Palawan)

In 1989, Indigenous Peoples Apostolate (IPA) brought together twenty indigenous village associations from across the island. NATRIPAL was organized with the objective of advocating the recognition of ancestral tenurial rights and of bringing access to land and its natural resources closer to these groups. It also aimed to enhance the economic bargaining position of indigenous POs through capability building on sustainable management and NFTP trading.

Since 1990, NATRIPAL has established and operated trading activities in rattan, almaciga resin and honey involving 57 POs within the federation. Assisted by donor agencies, it has set up trucking and marketing services, to move NWFPs from the islands to the market outlets in Cebu and Manila (Banua, 1998).

Organization and Management of NATRIPAL

At the community level, trading of NWFPs (almaciga resin, honey and other products) is through the Area Servicing Unit (ASU) of each indigenous community. The ASU serves as a depot for the community's NWFPs supplied by the gatherers. The manager, cashier, bookkeeper and utility personnel come from the community. The ASU extends credit, mobiles savings, conducts merchandising and trading of honey, rattan, almaciga resin and handicraft processing and conducts other value-addition activities. The members raise their own capital. Capital for marketing was initially provided by NATRIPAL as a counterpart to match the resources generated by the association or cooperative.

At the federation level, NWFP trading is consolidated by the Enterprise Development Unit (EDU). This provides to the ASU supervision, monitoring and control in fund use. A General Manager heads the EDU. Under him are supervisors of three departments namely NWFP Trading, Credit and Merchandising, and Marketing and Product Development (Banua, 1998).

Problems

Among others, NATRIPAL needs members with skills and experience in handling business matters. The communities and gatherers do not possess the adequate skills and technologies required in handling and marketing of NWFPs. Most prefer being gatherers or suppliers of NWFPs.

From personal interview with Ms. Dionisia Banua, it was gathered that they have tried to contact non-government organizations involved in reaching out to community-base organizations in marketing their baskets and other products. The members could not cope with the time allotted to complete or deliver the purchase order. Members still lack the consciousness of quality and delivery time.

5.1.2 Almaciga resin

Manila copal is another term for Almaciga resin. Originally, the license to gather resin has been granted to pioneer settlers of the lowlands or private concessions who are non-members of indigenous cultural communities (ICCs). Management of concessions has been handed down to families and heirs of the original license holders.

With recent developments particularly on the recognition of indigenous cultural communities as embodied under DENR DAO No. 04-1, Series of 1989 (Special Provisions within Areas Reserved/Occupied by Cultural Communities), a move by DENR to protect the rights of indigenous cultural communities to their ancestral lands to ensure their economic, social, and cultural well-being as mandated by the 1987 Constitution and Section 7 of the Strategic Environmental Plan for Palawan Act (RA 7611) which provides for the establishment of SEP's main strategy which ensures the protection of tribal people and the preservation of their culture, among other consideration, the indigenous cultural communities (ICCs) are asserting their rights to the exploitation of forest products on their ancestral domain.

Following the principles of the SEP and other government policies, the tribal organization under NATRIPAL (Nagkakaisang Tribu ng Palawan) has submitted their petition to the Palawan Council for Sustainable Development (PCSD) to recognize their rights to ancestral

lands including the management of its resources. The PCSD has adopted Resolution No. 94-51 on 25 July 1994 giving ICC's preferential rights to collect and gather minor forest products. This policy is now the source of conflict between the ICCs and the private concessionaires who are members of the Palawan Bagtik Association. The policy has been amended and studies are undertaken to resolve the conflict.

Meanwhile, processing of licenses and permits is being screened to ensure that the areas being applied for extraction of almaciga resin are not in conflict with the ancestral domains of the ICCs.

Much of the marketing information on almaciga resin were gathered from the study conducted by the Palawan Council for Sustainable Development.

Sharing and Working Arrangements

A concessionaire oversees the general operations of the concession and employs gathers, "kapatás" (similar to a field manager-cum-agent), guards (who often also does some gathering) and a warehouseman. And since the concessionaires do not reside within the vicinity of their concession area, some employ representatives to act in their behalf.

The average number of "kapatás" for each concession area is five and each "kapatás" supervises an average of 30 gatherers. The "kapatás" reports directly to the concessionaire or his representative. Generally, a "kapatás" is entrusted with cash to be used for procuring food (basically rice) to be consumed while gathering, and goods (e.g., sugar, cigarettes, rice) which are handed to the gatherers as loan before leaving for the concession area. Upon delivery of the resin, the value of the goods plus the cash advanced to the gatherers is deducted by the "kapatás" from the former's share.

The "kapatás" is likewise in-charge of weighing the commodity and if cash is still available, he pays the gatherer immediately. In some very isolated instances, he also classifies the resin as first or second class depending on the quality. The price paid to the gatherers is determined by the "kapatás" and the usual practice is to go an average of one peso lower than the buying price set by the concessionaire. In cases where the concession has no warehouse within easy access by the "kapatás", the resin is stored in sacks under his house. Transfer of the commodity to the concessionaire's warehouse or designated depository place at the poblacion including the cost of transporting the resin is also the responsibility of the "kapatás". However, some concessionaires shoulder the transport cost particularly if the quantity is 80 kilograms or more.

There are concessionaires who opt for the "royalty system". In this arrangement, a middlemen or the "kapatás" himself agrees to finance the

operational expenses and then shares the net income equally with the concessionaire. Another form of "royalty" is for the middleman to pay two pesos for every kilo of the collected resin. Still, some concessionaires lease the area for an agreed amount.

The gatherers belong to the tribal communities except for lowlanders (Cuyunon) in Puerto Princesa and Quezon. Gatherers also guard the concession from intruders who attempt to gather resin from trees which are being left to recover after a season or two of tapping (PCSD).

