

**Vietnamese - German Technical Cooperation**  
**SOCIAL FORESTRY DEVELOPMENT PROJECT (SFDP) SONG DA**  
**Ministry of Agriculture and Rural Development (MARD) - GTZ**

## MARKET ANALYSIS AND DEVELOPMENT

### Phase Two and Three Tua Chua District, Lai Chau Province

**Field Implementation**  
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Report

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## **1. BACKGROUND, OBJECTIVES AND METHODOLOGY:**

### **1.1. Background**

The Social Forestry Development Project (SFDP) focuses on the involvement of the local population in forest management as a key condition for forest protection. It is identified by the project and other organizations that the more farmers benefit from forest protection efforts (directly or indirectly), the more responsible they feel for protecting it. Furthermore, income generation is a driving motive for forest management activity.

The question is which forest products should be promoted to generate income for farmers catalyzing the forest management efforts? The project has decided to use Market Analysis & Development (MA&D) in order to solve this question because it is a participatory method to help the villagers to identify promising NTFPs, to build up business plans for income generation suited to their socio-economic conditions and technical knowledge without degrading their resource base.

The phase 1 of MA&D has been implemented in two communes of Muong Bang and Xinh Phinh of Tua Chua district in January, 2000. Main outputs of this phase were:

- General NTFP situation of the area has been assessed
- A short list of potential products has been identified
- The target group for this component has been identified
- Further investigation of involved information has been defined.

### **1.2. Study area**

Xinh Phinh and Trung Thu communes in Tua Chua district, Lai Chau province. The phase 1 of MA&D was conducted in two communes of Muong Bang and Xinh Phinh (January, 2000), with the findings of this phase, the project decided to conduct phase 2 in Trung Thu commune instead of Muong Bang commune as pilot sites. Beside the selection criteria defined in phase 1, the main reasons for this change are:

- Trung Thu is one commune that focussed on the identified priority products/resources in the past.
- It appeared that there are more households already involved in trading the identified products.

### **1.3. Objectives**

The main objectives of this mission:

- To facilitate the formation of producer groups basing on the products and potential entrepreneurs identified in phase 1.
- By conducting follow up phases of MA&D to support two communes of Xinh Phinh and Trung Thu with sustainable business plans that identify benefits in forest management activity.
- To help the project staff to continue facilitating the process through tools of MA&D.

The specific objectives of the mission:

- To collect and analyze required market/technical information for identified products.
- With the results of the market survey, to facilitate the villagers to select the most promising products.
- To formulate producer groups as the rural entrepreneurs- the basis of the future organizational structure.
- To facilitate the defined producer groups to build up general intervention strategy and specific product strategies.
- With the participation of the villagers, to analyze and prepare simple business plans for the prioritized products.
- To identify the actual support demands and measures for the pilot small-scale enterprises.

### **1.4. Methodology:**

The methodology used is Market Analysis and Development, phase 2 and 3.

It is recognized, from the results of phase 1, that in Tua Chua district, food security is a critical issue. Besides other purposes, the majority of population needs cash income to secure their food demands. This leads to the extraction of NTFPs without a resource management strategy and causes the resource stocks to decline. One of the significant findings from the phase 1 is that there is a high demand for the high value products, and the stock of these product has been almost far below the actual market demand or depleted. However, the marketing process of the high value NTFPs provides significant income for middle traders and only a much lesser amount for farmer households who are the forest users. The question has then been raised that what types of NTFPs can be developed, and how to support the involved farmer households in making sustainable business plans of the selected products to provide them with income from their forest land practically contributing to forest management activity.

Based on the products identified in phase 1, a market survey has been conducted following the identified market channels of the products from their production/extraction places to their next steps as close as possible to their final destinations. The important related information of four areas (market/ economy; resource management/ environment; socio-institutional/ policy; science/ technology) has been collected and analyzed. Then, in a participatory way, the analyzed information was used to select or confirm the most promising products and to propose strategies for improving or developing them as well as to build up practical sustainable business plans.

For this mission, the team used the following methods:

- Four area surveying method.
- Collecting information from written information resources, through interviews and observation.
- Workshops.

### 1.5. The implementation process and time schedule

The team conducted this mission in 29 days (The detail working plan is presented in Annex 1) completing the following activities:

- Eight days for market survey for the identified products including: Xa nhan- *Amomum xanthoides*, Canh kien- Seed Lac, Cau tich- *Cibotium barometz* and some medicinal plants such as Do trong- *Eucomnia ulmoides*, Thien nien kien- *Homalomena aromaticum*, Ha thu o- *Polygonum multiflorum*. This is a required step in applying MA&D to have a secure base for facilitating the target groups to select and confirm the promising products as well as to initiate business strategies and build up sustainable business plans of the selected products in the next step. This survey included collecting written information, direct interviews and information analysis considering four areas of information (market/ economy; resource management/ environment; socio-institutional/ policy; science/technology) of domestic market and international market trend. Basing on the list of potential products, their market flow identified in the phase 1, a number of informants were directly contacted, and written data resources were referred.
- 16 days in Trung Thu and Xinh Phinh communes-Tua Chua district and for conducting phase 2 & 3 of MA&D. With the gathered and analyzed information and in a participatory way, the team conducted the follow up required steps of MA&D phase 2&3 including:
  - Direct discussion with the representatives of the target groups to gather more practical information, to explain the results of the market survey and to facilitate the participants in selecting/ confirming the promising products
  - Together with the defined representatives to initiate business strategies and business plans for selected products as well as to form involved producer groups
  - Additional data collection at district level for setting up the detail business plans of the selected products and formed producer groups.
- 3 days for the consultant to write the report.

## 2. THE SELECTION OF PROMISING PRODUCTS, MARKET AND MEANS OF MARKETING

As introduced in the first part, the main outputs of phase were: the short list of products that has been finalised through the elimination of non-viable products, and the suggestion of follow up investigation plan.

The short list of products includes:

- "Entry products" that have been clearly confirmed and only need some information for initiating intervention strategy: Xa nhan- *Amomum xanthoides*, Canh kien- Seed Lac, Cau tich- *Cibotium barometz*.
- The products that need further market/technical investigation: medicinal plants such as Do trong- *Eucomnia ulmoides*, Thien nien kien- *Homalomena aromaticum*, Ha Thu O- *Polygonum multiflorum*

The mission was conducted in two parts:

- **First part:** Market survey: conducted by the team outside the district province;
- **Second part:** field implementation: the representatives of producer groups were assisted by the team to create the producer group, to define the strategy, and to gather still missing information for setting up business plans of the prioritized products.

### Objectives, expected outputs and sequence of implementation

Under the marketing environment of 4 areas- market/ economy; resource management/ environment; socio-institutional/ policy; science/technology, the main objectives of the mission were:

- To analyze the marketing channels and environment of the "entry products" and other potential products;
- To select and confirm the promising products;
- To create the producer groups of interested villagers.

With the expected outputs:

- The information of marketing channels of the potential products will be collected, analyzed and available to the local actors;
- Most promising products, intervention strategies will be selected by the interested villagers;
- Producer groups of interested villagers will be created.

In this phase of MA&D, the following steps were implemented:

**Step 1:** Market survey- analyzing marketing channels of defined products

**Step 2:** Selection and confirmation of promising products

**Step 3:** Creation of the producer groups

## 2.1 Step 1: Market survey and analysis of marketing channels of defined products

It is very important to collect information to confirm whether the products are sustainable or not in consideration of four areas of market/economy, resource management, social/institutional and technology aspects. The gathered and analyzed information will help the villagers to select the most promising products and decide on the business strategy for developing them. In this step of MA&D, by using some tools, the involved information was gathered to analyze the marketing channels and demand for the defined products. This market survey and analysis was conducted by the team outside the communes concentrating on the products available in the 2 communes and selected in the phase 1 including: Xanhan- Amomum Xanthoides, Canh kien- Seed Lac, Cau tich- Cibotium barometz. Do trong- Eucommia ulmoides, Thien nien kien- Homalomena aromaticum. Initiated by the Project management board, high growing tea was also included in the survey.

### Market survey process and sources of information

The work in phase 1 did not only define a number of potential products, but also suggested types and sources of needed information. The team spent 10 days for this market survey and analysis following the defined information resources .

The sources of information consist of two main types: written information and direct interviews that were collected at four levels: Community/district, province, national and international levels (see list of the contacted informants and referred data resources in Annex 2)

Under four areas of marketing survey and at four levels, the market survey focussed on the following types of information:

- Types of products (what form?) Production pattern? Main production areas for each species?
- Market demand for different products at domestic and export market.
- Marketing channels of the concerned products.
- Required product quality for each type of consumers? Importance of each type of buyers for the product? What pattern of the concerned product has the highest market demand?
- Quality control, How the product quality is controlled? Any Govt. office is responsible for this?
- Competition situation, opportunities? Constraints?
- General production situation? Trends of marketing?
- Production forces: any professional group for the products? Credit resources for the production? Any constraints?
- The infrastructure condition- Is there any special requirement of infrastructure for the production? Any constraints of this for the production?
- The situation of raw material resources- How about the natural stock? What is the regeneration capacity of the resources?
- The resource management experiences of the local and other areas.
- What are the impacts of the production on the environment? Any negative impact and what is the solution for that?
- What is the role of related organizations?
- Access to the resources, what type of imposed tax/fee?
- What are the constraints of policy issue?
- The related regulation
- Is the technique (production, processing,...) suitable to local knowledge?
- Research of new techniques.
- What are the support resources to the production (extension service, technical advice,...)