Production and Marketing

The peak period for resin gathering is during the dry season when the almaciga sap easily dries up. Lean production is experienced during rainy season. Gatherers spend the season for harvesting upland crops like rice.

A group of gatherers can collect an average of 50 kg of almaciga resin per week from 15 trees. Tapping is done on a rotation basis. In Rizal, the distance from home to collection site is about 3 hours walk. All members of the family who spend their time in the concession are to extract almaciga resin or rattan. Collectors spend P5.00 for sack.

The resin is packed in sacks which are placed inside the gatherer's rattan backpack or "rarong". The gatherer travels by foot through carabao and cart trails. A wooden raft is handy in areas where a river will have to be crossed. The bags are attached underneath the bamboo poles in the water and are floated from the collecting area to the drop off and payment point.

When the agreed volume is met, the "kapatás" delivers the resin to the concessionaire or to the direct buyer in Puerto Princesa at a price previously agreed upon by the concessionaire and the buyer. The resin, packed in sacks weighing 40 to 45 kilograms each is loaded in a 10-wheeler truck, ready for delivery to exporters and processors in Metro Manila. Trucking costs P1.00 per kilogram.

If shipped by a Manila-based buyer, the freight is P1.00 per kilo at the Negros Navigation Co. (NENACO). The shipping line frequents the Palawan-Manila route every Fridays and Sundays.

Grades of Almaciga Resin

There are three grades of raw almaciga resin sold in Palawan. These are the Grade A or Extra White or tipak, Grade B or semi-white and Assorted. The tipak grade is the top quality stuff and fairly clean. In the semi-white grade resin, there is a fair percentage of high quality resin and a

bit dirty. The assorted grade also known locally as ladlad is very dirty, has little resin and mostly dirt and bark.

Prices of Almaciga Resin

There are also fluctuations in the prices of almaciga resin. As gathered from one concessionaire, the price of almaciga resin during the time of interview was down because buyers or varnish processors decreased their production capacity. This decrease was due to the increase in price of chemicals used in varnish production. Producers may not be able to sell if both prices of inputs increase. Prices of almaciga resin during the visit are shown in Table 8.

Table 8. Prices of almaciga resin, Palawan (in pesos)

Market Level	Prices
Tappers	4.50
Agents (kapatás)	6.50
Concessionaires	
Grade A	10.00
Grade B	9.00
Assorted	8.00

Estimates of Net Revenue of Gatherers, “Kapatás” and Concessionaires

A gatherer’s income per month ranges from P180.00 to P550.00 while the kapatás earns P400.00 to P3,000.00. On the other hand, based on the responses of interviewed concessionaires, the average volume collected from each concession area is 80 tons per annum and ranges from a low seven tons to as much as 180 tons. On a per hectare basis, the average production is 5.5 kilograms. Using the P13.00 per kg average selling price set by the final trader, the concessionaire then grosses from P91,000.00 to P2.4 million per annum.

The estimated profitability of almaciga resin extraction activity on the concessionaire level is gleaned from Table 9.

Table 9. Profitability of almaciga resin extraction operation, concessionaire level, Palawan

Gross income during the past year	P 660,000.00
Expenditure during the past year	247,180.00
Estimated net return (gross income less operating expenses) per annum	P 412,820.00
Total area of concession	10,968 ha.
Net return per hectare per concession per annum	P 18.80

Source: PCSD

There are some intricacies in being a concessionaire. According to one concessionaire interviewed by NATRIPAL, aside from the yearly renewal of licenses, it has been found to be time-consuming and financially draining on the part of the applicant. Because all these costs are incurred prior to operation, all the expenses are borne by the concessionaire, and that a corresponding price adjustment on the price of the commodity may be justified. It is a known business practice to pass on any incremental cost to the consumer by increasing the price of the commodity. However, since almaciga traders or buyers are the ones dictating the price, the concessionaires resort to decrease the amount paid to gatherers or kapatás instead to be able to recoup the added expenses. Any increase in operating costs that is shouldered by the concessionaire will most likely entail a proportional fall in the income of the gatherers and kapatás (PCSD).

Concession Fee Structure

A concessionaire enumerated the costs involved in applying for a license:

Application fee - P30.00
Attorneys fees - (varied)
Mapping fees - (varied, but approximately P500.00- P2500.00 based on the following scale:

1 - DENR team leader @ P135.00 per day
1 - team member @ P115.00 per day up to two weeks
Inspection fee (P300.00)
Oath Fee (P30.00)

Surety bond or performance bond - must be deposited in a bank, more or less in escrow, to demonstrate the applicant has sufficient means to develop the concession. This bond averages approximately P5,000.00 but can rise for larger areas. It is also observed that the price level is also affected by another major cost item that further inflates the expenses of the concessionaire. This commonly referred to as “under the table” or grease money that has reportedly become a standard operating procedure so as to facilitate the processing of the application and in the transportation and shipment of the commodity.

Market Outlets

The local buyer of almaciga resin is Boysen Paint Co. It buys extra white, ordinary white and assorted qualities. Hongkong is the market for export grade almaciga resin. For lādād, local buyers are Catholic churches. They use the low quality resin as incense during mass.

5.5.3 Honey

Honey gathering is another source of livelihood for the IPs. The researchers however were unable to observe honey processing and marketing because there was no honey production. Honey production according to NATRIPAL has been affected by the the El Niño and La Niña phenomena that hit the country in 1998.

Honey is the sweet substance produced by honeybees from the nectar of blossoms or from secretions of or on living parts of plants which they collect, transform and combine with specific substances, and store in honeycombs. It consists of different sugars, predominantly glucose and fructose. Besides sugars, honey contains protein, amino acids, enzymes, organic acids, mineral substances, as well as traces of fungi, algae, yeast and other solid particles resulting from the process of obtaining honey.

The color of honey varies from nearly colorless to dark brown. The consistency can be fluid, viscous or partly to entirely crystallized. The flavor and aroma vary, and are usually derived in part from the plant of origin (Beeworld 5/79: Recommended European Standard for Honey as cited by Banua, 1998).

Honey Collection

Honey gathering among the indigenous people of Palawan has been an integral part of their existence and is part of their culture and rituals. The Batak hunter-gatherers of Palawan perform the lambai at the onset of the honey season. They would spend days in small camps at special sites in the forest to perform the rituals. The spirits of the honeybees are honored with prayers, dances, songs and the instrumental music. The Bataks believe that incorrect performance of the lambai results in poor harvests of brood and honey.

Accordingly, honey gatherers revealed interesting observations of the rituals and taboos of honey collection. They narrated that bees are sensitive to body odor and will attack gatherers with unpleasant smells. The bees are also sensitive to the smell of blood and will get aggressive and irritated to the smell of dead bees and scorched wings. Before a swarm attacks, a lead bee marks its victim by buzzing past or releasing an odor (pherome) which leads other bees to the target. Gatherers discourage eating of honey near hives, believing that the bees will swarm and not return to the same spot.

The Tagbanuas however have a different view. They believe that a hive is a gift to the finder by the guardians of the forest and the bees. They offer prayers and thanks to these guardians so that they will be led to the hives.

Honey gathering is a male-dominated activity while women are involved in the processing and marketing of the honey. Skills are acquired by joining the more experienced gatherers in the collection expedition. Skills tend to be handed down from father to son.

A typical honey gathering expedition starts with an individual or a group of 2 to 3 members (usually family members) who go out to the forest and locate dense areas of flowering trees. Familiarity of the flowering seasons of various species of forest trees and their location in the forest will determine a successful hunt. Foragers are also in constant lookout for indicators of hive presence: droppings (yellowish dots) of bees along river rocks, presence of young hives, indicative of a nearby large hive, directions of the flight of bees, and others. A pair of good, sharp eyes during the hunt is an advantage too.

Once a hive is located, a member of the team climbs up with a smudging fire (usually using coconut husk and fresh leaves) to produce a thick, white smoke. The climber then determines whether the hive contains matured honey or not. The bees are driven off and rendered lethargic by the smoke. Care is done not to kill, scorch or squeeze any bee as it would provoke them to sting. According to one informant, bees with their heads upward are not hostile. Bees with heads down and with their wings fluttering are those that are on the attack. A breathing sound emanating from a hive is indicative of a surprised colony which may turn hostile. It is normal for a climber to be stung. As a rule of thumb, if the sting is less than seven times, the bees are not agitated and it is safe to proceed. Beyond seven stings means the whole swarm might attack, thus the gatherer has to utter stronger prayers to pacify the bees or get down the trees very fast.

To harvest the hives containing the honey, the gatherer cuts the upper part of the hive slightly above the combs containing the eggs, leaving an inch or two of the hive containing honey. This is done to leave some food to the colony and to allow the hive to regenerate (regeneration normally returns two weeks after the harvest, but honey maturation requires a longer period). The honey-laden comb is lowered down via a plastic container attached to a rope and collected by those below the tree. Processing of honey is done in the village, or on-site but away from the hives.

Peak seasons of honey gathering, which coincides with the dry months starting February to April, a team of gatherers usually stays 2-3 days at a time foraging. On the average, 10-20 hives are located per trip and the average yield per hive is 2 gallons. In on honey-gathering season, families devote 80 percent of their time to the activity, returning only to restock on food and to process and sell their honey. A gatherer can collect an average of 30 containers (5-gallon each) for the whole honey-gathering season.

The honey season is the period most awaited by indigenous communities not only because it is an enjoyable one but also considered a premium activity because it brings the gatherers a quick conversion per unit time spent. There is not much capital and equipment needed and the job is considered light (since the most laborious part is only the climbing and the work is looked upon as an enjoyable one (including the eating).

Honey Production and Processing

The production and processing of honey appears to be a simple activity until one considers entering the export and commercial production scales. In Palawan, the common practice of processing is by pressing the honeycomb to extract the honey, passing the honey through a sieve and placing the cleaned honey into bottles and plastic containers ready for selling. Other honey by-products (mainly beeswax) are also collected, both for local household use (candle, medicine) and for sale to wax buyers.

Honey is preferred not to be cooked or heated. Gatherers believe that cooked honey tastes different and destroys the honey's medicinal value. Processing honey is a very simple and uncomplicated one.

NATRIPAL buys honey in bulk and sells it locally in Palawan and in Manila. To understand the requisites of this level of honey production and processing. Accordingly, there is a diversity in the quality of honey especially for wild honey. It derives its flavor, color, aroma from the dominant flower in season as well as poor handling in the field contributes among other factors to the difficulties of commercial production of tropical honey. Problems encountered by NATRIPAL in its honey marketing are: (a) high moisture content; (b) impurities; (c) fermentation; (d) diversity of honey -flavor, color aroma and others; (e) adulterations; (f) standardization requirements of buyers; (g) pricing; and (h) irregular supply.

Market Flow of Honey

During the honey season, gatherers from Cayasan in Puerto Princesa and Campung Ulay in Rizal collect honey and sell them to NATRIPAL or buyers within their municipality or barangay. NATRIPAL sells the honey to local users and Manila buyers. The buyers from the municipality or barangay pass on the honey to provincial buyers. Provincial buyers sell honey in bottles to local users and in gallons to Manila buyers.

Price differences at each market level is shown in Table 10 .