### Outputs of the market survey and marketing channel analysis

From the direct interviews and written data reference, the main results of market survey and analysis per type product are summarized as follows:

#### ***The general situation of medicinal plants in Vietnam:***

As the result of phase 1, the main part of the defined products are medicinal plants, the market survey focussed on general situation of these for analyzing each defined plant-derived medicine product. Basing on the analyzed gathered information from the informants (see the annex 2), Vietnam has considerable rich resources of medicinal plants. The existing medicinal plant resources can be classified into 3 types:

- Natural resource includes medicinal species that naturally grow in forest, farm and garden land.

- Cultivated resource includes medicinal species that are mixedly cultivated in forest farm, home garden land.
- Cultivated resource includes medicinal species that are cultivated in professional land with suitable soil and climate condition and appropriate technique.

There are 3 ways of using medicinal plants:

- Cooked form: Includes liquid forms, mixed powder, pills and tonic wine.... It needs special processing technologies to produce cooked forms of plant-derived medicines. These technologies are set up by professional chemists. The processing activities are undertaken by pharmaceutical factories and enterprises with professional equipment. The quality of these medicines depends on the quality of raw materials and processing technology. The processing technologies include thermalization, chemicalization and moisturization, creating changes in medicinal materials into needed compounds that have treatment effects without causing any negative impacts on patients. Therefore, the people who carry out the processing activities need to have high professional knowledge and experiences.
- Processed plant-derived medicinal materials: These medicinal materials are used for making traditional medicinal compounds, they are sold to traditional doctors in every area of Vietnam.
- Some plant-derived medicinal materials are used by pharmaceutical factories to extract different substances such as: Artemisinin, Hecogenin, Diosgenin, Quinin etc....From such substances, through special processing ways, useful medicines are produced.

Among the extracted substances, the aromatic group is used not only in medicine production but also in comestic and spice production etc...

*Market demand for plant-derived medicines:*

Market demand for plant-derived medicines is very high and the trend of using these medicines has increased. So far there are 3 types of market for this product:

- *Local market:* includes mainly medicinal plants which are used for producing tonics and medicinal compounds that are used for treating common diseases. The medicinal plants are sold in local markets, traditional medicine shops and clinics of traditional doctors. These medicines are used in every province and citie of Vietnam. The data from a survey carried out in Lao Cai and Ha Giang provinces shows that there are about 500 traditional doctors in each province and about 50 % of the population more or less uses traditional tonics and medicines. This situation is considered as general situation of the country. A noticeable issue is that the demand for plant-derived medicines in provinces is the same, but most of the provinces do not have suitable condition for planting medicinal plants, hence, plant-derived medicine resources from advantageous provinces are required for the other provinces.
- *Domestic market:* In recent years, besides the western medicine system, there has been a traditional medicine system consisting of 38 traditional hospitals, 156 traditional medicine departments belonging to central hospitals, local hospitals, medicinal institutes and medicinal university or medicinal vocation secondary schools. In this system, there are 6000 traditional doctors and 1000 assistant doctors.

The researching and piloting works have defined the use of over 2000 plant-derived medicines

In addition to the traditional medicine system, there is also a private traditional medicine network including 2800 groups or traditional medicine rooms that serve traditional health examination, prescription and selling traditional medicines, and there are also 30 000 private traditional doctors always practise their profession in the whole country. (The data of 1994- it is expected, by the Govt. officers, to be higher now)

Presently, there are over 600 market points for traditional medicines in Hanoi city, of which there are 2 large centers of Ninh Hiep commune (Gia Lam district) and Lan Ong street. The survey in Ninh Hiep commune shows that there are 400 households in the commune involved in medicinal processing activity. The processed quantity is very large, it is difficult to calculate the exact number, but there are 3 trucks carrying the product out and in Ninh Hiep commune everyday (about 40 tons/day). Some big processors in the commune, who were interviewed like Mr. Tu, Mrs. Mo, process about 1 ton of medicinal plants per year. The number of medicinal plant species processed in Ninh Hiep market is 135 species or higher. The raw material resources for this processing are bought from provinces in the North of Vietnam and partly from China. The form of processing is mainly primary processing- (drying, sorting, scenting, and packing). The processed products are sold to pharmaceutical companies in every province and city of the country. Yearly, Ninh Hiep market needs more quantity of raw materials for processing. This reality shows the market demand for traditional medicines is high and increasing. According to written data resources, the increasing rate of this medicine is about 11% per year in the Govt. enterprise area. There has been no correct statistics for the private area of trading this product but the interviewed Govt. informants confirmed that their main raw material resources are provided by private processors, and the interviewed private informants also confirmed that they sell large quantity of the primary processed products to Govt. enterprises. This is affirmed that plant-derived medicines are currently traded with much higher quantity in the private area.

There are two main resources of plant-derived medicines in the domestic market, those are Chinese and Vietnamese resources. The Chinese resource consists of mainly the tonic medicines, and the Vietnamese resources consists of both tonic and treating medicines.

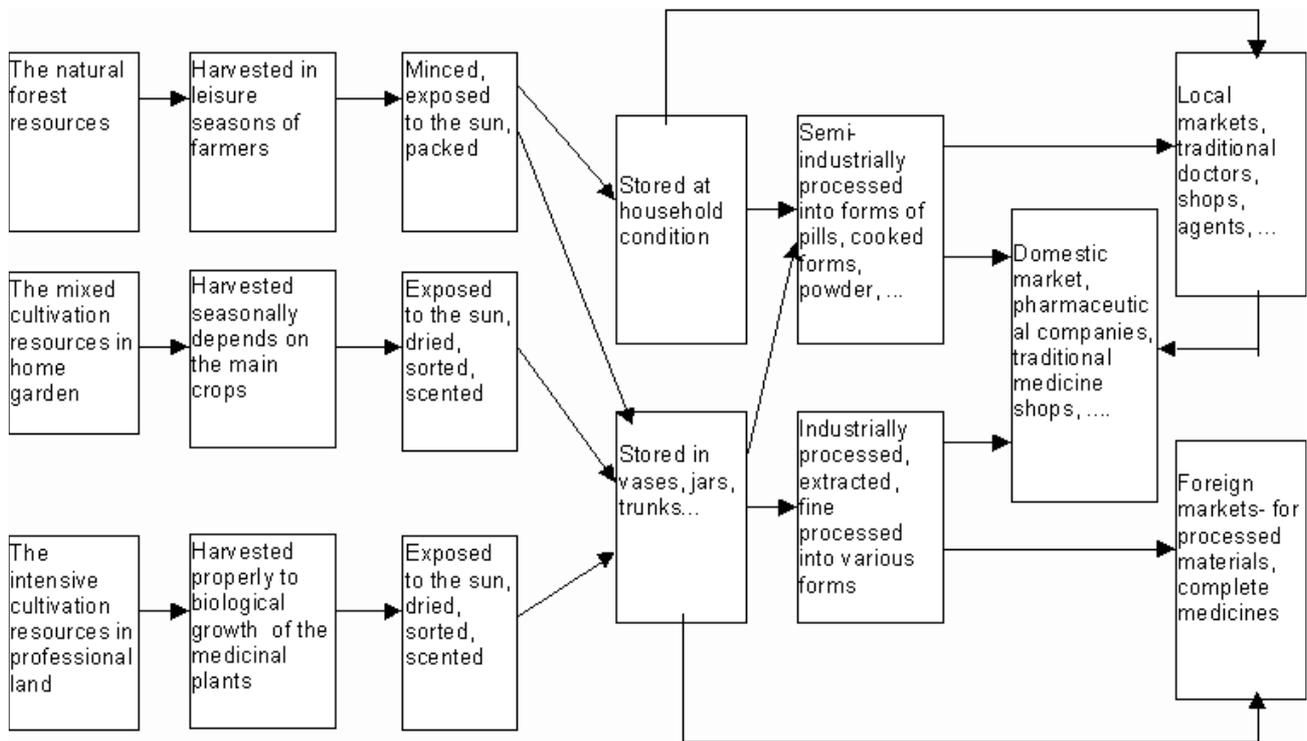
There are also some other large domestic markets for traditional medicines such as: Hai Phong city, Ho Chi Minh city, Quang Ngai province, etc.... For instance, in Ho Chi Minh city, the business on traditional medicine accounts for about 1.5 billion VND per day and the demand is increasing steadily. However, the competition in this activity is not very high, the activity only focus on areas that have tradition of developing it.

- *Export market:* So far, raw materials of plant- derived medicines and traditional medicines of Vietnam have been exported to some foreign markets such as: France, Germany, China, Hong Kong, Japan, etc.... The exported products include

aromatic plants and oils (Cinnamon- Que, Amomum costatum- Thao qua, Amomum Xanthoides- Xa nhan, Nervillia sp.- cay mot la, Saffron- Nghe, Garlic- Toi, Leonurus heterophyllus- Ich mau, Angelica uchamana- Duong quy , Ginger- Gung, etc....