Table 10. Prices of honey at each market level

Market Participant	Selling Price
Gatherers	P 250.00-270.00/gallon (BarangayMunicipal Buyers)
	P250.00-270.00/gallon (NATRIPAL)
NATRIPAL	P540.00/gallon (Local users)
	P400.00-435.00/gallon (Manila buyers)
Barangay/Municipal Buyers	P30.00-40.00 (gin bottle) (Local users)
Provincial Buyers	P250.00-270.00/gallon (Provincial buyers)
	P40.00-50.00 (gin bottle) (Local users)
	P400.00-435.00/gallon (Manila buyers)

Problems in Marketing Honey

Like any organization NATRIPAL is also beset with problems related to organizational or operational management, financial, and marketing considering that it has to deal with 57 groups.

The organization had difficulty in dealing with legalities required by different institutions like the DENR and LGU bureaucracies. A lot of documents have to be produced to meet the requirements.

As regards the socioeconomic aspects of the forest dwellers, the following issues that need to be resolved:

1. Lack of access to resources. Palawan today has only one registered concessionaire for honey gathering. It is inactive in the honey trade but the gatherers are always fleeced because of unavailability of legal documents allowing them to gather and transport honey.
2. Extortion from government personnel on transport and shipment of products.
3. Too much variance in the quality of honey and lack of mechanics to define quality standards of Philippine wild honey.
4. Use of pesticides on agricultural products causes harm to honeybees.
5. Destruction of the forest due to encroachment and its negative effects on the environment.
6. Lack of information on technologies to improve production and quality of products as well as marketing information.

5.2 Kamantian Tiny Basket Community

An interesting community in Kamantian in the town of Brookes Point, Palawan which makes tiny Palawan baskets and sold in souvenir shops would have been ideal respondents for this study. Their products have been exported by traders in Manila. A Palawan-based trader deals directly with the IPs in Kamantian. She gives them advance payment for products to be produced. Basket production 50 families or about 200 individuals depending on purchase orders. The trader encounters problems with coping up with orders of buyers because only the natives in Kamantian can make the items. She tried to contact other communities but the quality of workmanship is better in Kamantian. These are tiny woven baskets made from different NWFPs such as bamboo, rattan, and bamban. A basket is made for 3-4 days depending on the skill of the worker.

The trader did not have an idea on the volume of materials extracted. She climbs the mountains which takes 6 hours walk to reach the place. She buys the baskets at a price ranging from P50.00 - P135.00 depending on the size of the baskets and sells them 300% higher. The selling prices offered in the market are more than enough to offset her effort and expenses in marketing the products. The trader also has her share of problems. The natives she says are sensitive to criticisms. They get hurt if she gives negative feedbacks on the quality of the baskets produced. It would be difficult for her to convince them to produce the next time orders are made. Another thing is that she has to pay the same price for the product produced even if the quality was inferior. She spends time and resources for repair. She hires two natives to do the job and maintain the quality of her products.

5.3. Buri/Buntal Processing

The buri palm has many uses but has not been extensively tapped as a material for production of novelty items or for household use. The stem is converted into fiber which is an ideal material for the handloom weaving industry. The buntal/buri leaves also have their economic value. The mature leaves are converted into roof shingles while the young leaves which are still unopened are processed into hats, mats and bags.

It was gathered during the survey that the industries utilizing these raw materials are still in their infancy stage. The handloom weaving industry and the hat and bag producers are barely a year old. The Department of Trade and Industry (DTI) are finding ways and means to utilize the resource to help the indigenous communities have an alternative source of income.

5.3.1 Buri Fiber Processing

A buri plantation owner in Sofronio Española processes buri fibers which could be considered a crude but an environment-friendly process. It takes 25 days to extract buri fibers. The stem of the buri palm is cut from the base. The stem is further cut into three parts and the leaves are

removed. The cut stems are immersed in the nearby river and are left to stay for 25 days. After 25 days, a worker brings up the stems from the bottom. He holds the muddy stems and strikes them on the water. This process not only removes the dirt but also softens the material so that fibers could easily be extracted. The fiber is extracted by brush strokes. The brush is made of a wood that size of a hair brush with shoe tacks nailed on it. After de-fibering, the fibers are sun-dried. The plantation owner claimed that his process is better than the technology introduced by the Fiber Industries Development Authority (FIDA). This is more environment-friendly because he does not use any chemicals to extract the fibers. However, he added that FIDA graded his fibers as Class C only.

The plantation owner hires workers to process buri. A worker gets paid at a rate of P30.00 per kilo of fibers. The sun-dried fibers are brought to the handloom weavers in Puerto Princesa City for P50.00 a kilo. Fibers that are not bought are converted into brooms. He spends P10.00 for the wooden stick. He can make 3 brooms from the stick. He buys thread and other materials to attach the buri fibers to the stick. The plantation owner brings the brooms to the public market in Puerto Princesa City and sells them for P40.00 – P50.00 each.

5.3.2 Buntal/Buri Hat/Bag Weaving

Buntal/buri weaving is a newly introduced craft in Punang, Sofronio Española. To produce a bag, a mat has to be woven first. Buntal are the young leaves of the buri palm used for making the items. The stalks are harvested from buri palms which abound in backyards and vacant lots. The leaves are cut along the midribs and dried under direct sunlight. Splitting comes next using a buri splitter. The splits are bleached and are left to dry. The dyed splits are woven into mats. The weavers conceptualize their own design and color of dyes to be used. The dyed mats are sold for P0.70 per square inch while plain mats are sold for P0.60 per square inch. Weavers can either sell them as mats or have them sewn into bags. Finished mats are sold for P60.00.

5.3.3 Sharing and Marketing Arrangement

The weavers of buri/buntal have formed a cooperative engaged in marketing of products. A manager is elected to be in charge of the marketing aspect. The cooperative practices *corrida* or straight-buying. All bags produced are sold at a uniform price. The weavers get their share of income after two weeks when the manager has collected the payment. The products are brought to market outlets in Puerto Princesa City and to a souvenir shop on the airport.

The manager adds a mark-up of 15% for each item to cover the cost of transportation and food when making a trip to Puerto Princesa City.

Prices of Woven Bags

Table 12. shows the prices of bags which are sold in sets of four. The Department of Trade and Industry (DTI) has set the prices of the products since the weavers do not have the necessary skills in costing their products.

Table 12. Prices of bags (in pesos)

Size of Woven Bags	Buying Price		Selling Price	
	Natural	Dyed	Natural	Dyed
Extra Large – 96.5 cm x 127 cm	95.00	114.00	195.00	210.00
Large – 81.3 cm x 127 cm	80.00	96.00	169.00	190.00
Medium – 66 cm x 127 cm	65.00	80.00	152.00	170.00
Small – 71.1 cm x 89 cm	50.00	60.00	125.00	150.00

5.3.4 Buri/Buntal Handloom Weaving

The handloom weaving activity in Inagawan, Puerto Princesa City, Palawan is operated by a group of women who organized themselves into a cooperative. The cooperative is assisted by the Department of Trade and Industry (DTI), the Department of Science and Technology (DOST) and Technical Education and Skills Development Authority (TESDA).

The cooperative has 11 weavers who were trained by TESDA. Funds were provided by the cooperating agencies in the form of handloom equipment and materials to start the handloom weaving project. Their skills are continuously honed to come up with quality products and standard sizes. As of the moment, the weavers have not yet produced uniform sizes of products. It would not take them that long. At this stage, the cooperative has already sold woven buri fiber products in the local market. Products include window blinds, glass coasters, table runners and placemats. DTI is assisting them in marketing their products. Most of their produce are sold at the airport souvenir shop.

The members or weavers are still in the process of studying the input-output ratio of the products. This will help them control the materials used. The cooperative has so far utilized about 50 kilos of buri fibers which were bought from the buri fiber producer in Sofronio Española, Palawan.

5.4 Other Non-Wood Forest Products Traded in Palawan

A wide range of NWFPs are being traded in Palawan. These are nipa shingles, flattened bamboo roof shingles, and sawali mats from buho [(*Schizostachyum lumampao*) (Blanco) Merr.]. Buho is commonly used as material for fencing. The materials that are commonly traded are the following:

Buho

Buho [*Schizostachyum lumampao* (Blanco) Merr.)] is harvested from ancestral domain of the IPs. A gatherer can cut 200 pieces of 2 meter long buho in a day. He sells the bamboo directly to the traders in the market and gets paid P35.00 for a bundle of 50 pieces of buho. For 200 pieces the gatherer gets P140.00 as gross income. He spends P15.00 for transportation and P5.00 for permit from DENR. A gatherer can earn a net of P120.00 from trading buho poles.

The trader sells the buho at P40 per bundle. He earns P5.00 from trading the product.

Table 12. Cost and Returns from Buho trading.

Items	Gatherer	Trader
Costs		
Transportation	15.00	-
Permit	5.00	-
Buho	-	140.00
Returns	140.00	160.00
	P 120.00	P 20.00

Sawali Mats

A gatherer in Irawan, Puerto Princesa City can collect 180 poles of buho of 2.5 meters length. He cuts the material into thin slats and weaves the material into mats. Two mats are woven in a day. To trade the sawali mats the gatherer should be able to produce 10-12 mats to maximize transportation expense. He spends P60.00 for DENR permit for a piece of mat and P35.00 for transportation cost from Inagawan to the market site in Puerto Princesa City. He sells the mats at P170.00 a piece. The gatherer can earn an average of P1,065 for 10 mats or P215.00 a day for 5 days. Net income per piece is P107.50

Nipa shingles, and flattened bamboo shingle are also traded at a price of P250 a bundle of 100 pieces and P60.00 a bundle of 10 pieces, respectively.

6.0 COLLECTION AND TRADE OF NWFP IN TAYABAS, QUEZON

Tayabas, Quezon is a production center for handicrafts. Weaving is the known industry in the place. The skill in weaving has been honed since childhood. Men and women are skilled in the craft. Weavers supply the labor force and the subcontractors or exporters supply them the needed materials. The process of handicraft production involves the raw material preparation to the product formation. The products are semi-finished. Finishing is done mostly in Manila where exporters

ready the material for shipment. Final touches like putting of accessories, painting or finishing is done at exporters level.

Non-wood forest products used are products from buri, coconut leaves, vines and twigs. Bamboo has not been used but they are just collected and traded to end-users in Cavite involved in mussel farming.

6.1 Bamboo

The species of bamboo harvested in Tayabas is locally called as kauayan tsina. Bamboo poles are harvested by gatherers or bamboo producers in the fields. Producers have constant communication with the traders on the volume of poles to be harvested. Gatherers have their poles carried by carabaos near the roadside where sorting is to be done. Traders pick-up the poles every three days and deliver them to Cavite. There are 6 truckers who frequent the area. Buying and selling prices of bamboo poles are based on their sizes and diameter (Table 13.).

Table 13 . Buying and selling prices of bamboo, Tayabas, Quezon (in pesos)

Size/diameter (cm.)	Buying Price	Selling Price
6.0	3.00 - 3.50	6.00 - 7.00
8.0	5.00 - 6.00	7.00 - 10.00

The poles are loaded in a 6-wheeler trucks. The truck could accommodate 1,000-1,500 poles of small-sized poles and 400 - 500 for bigger-sized poles. The marketing expenses are shown in Table 14.

Table 14. Marketing expenses in trading bamboo poles, Tayabas, Quezon (in pesos)

Marketing expense	Cost
Labor (2 persons @ P250/day)	P500.00
Driver	400.00
Sorter (2 persons @100/day)	200.00
DENR permit	30.00
Grease Money	200.00- 500.00

A trader could realize a net profit of P2,500.00 for each truckload of bamboo poles.