The international market demand for plant-derived medicines is increasingly required. At present, there are many pharmaceutical companies producing plant-derived medicines for exporting such as Central Pharmaceutical Company No I, Central Pharmaceutical Company No II, Tranphaco, etc... with export quantity of hundreds tons per years. In the common trend of using organically-cultivated products, the trend of using plant-derived medicines is increasingly developing. One of the constraints the traditional medicine producers are facing now is that the demand for high quality products is increasing, it needs not only special techniques in planting, harvesting, storing but also high technologies in processing and producing the product. In the current situation of rural areas this question can not be solved in a short time.

The process of harvesting, processing and marketing of plant-derived medicines can be described in the diagram below:



Because of the increasing market demand for plant-derived medicines, while protection and development activities of the medicinal plants are not adequately paid attention, there are constraints in the development of these products. Considering trading aspects, there are the following main constraints:

- Many medicinal plants have been over-harvested, the resource base for many species has been depleted, for exporting as well as for domestic consumption including: Xa nhan-Amomum Xanthoides, Vang dang- , Ba kich- , Cay mot la-Nervillia sp, Thach hoc- , etc...
- The quality of processed medicinal plants is not high enough, causing low selling prices and negative impacts on the productions.
- The trading activity of medicinal plants is not well organized and there is no planning in trading medicinal plants causing problem of fluctuating selling prices. Unstable markets contribute to over-harvesting since it might be the only chance for the farmer to sell the product. There is also not enough supporting activities to farmers in harvesting, storing and processing.

#### Xanh©n- Amomum Xanthoides:

Amomum Xanthoides belongs to Zingiberaceae family. Height of the tree is 1-2 metres. This species blossoms in summer (April - May) with 3 to 6 bunches at the foot of the tree, each bunch has 4 to 6 white flowers, the fruit has diameter of 1 to 1.2 cm with 3 pieces of seeds, the fruits ripen in July-August.

Amomum Xanthoides grows wild and is planted in some mountain areas such as: Bac Thai, Hoa Binh, Son La, Lai Chau, Thanh Hoa, Ha Bac, etc...

The used parts of Amomum Xanthoides are seeds, the whole mature fruit, or the skin of fruits. Amomum Xanthoides fruits are harvested in July and August, when they are already mature with yellow-brown seeds and easily separated from their skin.

Amomum Xanthoides seeds contain substances of D-Camphor, D-borneol, Borney acetat, Linalol, Nerolidol. According to idea of Eastern pharmacists Amomum Xanthoides is used in medicines for treating respiratory diseases, digestive diseases, as pain killer, vomiting control and anodyne.

Amomun Xanthoides is only suitably planted in high mountain areas (with altitude of 100 - 800m, and rainfall of 1000 - 3000mm), it needs cool moist soil, not too sloping land and forest canopy (0.3-0.5). There are 3 main species of Amomun Xanthoides which have high productivity and quality. These species have the same appearance, they are only sorted based on color of the flowers, fruits and seeds:

- Red Amomun Xanthoides- A. Villosum: White flower with 2 red-yellow lines, red or green round fruit, the seed has a small node.
- Purple Amomun Xanthoides- A. Longiligulare: White flower with yellow edges, purple round fruit, three-edge seed with even nervations.
- Green Amomun Xanthoides- A. Xanthoides: White flower with purple dots, green oval fruit with even prickles, the seed has a small node.

Amomun Xanthoides is processed by exposing it to the sun or drying with weak fire heat, then removing their skin. There are 4 types of the product:

- First class: The fruits are harvested when they have dark yellow color, thinly grown prickles, easy to remove their skin, the fruits are still hard, the seeds are light yellow with black dot in the middle and with sour-hot taste.
- Second class: The fruits are harvested when they are not mature enough, with white or light yellow wrinkled seeds, the seeds taste hot but not sour.
- Third class: Broken Amomun Xanthoides: the fruits are broken because of wrong drying ways, the seeds do not taste hot enough.
- Fourth class: Sugar Amomun Xanthoides: Too late-harvested fruits (4 to 7 days after it is mature), the fruits are soft, with sweet taste, not hot, low volatile oil percentage, difficult to store, easily get spoiled by mould, easily get moist after drying.

Amomun Xanthoides is mainly traded in domestic market. The traded quantity is bought from domestic resources, only a small part of the product is sold to China (there is no exact data for this). The market demand for Amomun Xanthoides is very high. The processed quantity of Amomun Xanthoides at Ninh Hiep market is over 100 tons per year, those at Mai Chau district (one of the areas that have developed Amomun Xanthoides plantation) is over 10 tons per year, and all the informants affirmed that the demand for this product is much higher, but the provided resources are limited, even some natural resources have been depleted.

Like other medicinal plants, Amomun Xanthoides resources are mainly sold to Ninh Hiep market, after being processed, it is sold to Hanoi and many places in the country (traditional medicine shops, producers)

The quality of the product is only required by traditional medicine processors, there is no quality control unit for the product. The processors need mature, well-dried and proper colour fruits of Amomun Xanthoides.

For Amomun Xanthoides plantation, it needs not only suitable natural condition but also tradition or initiated plans, that is why there are a few places of planting this product (in Hoa Binh, Son la, Thanh hoa provinces,...), the competition of this product production is low. The number of traders in this product is high (most of the interviewed traders who deal in medicinal plants affirmed that they will buy Amomun Xanthoides if there are sellers), this is an opportunity for Amomun Xanthoides development. The survey in Ninh Hiep and Mai Chau shows that the main part of Amomun Xanthoides is traded to Ninh Hiep where the price of this product is 40 000 to 50 000 VND per dried kg, even traders paid deposit with this price for farmer households who plant Amomun Xanthoides in Tan Mai commune, Mai Chau district.

Amomun Xanthoides plantation is a good activity for forest management in term of technical, economical resource management. The practical result of this plantation in Mai Chau shows that this is a simple activity that every farmer household can practise, and a farmer household can get an average income of 1 million VND per year from Amomun Xanthoides plantation (300 000 to 500 000 VND for the starters, 3 to 4 millions for the experienced ones), this is a good income resource from forest management. The growth of Amomun Xanthoides has positive impact on soil erosion protection by its root development (the tree bears fruit at its roots). The growth of Amomun Xanthoides also needs forest canopy, that means to develop this plantation, the forest coverage must be protected and developed. This a good species for forest enrichment.

From practical experiences and researchers' idea, Amomun Xanthoides plantation does not need much labour force and expertise, farmer households can utilize their under forest land and home garden land for the plantation, the main problem of this is management aspect.

Amomun Xanthoides has very good regeneration capacity, the causes for current depletion situation of the species is overharvesting and harvesting without management.

In harvesting, processing the product, there is no complicated requirements, only simple infrastructure condition, simple condition for drying, and storing.

There are no constraints in marketing the product relating to policy aspect, there is only Decision No 88/2000/QĐ.BTM saying that Amomun Xanthoides is one of the forest products that are under the Govt. control, this means the Government encourages the plantation of Amomun Xanthoides and protects the natural resources of this species.

The plantation technique is simple and suitable to farmers knowledge in mountain areas. The related issues such as seedling resource, technical training materials, ... are available. The NTFP Center has done research on this species and guidelines for the plantation.

*CÈu tÝch- C©y lªng cu ly-Cibotium barometz:*

Cibotium barometz belongs to Dicksoniaceae family. The tree has a height of 2,5 m, its root is covered by brown fur.

The used part of Cibotium barometz is its root. The product can be harvested all through the year, but the best time is in dry season (October to December). The whole root is dug out, its fur is removed and the it is thinly chopped and exposed to the sun or dried in weak fire heat.

The active substances of Cibotium barometz have not been analyzed. The idea of the eastern pharmacists is that Cibotium barometz is used for treating some diseases such as: rheumatism, backache, female diseases, and it has tonic effects on human kidney and liver. It is used in many traditional medicine compounds.

The main type of processed form of the product is dried slices, there is only a small demand for the form of sugar soaked slices. Cibotium barometz is used in many traditional medicine compounds. It has high market demand. In Ninh Hiep market, about hundred tons of Cibotium barometz are processed per year, and the idea of the interviewed processors is that they still need more of this product. This product is also bought by the Govt. pharmaceutical companies. The main market for Cibotium barometz is domestic market, apart of the processed Cibotium barometz is exported to Taiwan and China (no exact data).

The product is harvested from natural resources by farmers of mountain areas in their leisure time, it is s old with low price (400 to 500 VND/kg at local market, 2000 VND at processing place like Ninh Hiep). Cibotium barometz is a wild forest product, it naturally grows in many mountain areas. Even though this product is required by many plant-derived medicine processors, but there is no negative issue of competition situation because of its natural availability. So far, nowhere this species is being cultivated. Like some other wild forest medicinal plants, this species has already been depleted in many forest areas, especially in poor mountain areas, because of over-harvesting.

Cibotium barometz has a good regeneration capacity, but experiences of some areas that have depleted this product shows that it also needs management activities in harvesting.

This is one of under forest vegetation species that can provide extra income for farmers, there is no constraint of policy aspect, the forest land allocation policy is an opportunity for protecting and developing under forest vegetation species including Cibotium barometz.

Cibotium barometz is a wild forest product. In spite of its high market demand, so far, the research and experience of managing and developing this species are limited. However, practical marketing situation of the product shows that there are no constraints related to technical aspect in harvesting, processing and storing this product.

#### *§ç trång- Eucomnia ulmoides:*

This is an introduced species, the main resource coming from China. This tree has been brought to Vietnam by seed, the pilots so far give considerable good results of its growth.

The used part of this tree is its bark. It is harvested in summer, the bark of Eucomnia ulmoides tree (of its trunk and branches) is stripped and dried.

Bark of Eucomnia ulmoides tree is used for treating backache, rheumatism, foetus protection. With its main effect of tonic, it is used in many plant-derived medicine compounds.

Eucomnia ulmoides tree plantation has been piloted in Sa pa- Lao Cai, Ha Giang provinces and some other mountainous cool places even in Trung Thu commune of Tua Chua district. The tree has been planted by seed, the piloting plantations show that Eucomnia ulmoides grows well in such areas, with its height of 2 to 3 meters.

Because of its use in traditional medicines, Eucomnia ulmoides also has a high market demand. The gathered information from Ninh Hiep market shows that the demand for Eucomnia ulmoides is about 100 tons per year and this demand is increasing steadily. However, according to the interviewed informants (both processors in Ninh Hiep and professional staff in Tranphaco, Lao Cai Pharmaceutical company and Sa pa Medicine plant Research Station), one significant constraint of marketing this product is that Eucomnia ulmoides from Vietnam resources is difficult to compete with those from China because of its quality. Even the professionals in Tranphaco affirmed that this tree should not be planted in some places like Lai Chau, Sapa. That is why in a large market like Ninh Hiep, the main part of about 100 traded tons of this product is bought from China. The prices of this product are also different, those are: 15 00 VND per kg of dried Chinese Eucomnia ulmoides bark, 10 000 VND per kg of dried Vietnamese Eucomnia ulmoides bark (in Ninh Hiep market).

The main market for Eucomnia ulmoides is private areas, all the interviewed Govt. officer wonder whether this product has good market or not.

Through the practical piloting results, the plantation of this tree does not need high requirements of labor force as well as expertise. The tree can be harvested 7 to 10 years after planting. The processing activity is also simple, the bark is only stripped, dried (by exposing to the sun or by using weak fire heat) without any scenting activities.

Because this is an immigrated species, the raw material resource of this product is not available in Vietnam, the main resource for the processing in Vietnam is from China, the Vietnamese raw material resources are mainly come from piloting areas such as Ha Giang, Lao Cai....

This species plantation has a good impact on environment and suitable to the mountain rural people, but because of market issue, this tree has not been introduced at large scale. One significant constraint of introducing this tree to mountain rural areas is

that it takes long time from planting to harvesting.

So far there have been researches and pilots of this species, the seedling resource and technical services of this tree plantation can be provided by researching and piloting areas like Sa pa Medicine plant Research Station. There is no constraint for developing this product regarding policy and institutional aspect.

#### *C. nh kiỐn- Seed Lac:*

Seed Lac is a product produced from a discharged substance of lac insect. The insects live on branches of trees and discharge this substance for making their nest (there are 3 species of these trees that Lac insects can live, but the best species is Dalbergia- Că khiỐt). The processed product from this material is used for producing varnish.

The main raw material resources of this product in Vietnam now are provided from Lai Chau, Son La, Thanh Hoa, Nghe An provinces and apart from Laos and China. Ha Dong is the unique processing area of this product. Market for the processed product is domestic market, it is sold to every province of the country.

The raw material quantity from Vietnam provided for Ha Dong processing area is estimated about 50 tons per year (recent years), the demand for raw material of the area is about 500 tons. At present, this shortage of raw material is bought from Laos and China (through Lao Bao border gate). The market demand for Seed lac has been increasing, the main demand is for domestic market. Formally, Seed lac was exported to Russia and Japan, but it stopped now. For international market, this product can not compete with those from India and China. In order to export this product, the idea of the processors is that the raw material should be well managed, and the processing equipment should be modernized. It is better to use the small modern processing lines that could be suitable to family enterprises. The quality of raw material from Vietnam resources is worse than those from Laos and China (it is considered because of storing technique), but the quality of fine product of Seed Lac (g«m) of Vietnam is higher than those of China. The current buying prices of raw material at Ha Dong market are: 15 000VND to 20 000VND/ kg for VN raw material) and 25 000VND to 26 00VND/ kg (for China raw material), the current selling price of fine product (g«m) is 55 000 VND/ kg.

The increasing domestic market for the fine seed lac and the low competition in raw material production (there are only some places can produce this product- as mentioned above) is opportune for the production. However, one significant constraint in marketing this product is the competition between seed lac varnish with imported modern paints.

For mountain rural areas like Tua Chua district, the production of seed lac has a good economic value. Labour cost for planting trees, raising lac insect, harvesting is low, with the local selling price of 6000 to 7000 VND, this production is considered a good income source. The farmers can utilize their allocated land for this production contributing to their income resources.

The production of raw seed lac material is simple, and suitable to mountain rural people (planting the Dalbergia tree, raising lac insects, harvesting and storing raw seed lac,...). But the process of processing from raw form to fine form of seed lac is considerably complicated, even though it can be done manually. With improper processing steps, the fine product will be bad in quality.(there are the following basic processing steps: raw form -> ground -> washed -> dried -> finely filtered -> water removed -> cooked -> fine product)

This procedure needs too be carried out by experienced people with professional equipment. That is why all the private processors of seed lac now in Ha Dong are the professionals and workers who used to work for Ha Dong Seed Lac Govt. Enterprise.

With the seed lac raw material production, there is no negative impact on environment, even it has some positive impact on soil erosion and watershed protections.

There has been research on this production (NTFP Research Center) and this is also a traditional production of Lai Chau province, the related technical services are available in the province.

#### *Chì c©y cao-High growing tea-Shan tea:*

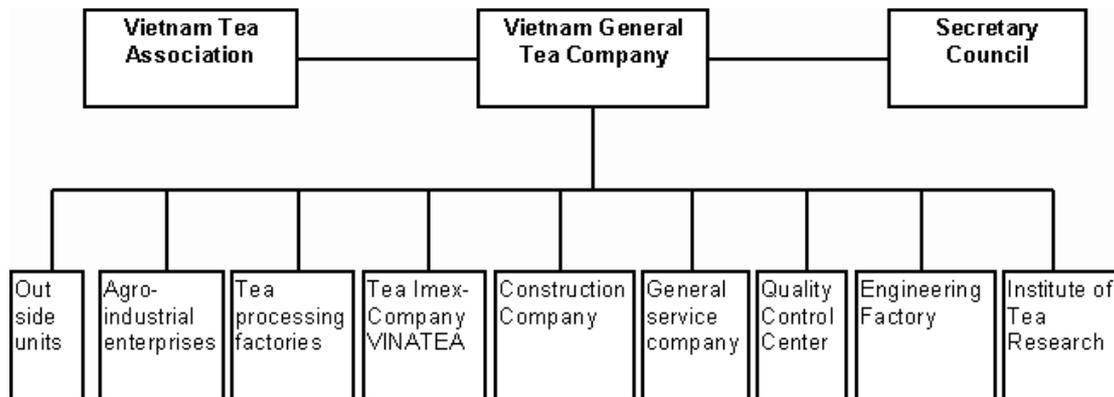
Shan tea production is in the general tea production programme. This is one of the big economic development programmes of the country. The team included survey on general situation of common tea and Shan tea. The following information is gathered from written data resources of Vietnam Tea Association, VINATEA, and direct interviews.

#### General situation:

- Types of tea products in Vietnam: Black tea, Green tea, Yellow tea, O long tea, Man tea (processed from Shan tea), Scented tea, Instant tea.
- Tea varieties in Vietnam: According to Denss and Du Pasquier, Vietnam tea can be classified into 4 varieties:
  - Small Leaf Chinese tea- Chine microphylla: grows in Lang Son province, it has small bud with purple or red color, low productivity, cannot be used for producing black tea, it should not be developed.
  - Broad Leaf Chinese tea- Chine macrophylla: typical for this variety is Middle land tea (chì trung du), this variety can be used for producing black tea and green tea.
  - Shan tea: grows in Suoi Giang- Yen Bai, Cao Bo- Ha Giang, Moc Chau- Son La, this variety is good for producing black tea.
  - Assamica tea: typical for this variety is tea introduced from India such as: Assam, Manipur, these varieties was first planted in Phu Ho Research Center and is widely planted in farms in Tay Nguyen upland area, these varieties are

very good for black tea production.