6.2 Buri

Fresh buri is purchased at P6.00 per stalk. Buri leaves are cut along the midrib. These are then soaked in a solution of water and vinegar for bleaching. This is dried under direct sunlight for 2 days. The dried leaves are dyed if

quality of material does not appear good. Cost of dye is P15.00 per gram which is good for 2 rolls of buri

A stalk of buri makes two rolls of buri a day, which is sold at P11.50 per roll. Braided buri can be made into braided placemats sold at P10.00 per roll and P13.00 per roll for hats.

Multi-colored braided buri are sold at P20.00 per 30 yards and one-colored braided buri are sold at P18.00 per 30 yards. The weavers have no problem in marketing their product because buri has always been used in the production of novelty items in the area. They can also sell the products in the market where native products are being sold.

6.3 Twigs and Vines

Twigs from bolong-eta are used in the production of novelty items which are supplied to subcontractors or exporters in Manila. Volume of products used is based on the purchase orders and the design of the product. Normally, the subcontractor supplies the contract suppliers the raw materials.

Vines are used in the production of baskets also for export. The agent usually buys the materials and have them distributed to producers in the different communities. There is no estimate of how much vines are processed into handicrafts in the area like trays, and baskets.. But an interview with a trader in Tayabas said he sells 1,500 - 2,000 kilograms of assorted vines a week. Translating this in one month consumption, the volume of vines consumed by handicraft producers is 6,000 - 8,000 kilograms. The trader said that there are 1,000 weavers in Tayabas, Quezon and he meets an average of 200 customers weekly. There is a fast recovery of investment in trading vines. The trader recovers his P20,000.00 investment in one day.

Species of vines sold and utilized in Tayabas are hagnaya, galtang, gugo or crazy vines and bangyasan, a rattan species. About 30 gatherers alternately supply non-wood forest products in the area. These are gathered in the forest of Sampaloc, Quezon. Carabaos are used for hauling the vines from the forest down to the roadside. A gatherer can collect 100 kilos of vines. Table 15 shows the selling prices depends on the sizes of the vines

Table 15. Selling prices of vines. Tayabas, Quezon (in pesos)

Non-Wood Forest Products	Selling Price
Gugo (crazy vine, 2 meters long)	
Smallest	3.00 per piece
Small	4.00 “
Medium	5.00 “
Large	7.00 “
Galtang	6.00 “
Hagnaya	35.00/100 pieces

7.0 COLLECTION AND TRADE OF PANDAN IN LAGUNA

Majayjay, Cavinti and Luisiana, Laguna have abundant sources of pandan which is used for weaving mats, bags and hats. After harvesting, thorns are removed and the leaves are cut along the midribs. The leaves are stripped to the desired width by using a stripper. After stripping, the leaves are dried under direct sunlight for 1 to 3 days. The leaves are then pressed by rolling a cylinder of cement over the leaves. This roller weighs 500 kilograms. Dyeing may or may not be done. After dyeing, weaving comes next.

A weaver can finish an average of two pieces of single sized mats in one day. A double-sized mat will take two days to complete. Weaving job can be taken over by another person if the weaver has a very urgent job to do. The skill of joining together is an art already honed by the weavers in Laguna and has been passed to generations.

Pandan leaves cost P75.00 per bundle, each bundle containing 70 pieces of unsplit of pandan leaves. This is enough to produce two single size mats (76.2 cm x 137.3 cm). Cost of materials for each size and corresponding selling prices from producer to trader are also given in Table 16.

Table 16. Selling prices of woven mats at different market levels, Laguna (in pesos)

Traditional size	Standard size	No. of strips	Cost of Materials	Selling Price		
				Weaver	Middleman	Trader
5 and 9	76.2 cm x 137.3 cm	180 - 350	P37.50	P60.00	P80.00	P100.00
6 and 9	91.5 cm x 137.3 cm	230 - 400	46.80	90.00	120.00	150.00
10 and 8	122 cm x 152.4 cm	330 - 500	68.00	120.00	140.00	450.00
7 and 9	106.7 cm x 137.3 cm	280 - 450	53.55	100.00	140.00	400.00
11 and 9	167.8 cm x 137.3 cm	380 - 550	84.15	140.00	160.00	500.00
4 and 3	61 cm x 91.5 cm	50	12.50	25.00	35.00	50.00

Marketing system

Middlemen buy the mats from the weavers and peddle these in different provinces. An average of P200.00 is spent for transportation. Ten mats are sold per trip. The mats are sold to traders in market places.

Status of Pandan Weaving

Pandan weaving in the town of Majayjay is a dying industry. Women would rather do laundry jobs which command a better pay of P200.00 a day. This is higher than weaving mats. People are not concerned with the sustainability of the resource. Some have already converted their pandan lots to agricultural lots which would give them better returns. With the advent of plastics as alternative material for packaging, women no longer weave bags. Their market share has been lost to plastic bags and plastic mats.

8.0 CONCLUSION AND RECOMMENDATIONS

The marketing of non-wood forest products to be of two systems. One is that in the forefront of the marketing chain are the gatherers. They gather leaves, vines, fern fronds, rattan, resin or bamboo and passed them on to the different market intermediaries. A small portion of these may be used to weave baskets or household wares for their own use. But most are sold either to intermediate processors or to representatives of licensees.

There is often very little value addition in rattan poles and almaciga resin at the gatherers' level where they are sold in their raw form. Preliminary processing such as sorting and grading are usually done at the traders' or concessionaires' level.

Another system is some gatherers already convert non-wood forest products such as vines and leaves into baskets, bags, nipa shingles, rattan splits and other craft. They hawk the processed goods themselves in the local public market or sell these to traders. This marketing route has lesser intermediate channels but a small market reach. Gatherers-processors who live quite a distance from the public markets often find it advantageous to sell their goods to traders even if the price is lower since they are already assured of a ready market.

Most gatherers of rattan and almaciga resin sell only to concessionaire's agents, locally known as kapatas. From the concessionaire, rattan poles are delivered to furniture and handicraft producers while almaciga resin is delivered to varnish producers or exporters.

Gatherers and even non-members of community-based livelihood projects have no access to marketing information. They rely on prices already existing in the market or sometimes dictated by buyers. One observation is that their lack of information makes them too timid to negotiate directly with end-users. Their illiteracy makes them vulnerable to tricks made by some unscrupulous traders. Their lack of knowledge on business operation makes them stagnate as gatherers. The tenurial rights should make them managers of their own land but what is prevailing is that they do not have full access to extraction of resources.

Non-wood forest products are so diverse not only in the species available in an area but on their number or volume of availability. Resources may be scarce in

production centers but are abundant in areas seldom reached by transportation and even programs by the government. It could be regarded that location is a detrimental factor on the utilization of non-wood forest products. Transporting the products to its final consumers would be too expensive. The final price would make products incompetent in the market.

Efficient marketing of non-wood forest products can be done if the following could be address.

a. Political and Institutional

The issue on tenurial rights must be addressed. Conflicts on granting of permits to indigenous over non-indigenous groups like concessionaires or permittees should be given immediate solution. The IPs who are mostly in the gathering activity could not take over the full management of their ancestral domain. This would not only prevent migration but would also help in sustainability of resources. Giving IPs their right will make them more concerned on making the forest productive.

b. Skills and Technology

The forest communities lack adequate skills in business operations specifically on marketing. The Forest Products Research and Development Institute (FPRDI) could intervene in terms of raw material processing i.e. preservation or treatment of non-wood forest products. Other government sectors could also intervene by way of introducing sustainable livelihood projects. This should integrate marketing information and market research for products developed.

c. Infrastructural Aspect

Existence of transport facilities, construction of roads, bridges and provision of transport facilities to facilitate movement of products from source to market would help improve the economic and social well-being of the forest communities.

d. Education Aspect

The Department of Education Culture and Sports (DECS) should also have a part on reaching out to forest communities. Training programs or modules for adult learning process should be designed to empower these people and believe on their capability to deal with people outside their community.

The courses should also integrate the marketing aspect and financial management so that gatherers would have an idea on how to value their products.

e. Marketing

The Department of Trade and Industry (DTI) and the DENR should have the necessary baseline information or data on markets for non-wood forest products. They should provide the linkage between markets and the source. This would at least help reduce the cost of resources for the production sector as gatherers can deal directly with end-users. This would eliminate the mark-up added by intermediaries.

Product development from non-wood forest products should be continuously done. This would help in honing the skills and creativity of the forest dwellers thus, high-end products could be developed.

As communities are so diverse appropriate recommendations or marketing strategies can be developed to suit the needs of the concerned communities or organizations.



Fig. 1. Palawan Baskets' woven by Tagbanuas living in the mountains of Kamantian are sold in a souvenir shop in Puerto Princesa City, Palawan.



Fig. 2. A Tagbanua carves leaf designs on a Palawan basket.



Fig. 3. The stems of the buri palm are cut crosswise and split down their lengths.



Fig. 4. Bundles of split buri stems are soaked in a pond or river to soften the fibers.



Fig. 5. After 25 days mud-stained buri stems are brought up from the river bottom.



Fig. 6. Striking the buri stems on the water removes mud and small fibers.



Fig. 7. Sun-dried and sun-bleached buri fibers are ready to be delivered to buyers.



Fig. 8. Buri fibers are used in handloom weaving in Palawan.



Fig. 9. Buri fibers are inter-woven with colorful thread.



Fig. 10. Young girls earn extra money for school by weaving during their spare time.



Fig. 11 Buri fibers are also made into brooms.



Fig. 12. Buri leaves, also called buntal, are woven into bags.



Fig, 13. This roadside store displays buntal products hand-woven by housewives in the community.



Fig, 14. Non-wood forest products are sold in the market site in Puerto Princesa City, Palawan.



Fig. 15. Fresh stalk of buntal leaves from the buri palm have to be sun-dried before they can be used for weaving.



Fig. 16. Braided buri and rolls of dyed buri leaves are ready to be sewn into bags.



Fig. 17. Dried buntal leaves are ready for weaving into bags, hats and mats.