- Tea production situation in Vietnam:
  - The organization of Vietnam tea sector:



- Tea production areas of Vietnam: Vietnam has a large area suitable for tea production, from Lam Dong province to Ha Giang province, there are 6 main tea production areas as in the table below: (statistics in 1993)

Province	Total tea area (ha)	Harvested tea area (ha)	Production yield
<b>Total of the country</b>	<b>63395</b>	<b>49241</b>	<b>169755</b>
<b>I. Tay Nguyen area</b>	<b>12880</b>	<b>11142</b>	<b>52550</b>
1. Lam Dong	11081	9532	48307
2. Gia Lai	1563	1387	3806
3. Dac Lac	249	200	414
4. Kontum	50	23	23
<b>II. South-east area</b>	<b>32</b>	<b>32</b>	<b>120</b>
1. Dong Nai	32	32	120
<b>III. South area of central Vietnam</b>	<b>1623</b>	<b>1146</b>	<b>2180</b>
1. Binh Dinh	176	112	112
2. Quang Ngai	61	61	122
3. Quang nam-Da nang	1371	958	1933
4. Phu Yen	15	15	13
<b>IV. North area of Central Vietnam</b>	<b>3791</b>	<b>3375</b>	<b>9452</b>
1. Thanh Hoa	850	850	1700
2. Nghe An	2054	1711	6113
3. Ha Tinh	439	384	850
4. Quang Tri	140	140	213
5. Quang Binh	135	120	240
6. Thua Thien Hue	173	170	336
<b>V. Red river plane area</b>	<b>2498</b>	<b>1616</b>	<b>6863</b>
1. Ha noi	304	160	160
2. Ha Tay	1629	1058	5213

3. Hai Hung	129	81	120
4. Ninh Binh	356	237	810
5. Nam Ha	80	80	560
<b>VI. The north Midle-mountain area</b>	<b>42571</b>	<b>31930</b>	<b>98590</b>
1. Lao Cai	1447	1243	5078
2. Yen Bai	6855	5295	19771
3. Vinh Phu	7222	5406	18239
4. Lai Chau	690	415	1556
5. Ha Giang	5966	3812	8128
6. Tuyen Quang	4469	3033	14957
7. Son La	2022	1638	3845
8. Hoa Binh	4561	3300	4950
9. Ha Bac	1360	1312	3411
10. Bac Thai	6823	5582	15957
11. Cao Bang	215	211	633
12. Lang Son	750	509	1630
13. Quang Ninh	191	174	135

- Required natural condition for tea production: According to research documents of the tea producing countries in the world, tea grows well in the following climate and soil conditions:
  - Annual average temperature: 15°C to 25°C
  - Annual average rainfall: 1 500 to 2 000 mm
  - Relative humidity: 80% to 85%
  - Soil PH: 4.5 to 6
  - Soil with thick surface layer and high humus percentage, rich with Nitrat, Phosphate and Kalium, especially with Nitrat. The land that has not too high slope degree, good water retention but not stagnant .
  - The higher altitude of the land the better tea quality but the lower tea productivity.

Together with other required elements, Shan tea should be planted in the areas that have altitude of over 500m and Middle land tea (Chi trung du) can be planted in areas with altitude of below 500m .

- Structure of Vietnam tea products: At present, In the total quantity of Vietnam tea products, black tea accounts for 82%, the rest amount is green tea and other types (this is average data of recent 5 years).  
There are 2 kinds of black tea: OTD (traditional black tea) and CTC (Crushing, tearing, curling-Chi @en m¶nh).  
There are the following kinds of green tea: Chinese green tea, Japanese green tea (Chi xanh dÑt) and other kinds of scented tea.  
Recently there are some new products such as: Kim Anh green bag tea, Ha Giang Yellow tea.
- Since 1992, Vietnam General Tea Company has had trading relationship with 100 organizations of 30 countries, expanding to Western European, Middle-East, Northern African countries and Japan. There are many countries which import a large quantity of tea from Vietnam including: Iraq, Russia, UK, Algeria, Taiwan, Poland, Germany, Singapore, Hong Kong.
- The domestic market for tea has been strongly increased in recent years at rate of 1.8 times for 5 recent years. The Vietnam tea product has been improved in quality and diversified in types of products. Types of traditional special tea, scented tea, tonic tea have been getting high prestige in domestic market.

**Table: General situation of production and market of Vietnam tea**

	Unit	1974	1984	1994	1999
• Quantity of complete products	Thousand tons	7 587	10 397	14 118	18 000
• Exported quantity	Thousand tons	4 440	8 457	10 550	13 500

- The export market plays very important role in tea production of Vietnam as well as other tea production countries, this market different year to year, with their interactions, the following table partially shows this situation:

**Table: Exported tea quantity of some main countries (thousand tons)**

Country	1993	1994	1995	1996	1997	1998	1999
India	174	149	164	160	201	206	190
China	201	180	167	170	202	219	201
Kenya	188	183	237	244	194	264	230
Srilanka	210	224	235	234	257	265	264
<b>Total</b>	<b>773</b>	<b>736</b>	<b>803</b>	<b>808</b>	<b>854</b>	<b>954</b>	<b>885</b>

**Table: Imported tea quantity of some main countries (thousand tons)**

Country	1999	1998
UK	163 655	178 153
Pakistan	105808	111 559
Canada	21 365	19 790
Japan	50 834	46 919
America	96 062	100204
Egypt	73 250	65 458
Russia	163 857	150 225

- Consumption situation of tea in the world: according to FAO evaluation, the market for tea is very diversified, it is fairly well balanced between produced quantity and market demand, although the produced quantity is a little higher. The trend of producing tea products that has good effects on human health is paid attention by tea producers in their competition strategies. According to International Tea Committee-ITC, the situation of tea production and tea market demand is as follows:

(Thousand tons)

	1997	1998	1999	2000
Produced quantity	1898	2000	2062	2162
Market demand	1897	1929	1961	1004
Balance	1	71	101	138

From the same above information source, the tea consumption demand of some countries with high tea consumption is as follows:

(Thousand tons)

	1997	1998	1999	2000
India	633	650	670	692
Countries of former Soviet Union (CIS)	186	180	175	180
UK	153	150	148	147
Pakistan	87	90	100	106
America	81	85	87	88
Other countries	751	714	781	791
<b>Total</b>	<b>1897</b>	<b>1929</b>	<b>1961</b>	<b>2004</b>

- The average domestic tea consumption level is 260 gr/ capita/ year (1998). This level is expected to increase by 5-6%/ year, therefore, the total domestic consumption demand for tea will be 24 000 tons (2000), 35 000 tons (2005) and 45 000 tons (2010). (the data of Vietnam tea Association)
- According to FAO and ADB documents, the tea consumption level of the world is increasing by 4-5%/ year in next years. The global tea consumption demand is very high while the export quantity of Vietnam tea accounts for only 2% to 3% of the total export tea quantity of the world. Vietnam tea sector is trying to increase this quantity by 8% to 10% over the next years. At present, Vietnam tea production is advantageous because its market demand is higher than the production capacity.

 The strategy of Vietnam tea development:

- To best satisfy the domestic market demand.
- To develop tea export, consolidate and expand the export market, with higher quantity and reasonable price. Try to reach a turnover of exporting tea of USD 200 millions by 2010.
- The concrete tea development objectives:

	2000	2005	2010
Total area (ha)	81692	104000	104000
Area of harvesting (ha)	70192	925000	104000
Average productivity (ton of fresh tea/ ha)	4.23	6.1	6.36
Fresh tea quantity (ton)	297600	490000	665000
Dried tea quantity (ton)	66000	108000	147000
Export quantity (ton)	42000	78000	110000

For this strategy, Vietnam tea sector has to focus on:

- Intensive cultivation of 70192 ha of old tea area and 22 400 ha of newly planted tea area;
- Planting further 25 100 ha of tea;
- Achieving 75 to 108.8 thousand tons of dried tea, of which 48 to 78 thousand tons for export
- Develop tea in suitable areas, prioritizing tea development in special focussed areas with high productivity and quality such as : Moc Chau-Son La, Phong Tho- Lai Chau, Than Uyen- Lao Cai and Thanh Son- Phu Tho
- Improving tea quality with types of OTD and CTC black tea, green tea of various kinds.

 Strategy of developing market for Vietnam tea:

- *Domestic market:* The domestic market for tea is increasingly requiring high quality products. The current trend is requiring special teas with high quality such as: Shan tea, organically-farmed tea, high quality scented teas, bagged black tea, and traditional teas with higher quality and reasonable price. Types of special tea like Shan tea should be improved in processing for higher quality and in expanding commercial services for larger market area.
- *Export market:* The goal is to consolidate the existing market and to expand to new market by producing and selling high quality and reasonable priced tea products. Focussing on advertising services and other market promoting activities in many countries and regions.

To consolidate and expand the traditional markets that can import large quantity of tea from Vietnam such as: Middle-east market that can import 50 000 tons per year; East- European market that can import 30 00 tons to 50 000 tons per year; West-European market that can buy 10 000 to 15 000 tons per year; Asian market that can buy 10 000 to 15 000 tons per year; American and African market that can buy 5 000 to 8 000 tons per year.

- To strengthen the organization of Vietnam Tea Association not only in its operation but also in equipping to ensure the producing, processing and product quality controlling activities, responding to export and domestic market demand. Consolidating the cooperation, collaboration activities for sustainable market expansion.

*High growing tea- Shan tea:*

Shan tea (C.var. Shan) is one of 4 tea varieties that have existed in Vietnam for long time. The main areas that this variety grows are Suoi Giang- Yen Bai, Cao Bo- Ha Giang, Moc Chau- Son La, Lao Cai,

This variety has developed in Vietnam over a long time. Presently, the development of this tea variety is part of the big common tea development programme, and also in the long term tea development strategy of Vietnam. With its biological characteristics of high resistance to cold and misting weather, this product is suitable for high mountain rural areas.