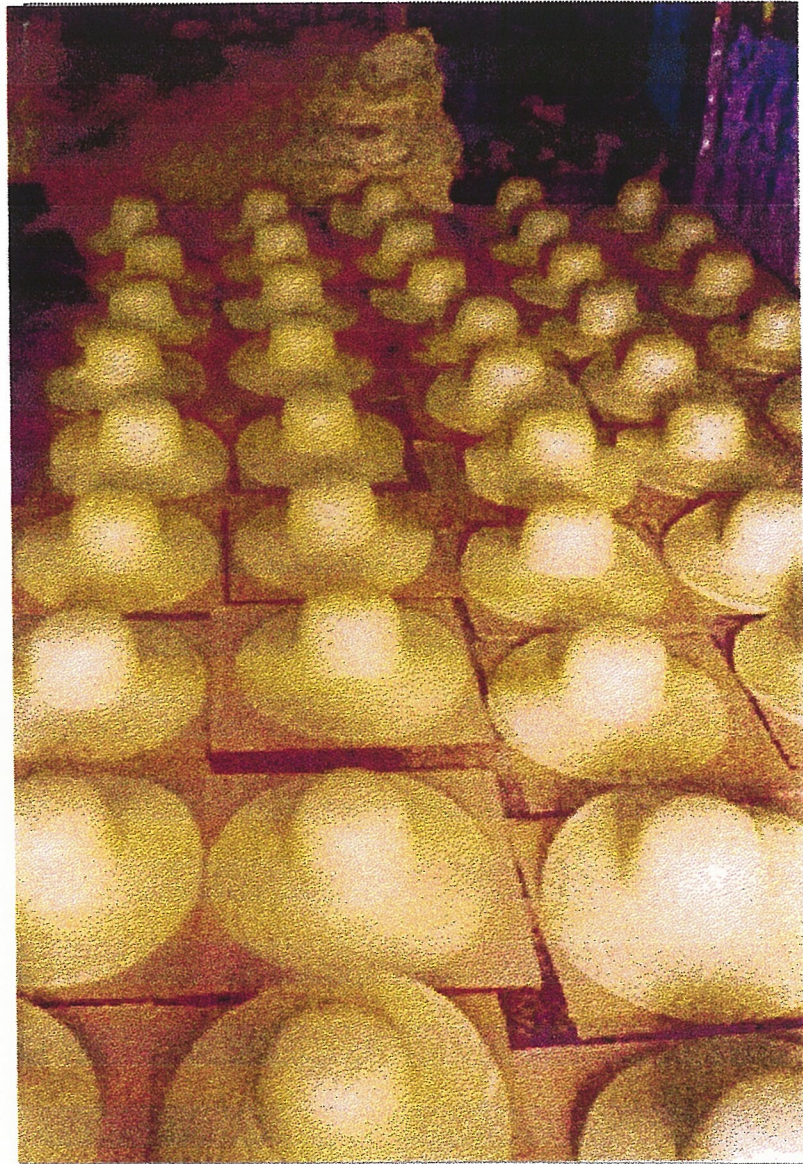


Fig. 18. Hats made from sabutan leaves are ready for packaging.



Fig. 19. Sabutan leaves are dyed and hung for drying.



Fig. 20. Fresh vines collected at Aurora province.



Fig. 21 Christmas décor made of vines.

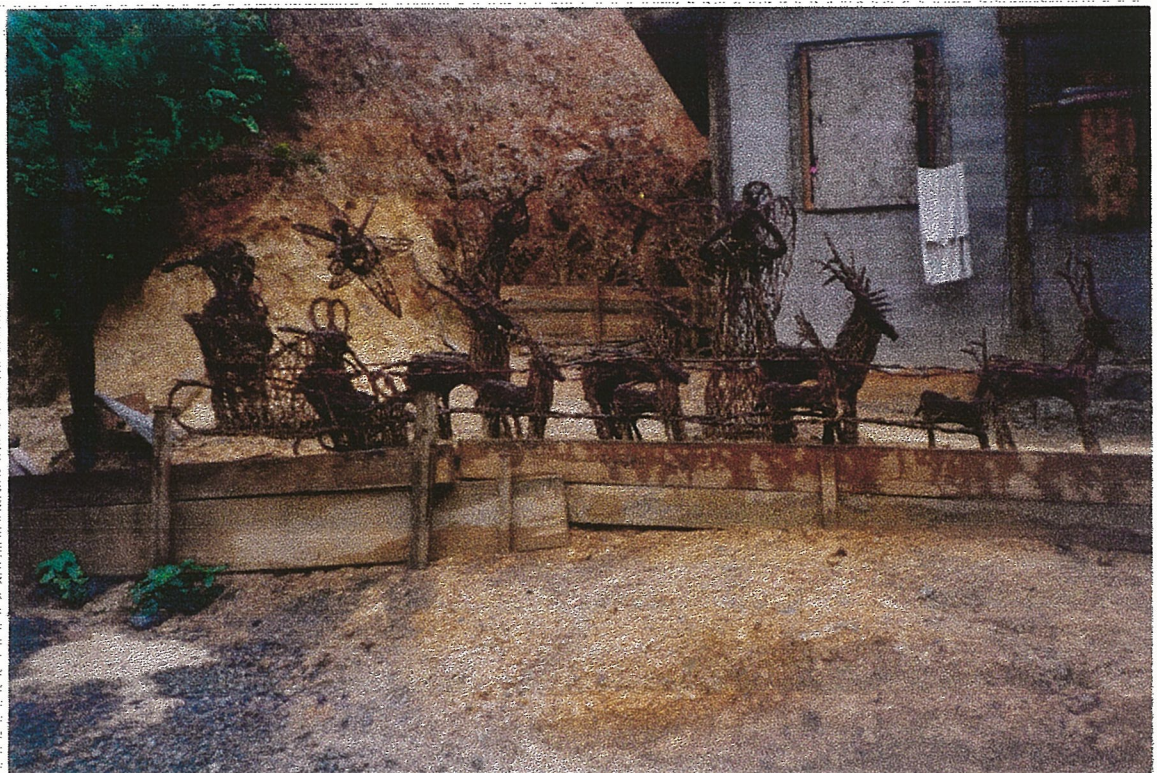


Fig. 22. A set of Santa Claus, reindeer and angels on display in front of the house of a processor in Diteki, San Luis, Aurora.



Fig. 23. Twigs used as handicraft materials in Tayabas, Quezon.



Fig. 24. Bundled vines being sun dried.



Fig. 25. The hardy carabao is still the best means of hauling bamboo in Tayabas, Quezon.



Fig. 26. These poles will be delivered to mussel farmers in Cavite.



Fig. 27. Bamboo poles sorted by diameter size.



Fig. 28. Agsam products are being shown to ITTO4 team.



Fig. 29. A manobo in Surigao del Sur weaves baskets from rattan splits. The baskets will be hawked in the public market.



Fig. 30. Weaving of rattan baskets is a source of income in Diteki, San Luis, Aurora.



Fig. 31. Classification of rattan poles at stockyard in Diteki, San Luis, Aurora



Fig. 32. Sizing of rattan poles at stockyard in Diteki, San Luis, Aurora