At present, Shan tea is used for only producing special green tea, even this variety is very good for producing black tea. The reason for this is that in spite of its high quality, its quantity is still limited. Besides the places mentioned above, there is also small quantity grown in other high mountain areas such as Lai Chau, Bac Can, Thanh Hoa. Some of these places have developed this

tea variety including Yen Bai, Ha giang, Son la at an average rate of plantation area of 30% per year (in recent 5 years), and with average quantity of 200 tons of dried tea per year ( Yen Bai 60 tons, Ha Giang 80 tons, Son La 60 tons - in 2000). The total area of Shan tea plantation is 25 420 ha (accounting for 31% of total tea area of Vietnam-1999)

Types of processed products from this tea are traditional green tea, bagged green tea. At present, the main market for this tea is domestic market. The trend of using high quality and organically-farmed products is an opportunity for this tea production. Thus the price of this product is currently higher than for other kinds of green tea although processing technology is not more complicated. For instance, the average price for special green tea (made of Shan tea) is 70 000 VND to 120 000 VND per kg, while the normal green tea only sells for 30 000VND to 50 000VND.

This variety can only be planted in high mountainous areas (in the north of VN) as mentioned above, there fore, the competition of this tea production is lower than that of normal tea, this is also an advantage for the production.

Currently, there are some constraints in the production of Shan tea. The Govt. encourage this tea development, but the incentive price for buying raw material from farmers has not been high enough to motivate them in the production( 2 500 VND per kg of fresh tea, while price of buying normal tea is 2000 VND per kg of fresh tea). The selling price of this product is still high to the majority of population. The business promoting activities are still limited. These constraints result in slow expanding the plantation area, slow selling the product, and limited selling area ( this product has not been introduced to many provinces in plane area).

- In Tua Chua- Lai Chau: is also an area that has had Shan tea for a long time. The recent survey shows that Shan tea has been planted dispersedly in an area of about 2000 ha for a long time (about 200 year ?). This species was introduced to the area by Chinese (Xa Phang race). Ta Sinh Thang, Sin Chay, and Sa Phinh are three focussed communes of the district with this tea. The survey in these communes shows that there are 275 households having Shan tea, with total of 9934 trees of which there are 6164 trees that have diameter of over 10 cm. This number of Shan tea trees is equivalent to 6 ha of tea that is planted with regulate density.  
So far this tea naturally grows without receiving any tending activities and has low productivity (10 kg of fresh tea per harvesting time). With bad processing and other difficulties (bad road condition, lack of information,...), the product is only for self consumption of local people.  
Current situation shows that this tea variety can grow very well in Tua Chua, the first harvest can be in the 7<sup>th</sup> years after planting. The provincial authority has decided that Tua Chua is a focus district of developing this tea variety. The district's plan for this plantation is: 50 ha planted in 2000, and 300 ha planted by 2004.  
For this plan, the seedling is producing in Tua Chua with the seed deriving from existing resources. The province Seed Company is responsible for tea processing activity, a tea processing unit will be set up in Ta Sin Thang- Tua Chua in 2000 to help farmers with the existing tea quantity. The province and district authority is also calling for supporting resources from projects for this programme.

## 2.2 Step 2: Selection of the most promising products/ intervention

With the analyzed information and direct participatory discussion, in two days for each target group, the team facilitated the representatives of the groups to recognize which of the following products that can be developed with confirmed aspects including: Xanhan- Amomum Xanthoides, Canh kien- Seed Lac, Cau tich- Cibotium barometz , Do trong- Eucomnia ulmoides and why the others should not be started.

Then, at the end of the second day, the group was facilitated to do an exercise of the product assessment to define opportunities and constraints of each selected product, and to suggest solutions for solving the constraints that will be used in strategies initiated in the next phase.

### The criteria used to select the most promising product:

The participants were facilitated to assess the products by going through the a table of key criteria below:

**Table 1: Criteria for product assessment**

<p><b>Market/economy area</b></p> <ul style="list-style-type: none"> <li>• Raw material resource: How large and sustainable is the current and future supply?</li> <li>• Market potential/ level of demand: How is the product demanded by the buyer groups?</li> <li>• Competition: ( For finding market place- level of competition)</li> <li>• Constraints to business entry: (Constraints of market channels, policy, expertise, financial aspects)</li> <li>• Profitability Are the production costs acceptable to allow for a fair margin?</li> </ul> <p><b>Resource management/ environment area</b></p> <ul style="list-style-type: none"> <li>• Availability in time How much quantity is available in the year?</li> </ul>
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- Availability in space  
What is the level of availability of the product, in what quantity?
- Time of the production  
Time from planting to harvesting (with cultivated products)
- Regeneration potential  
(With forest products)
- Impact of harvesting on survival of species  
(With forest products)
- Impact of production on environment

#### **Policy/ Social/ Institutional area**

- Contribution to income  
How far will the product development contribute to the income of the concerned users?
- Benefits for the community  
How will the local community benefit from the product development?
- Experiences with the product  
Is the product new to the users? are they experienced in the production?
- Potential of employment creation  
How does the product development impact on job creation?
- Gender impacts  
How will women be involved in or be affected by the product development?

#### **Science/ Technology area**

- Suitability to rural entrepreneurs- production location
  - Suitability to rural entrepreneurs- technology requirements
  - Infrastructure status
  - Human resource/ expertise
- 
- Human resource/ quantity

### **Selection process of promising products**

With the provided criteria, the representatives were facilitated to select the promising products by doing the following scoring exercise:

- Each of defined product was screened against the list of criteria.
- Referring to the analyzed data of each product, the participants circled the most appropriate score of each criteria (see a sample of selection criteria form of Seed Lac in the annex 5)
- The total score of each product was calculated.
- Then the scores of different products were compared by using the following table:

**Table 2: Comparison of the scores of the products (Example of Trung Thu commune)**

Criteria	Products			
	Xanhan- Amomum Xanthoides	Cau tich- Cibotium barometz	Canh kien- Seed Lac	Do trong- Eucomnia ulmoides
<b>Market/ economy area</b>				
Raw material resource	2	1	3	1
Market potential/ level of demand	3	3	3	2
Competition	3	1	3	1
Constraints to business entry	2	3	2	1
Profitability	3	1	3	3
<b>Resource management/ environment area</b>				
Availability in time	1	3	1	3
Availability in space	3	3	2	1
Time until production	2		2	1
Regeneration potential	3	2	3	2
Impact of harvesting on survival of species	2	1	2	1

Impact of production on environment	2	2	3	3
<b>Policy/ Social/ Institutional area</b>				
Benefits for the community	2	1	3	2
Contribution to income	4	0	4	2
Experiences with the product	2	1	3	1
Potential of employment creation	2	2	2	0
Gender impacts	2	2	2	2
<b>Science/ Technology area</b>				
Suitability to rural entrepreneurs- production location	3	3	2	3
Suitability to rural entrepreneurs- technology requirements	3	3	3	2
Infrastructure status	1	1	1	1
Human resource/ expertise	2	1	2	1
Human resource/ quantity	3	3	3	3
<b>Total</b>	<b>49</b>	<b>37</b>	<b>52</b>	<b>36</b>

(The same exercise done in Sinh Phinh, and the total scores of the products are as follows: Do Trong: 38, Canh Kien: 50, Cau tich: 36, and Sa nhan: 46 )

From this comparison, the participants objectively chose the products which have highest total scores, and together with their interest decided what type of the products to develop. The products the participants decided to develop include: Xa nhan- Amomum Xanthoides, Canh kien- Seed Lac.

### 2.3 Step 3: Formation of producer groups

Identification and formation of rural entrepreneurs is one of the goals of MA&D process. The rural entrepreneurs are the key condition for further implementation of the activities.

In phase 1, the participants were facilitated to recognize what negative issues the small rural entrepreneurs get if they work individually and what benefits they get if they work in groups. It was suggested at the end of phase 1 that the interest groups should be formed as rural entrepreneurs building on the people identified as most interested entrepreneurs. For the new commune of Trung Thu, which was not involved in phase 1, this step was also briefly explained and all the participants also agreed to form the spontaneous interest groups as rural entrepreneurs initiated by the most interested people.

To facilitate the participants in forming interest groups, during the workshop day with each representative group, the participants were asked to do the following exercises:

- To share their experiences of working in groups in the past
- To list what benefits they got from working in group
- To describe the way they formed the groups, what are the rules they set for the groups operation
- From their experience, what are their suggestions for better grouping this time.

Through the discussion, the basic principles of forming producer groups initiated by the participants are:

- Spontaneous participation
- Basing on convenient conditions such as: neighborhood, relatives.
- Geographical area-basing on the area of forest and cultivated land areas, convenient for management.

After finishing exercises of selecting the most promising products and forming producer groups, the participants went back to their villages to explain to other villagers the steps they had done, what are the promising products selected, and start forming producer groups based on the most promising products. The following table 3 shows the list of the products they decided to develop among the defined most promising products and the number of producer groups, their initiators, the number of members for each product.

**Table 3: The number of producer groups, their representatives, number of members per product.**

Product	Xinh Phinh commune		Trung Thu commune	
	Representatives	No of members	Representatives	No of members
Xa nhan- Amomum Xanthoides,	Giang A Su- Phi Dzin 2	3	Thao A Ky- Ban Pho village	11
	Cu A Chang- Vang Chua		Thao Se Dinh- Chang Phang Kho village	21

			Sung Sua Vu- Pu Ka Dzao village	20
Canh kien- Seed Lac,	Giang A su- Phi Dzin 2	10	Thao A Ky- Ban Pho Village	11
	Sung A Khai- Ta La Cao		Thao Se Dinh- Chang Phang Kho village	24
			Sung Sua Vu- Pu Ka Dzao village	21
			Ly A Chang- Trng Thu vilge	12

(Sinh Phinh has not finished forming interest groups-The representatives came only from villages that have the defined products including: Phi Dzin 2, Ta La Cao, Vang Chua villages)

### 3. PROPOSED STRATEGY (PHASE 3 OF MA&D):

After forming the interest groups, the representatives of the groups were gathered for a day workshop to assess deeply the 2 selected products and initiate sustainable intervention and business plans.

#### Objectives:

- To formulate an intervention strategy, including specific strategy for each product.
- To develop sustainable business plans for the initial production phase.

#### Expected outputs:

- An intervention strategy and specific strategies for each product are proposed.
- Sustainable business plans for selected products are initiated.

#### Methodology:

The aim of using MA&D is to help rural people to create a cash income resource without destroying their resource base and thus protect their environment. For this phase, the promising products have been selected and types of producer groups have been formed. However, it is necessary to have a better understanding of the products to avoid the problems that may emerge during implementation of the business plans. One crucial purpose of this phase is to discover these constraints prior to making business plans.

In this phase, the representatives of producer groups who participated in the workshop day were facilitated to discuss related issues of each product and did an exercise of product assessment to define what constraints in producing/marketing the product and to find solutions for those constraints, setting up simple business plans for immediate production.

#### The outline of the proposed strategy:

The villagers have been facilitated to select the promising products that they are confident to develop, these products include Sa nhan- Amomum Xanthoides and Canh kien- Seed lac. The question now is what option to include, what option to leave out and what intervention strategy from the project perspective and from the farmer perspective to choose. These decisions include:

- The marketing strategy: include: the market options, the marketing mix, the pricing strategy, and the organizational aspects (i.e. production and processing strategy and involved aspects)
- The resource management strategy: Resource management options and the best partners to achieve them.
- The social development strategy: How to develop the product in the best operation form considering social aspect (contracts, registrations, alliances,...)

The strategy is based on:

- Avoiding socially negative impacts (gender issue, land and resource access...)
- Understanding and operating the business by the rural entrepreneurs themselves in the long run
- Avoiding the economic dependence of the rural entrepreneurs on one product or one buyer
- Avoiding the dependence on non-accessible credit resource or market information.

#### The marketing strategy:

##### **Production development structure:**

One of the main finding in phase 1, through analysis of financial objectives of the target group, is that the expected financial improvement need of the villagers ranges from 1,200,000 VND to 6,800,000 VND with the majority ranged from 3,000,000 VND to 6,000,000 VND per year. At present, the households have already tried to fulfil the need by every production activity they can do. To meet the expected needs, the proposed strategy for developing the defined products is that the households do not

develop a product independently. Based on their real condition, one household can focus on a product, while the other can focus on a main product and together with other products. The villagers also realize the importance of production diversity for their area. The more the villagers lack agricultural production advantages, the higher cash income resources they need for securing their food demand. This is why they have proposed a product mix for development strategy.

#### **Market options:**

One of the key issues for sustainable development is that the defined business ideas meet all required aspects (economic objectives, environmental adaptability, social issues, human capacity, ...). For proposing a sustainable strategy, it should be ensured that the business will be less risky, the production/marketing of the product will not be too complicated i.e. the selected strategy should be stable and less risky in the long term.

Considering the real local conditions as described in the previous sections, the representatives of the producers groups decided to start their first phase of productions with domestic district market (existing product/existing market) and then after longer experience of producing and finding new markets at province and other markets.

#### **Pricing strategy:**

At present, the villagers are very subordinated to the buyers in selling their products because they very much need cash, they lack market information as well as other issue of marketing the products. With their difficulties, the villagers do not care if the selling prices can cover the production costs or not (even they have never consider labor cost in their production), they only sell a product at a low price to meet their cash demand. The participating representatives were facilitated to recognize that for the business survival, the price of the product should provide a fair margin, cover all production and other costs, pay back the investment, provide a profit for long term investment, be accepted by buyers and attract them and be aligned with those of competitors.

#### **Marketing alliances and partners:**

With discussion and doing the exercises, the participants have been more clear that the forest and home garden based-enterprises cannot be undertaken by a single actor, the process of marketing these products needs many steps and actors and they have crucial interactions. The actors include direct actors (harvesters, processors, transporters, traders,...) and indirect actors (technical services, policy makers, ...). This means for developing the defined products, the producers have to define all partners and alliances they need in the marketing process to achieve the business objectives.

The practical marketing alliance strategy has been defined:

- Reassess the reality to define what are the alliances they should have to overcome constraints of land resource management, technical support, production organization, policy issues... (with local authority, extension services, project,...)
- Define what issues they need to improve in promoting marketing the product by forming alliances with involved actors (contracts with traders, agreements with other producer groups,...)

#### **Production strategy:**

With the participatory clarification of market/economic information, technical aspects, resource management/environment and social/ institutional aspects, the producer group representatives have initiated their production strategy. The main criteria they have decided on are:

- Level of technological sophistication: Traditional method of producing, harvesting and processing the existing product with improvement of some new technical impacts.
- Skill level required for cultivation/ harvesting and processing: Low skill requirement and enhanced with appropriate preliminary technical training to improve productivity and product quality fulfilling the proposed enterprise. These technical improvements will benefit the community.
- Size of the enterprise: Groups of households for producing, processing and selling the products at community level.
- Management skill: Local people's management knowledge is sufficient to manage the producer groups, it is better to have preliminary management training for them.
- Raw material needs: Raw material for the defined productions is locally available, the production activities do not cause any harm to the natural resources. Technical training is needed for avoiding negative impacts.
- Quality control aspects: Locally controlled, information on market standards and training on techniques of improving the product quality are needed for enhancing their knowledge.
- Storage facility: The selected products do not need high requirements of storing, through technical training the local producers can well organize storing activities.
- Choice of infrastructure and possible transportation: The selected products also do not need high requirements of infrastructure and transportation condition, the current local condition is acceptable.

#### **The resource management strategy:**

Generally, the local people have experienced the harvesting and producing activities harmful to the resources and their environment. Through reviewing results of the inventory of the phase 1 and carrying out the exercises, it is easy for them to be aware of resource management issues and to select the production activities that are sustainable in the long run considering resource management aspects. It is also easy for the team to facilitate them to initiate the resource management strategy resulting in sustainable raw material supply.

The resource management strategy includes:

- The selected products are cultivated with available local supply resources.
- With the selected products, there will be no problem of raw material supply if the production is expanded.
- The defined production will have positive impacts on environment, contributing to forest conservation, soil protection and other values.

For developing the two selected products of Xa nhan- Amomum Xanthoides and Canh kien- Seed lac, considering the resource management aspect, the main issue that the producers interested in is access to land resources. So far, with the villagers, only the agriculture land has been well allocated, the forest land has only been allocated to village management. For better management, especially of Xa nhan production, the producers want the forest land to be allocated to smaller groups of households. To achieve this management request, the groups of producers need alliance with local authority in organizing access to land resource.

Another issue in resource management is that Xa nhan is one of the forest products that controlled by the Government (for natural resource protection). The producer groups also need an alliance with the responsible Govt. units in trading their harvested products.

#### **The social development strategy:**

The professional organization of rural entrepreneurs is a very important precondition for a successful business operation. Therefore, it is important to decide on the organizational form of the rural entrepreneurs.

With the two selected products of Xa nhan- Amomum Xanthoides and Canh kien- Seed lac, there is negative impact on resource management if the production scale is enlarged. Some of the main problems are lack of new techniques for higher productivity, low and fluctuating prices because of individual selling, limited access to support resources, access to land resource... With facilitation of the team, the producers decided to form the producer interest groups that best help them to get what they would not obtain if they work individually.

The producer groups creation will have the following functions:

- Managing the resource: Getting access to land resource, Improving natural forest management, Organizing cultivation.
- Increasing productivity: Sharing experiences, organizing training, exchanging labor.
- Getting administration, technical, financial supports: requesting technical support and financial support from the project, extension services,...
- Forming alliance for better marketing operation: Contracting with traders, Asking support resources (from institutions) for better productivity of groups ...

#### **The general strategy:**

Based on the results of previous phase and the market survey, in the actual context, the representatives of producer groups have proposed their general strategy for their production:

- Start a pilot cultivation of Xa nhan- Amomum Xanthoides with the real spontaneous groups (3 groups in Trung Thu and 2 groups in Sinh Phinh) under the support of the project (technical, organizational and financial support). At the same time to protect and well manage the natural resource of Xa nhan- Amomum Xanthoides.
- Improve the current production and trade of Canh kien- Seed lac in both communes by working in groups (selling the product, organizing training). Organize the producer groups of this product and expand the production with detailed plans with the support from the project (technical, organizational and financial support).
- These two productions blend well into common village development plans to ensure food security and sustainable forest management.
- Assess the result of the pilot production (mainly with Xanhan – after the first 3 years when the first harvest comes) for reinforcing producer groups and expanding groups' production.

The development of these business activities needs the following conditions:

- The producers organize themselves into spontaneous groups: they have to realize that they are the real actors, not simply waiting for subsidy supports. The set up business plans are their plans and they are responsible for implementing those plans. The producers only identify in their plans the real support demand and from what supporting resources.
- The main supporting demand defined by the producer groups includes: Capacity building for the producers and facilitating support. For starting new idea of Xa nhan plantation and improving existing production of Canh kien, the villagers need technical trainings. Although some of the villagers have experience of working in spontaneous groups, for an effective pilot of organizing and managing producer groups the villagers also need facilitating support from professionals .
- One other important condition is that the land resource must be secured. For the 2 selected products, the production base is land resource, it is not sustainable for the development if the land resource is not allocated to villager for management. It was suggested that the responsible project staff has to discuss in detail with local authority about this issue.

From the project perspective, for more effective supporting the producer groups, the district project has raised some concrete supporting proposals including:

- These production plans should be started in 2001 (according to plantation season and the project planning reasons)
- The productions should be piloted in first year, then expanded after having assessment.
- The supporting plan for the production should be approved by the Management Board of SFDP Hanoi and integrated in

- the annual plan.
- Agreeing on scientific idea of the method, the following support activities for the productions are proposed by the district project:
  - To assign a project staff to be responsible for facilitating producer groups in the 2 communes.
  - Support of technical trainings, including training for farmers and for the project staff
  - Support of seedling production
  - Support of domestic study tours (to developed models of the 2 products)
  - Having detail support demand for project approval.

(These support demand from the project should be discussed in more detail)

### Specific strategy for each product:

An important part of this phase is that the representatives of the producer groups were facilitated by the team to define a development strategy for each product.

In this exercise, the participants assessed not only the opportunities but also the constraints product considering 4 areas of development (market/economic, resource management, social/institutional and technology areas). Then with the defined constraints, they suggested the solution for overcoming them. The following tables summarize outputs of the intervention in producing/marketing the tool used by producer groups that will be presented as development strategy for each product:

#### Development strategy of Xa nhan- Amomum Xanthoides

Market/ economic	Resource management	Social/ policy	Technology
<u>Opportunity:</u> <ul style="list-style-type: none"> <li>• High market demand</li> <li>• Profitable</li> <li>• Low competition</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>- Suitable natural condition</li> <li>- Good regeneration capacity</li> <li>- The cultivation and conservation is good for forest protection (it needs forest canopy)</li> <li>- Availability of seedling and land resources.</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>- The local people have experience in harvesting, primary processing and selling Xa nhan</li> <li>- Conservation and plantation of xa nhan is encouraged by the Govt.</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>-The plantation, harvesting and processing is simple</li> <li>-The production does not need high technical labours and complicated equipment.</li> <li>-The local people can recognize the suitable natural condition for the cultivation.</li> </ul>
<u>Constraints:</u> <ul style="list-style-type: none"> <li>- Lack of market information</li> </ul>	<u>Constraints:</u> <ul style="list-style-type: none"> <li>- Problem of protecting the product (Xa nhan is cultivated in remote forest areas, it is eaten by squirrels...)</li> </ul>	<u>Constraints:</u> <ul style="list-style-type: none"> <li>-Local people harvest and sell the product individually</li> <li>-Trading Xa nhan is controlled by the Govt. (for conservation of the product purpose)</li> </ul>	<u>Constraints:</u> <ul style="list-style-type: none"> <li>• Local people have no experience of Xa nhan plantation</li> <li>• Lack of knowledge on xanhan variety.</li> </ul>
<u>Suggested solution:</u> <ul style="list-style-type: none"> <li>- To ask local authority to help (or the project)</li> </ul>	<u>Suggested solution:</u> <ul style="list-style-type: none"> <li>- To plan among the village on land management (define the lots of land for households to manage)</li> </ul>	<u>Suggested solution:</u> <ul style="list-style-type: none"> <li>- To organize the groups of Xa nhan plantation- selling in group to secure a stable price.</li> <li>- To register with the authority the business of Xa nhan</li> </ul>	<u>Suggested solution:</u> <ul style="list-style-type: none"> <li>- To ask the project for technical training.</li> </ul>

#### Development strategy of Canh kien- Seed lac

Market/economic	Resource management	Social/ policy	Technology
<u>Opportunity:</u> <ul style="list-style-type: none"> <li>• High market demand</li> <li>• Profitable</li> <li>• Low competition</li> <li>• Not many difficulties in the production process</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>- Suitable to natural condition of the area</li> <li>- It is good to plant seed lac trees mixing in crop land (contributing to soil erosion protection)</li> <li>- Seedling is available in the area (both of seed lac tree and lac insect)</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>- The production is encouraged by the local authority</li> <li>- There is no obstruction by policy</li> <li>The local people have had a long tradition of production.</li> </ul>	<u>Opportunity:</u> <ul style="list-style-type: none"> <li>- The simplicity of planting the tree, raising lac insect and harvesting the product</li> <li>(the local people are used to seed lac production)</li> </ul>

	- Convenience of protection		
<u>Constraints:</u> - The villagers have to sell the product at district center (far from the villages) with various prices	<u>Constraints:</u> - The harvested quantity is strongly effected by weather status.  - The needed land for planting seed lac tree is not very available.	<u>Constraints:</u> - There is no concrete support to this production in the area.  - The local people are producing and selling the product individually- there is no collaboration and exchange of experiences	<u>Constraints:</u> -The productivity is still low, even they lost harvest in some seasons- lacking technique for high productivity and protecting lac insect in bad weather
<u>Suggested solution:</u> - To send the representatives to contract with middlemen in buying the product (at agreed time, places and prices)	<u>Suggested solution:</u> - To ask the commune authority to plan the areas for seed lac production.  - To reassess the land resource for seed lac production of every households	<u>Suggested solution:</u> - To build up production group to support households in producing and selling product.	<u>Suggested solution:</u> - To ask the project for technical trainings

#### 4. THE SUSTAINABLE BUSINESS PLANS FOR PRODUCTION ACTIVITIES: (PHASE 3 OF MA&D)

Having selected the promising products, assessed the products in detail and outlined the development strategy for each product, in this step, the representatives of the producer groups were facilitated to discuss and initiate their business plans for the selected products. The business plans for each product indicate the confirmation of profitability, sustainability and broad understanding of the production and sale plans for the first year by the production groups.

##### 4.1. Sustainable business plan for Xanhan- Amomum Xanthoides production:

(The plan is set up based on an average producer group of 10 households cultivating 0.5 ha per household in first year and 1 ha in following year. This is a sample for the project or other producer groups to prepare their own plans.)

##### A. Discription of goals of the enterprise:

###### - The enterprise profile:

Name of the enterprise: Xanhan producer group of .....village

Village: .....Commune: .....District: .....

###### - The background of the enterprise idea:

The enterprise business idea came out and was confirmed and practically planned during the workshop and group formation in July, 2000, under support activity of SFDP in Trung Thu and Sinh Phinh communes for promoting NTFPs component.

###### - Legal status:

This is a rural entrepreneur in form of spontaneous producer group. It is the first time this form of enterprise has been organized in the community. For long term development, it is necessary to have a staff for coordinating all related activities and the group plans to collaborate with different support organizations including SFDP, local authority, ...The legal status will be selected by the members.

###### - The purpose of the enterprise:

The producer groups will plant Xa nhan, harvest and primary process the product to sell under the supported training from SFDP for creating a cash income resource contributing to common forest management activity.

The groups plan to start with first years : 0.5 ha of Xa nhan plantation per household, and 0.5 ha more per household per year in the next year.

After 3 years, they plan to sell 75 kg of dried Xanhan fruit per house hold (0.5 ha = 500 bushes x 1 kg fresh fruit /bush = 500 kg of fresh = 60 kg of dried) and get 2 40 000 VND.

From the fourth year they expect about 80 kg (dried fruit), 3 200 000 VND per household (the productivity of Xa nhan is not the same for every year)

**- Group/enterprise production cost estimate:**

Investment:  
 Three year working capital:  
 Total:

**- The resources of funding:**

The production costs are mainly labor cost, the member households do not have to get loan, the funding resource is from their own.

**B. The mission statement of the group/enterprise:**

- The villagers and forest Xa nhan harvesters will receive support training on Xa nhan plantation and start this production on their allocated forest land to create better and more sustainable cash income source. The group members will share labor force, experiences, organize protection and selling activity of the product as well as receiving support from indirect actors such as technical training.
- The group will create jobs for 10 member families with 30 working days per year (90 days / 3 years) and 2,400,000 VND per year (after 3 years) for a family planting 0.5 ha of Xa nhan.
- From the fourth year, even the harvesting area increases, but the productivity of Xa nhan is not the same for every years, therefore, the expected average income from this product is about 3,000,000 to 3,500,000 VND per household per year. This amount will meet the economic objectives that defined in phase 1.
- The production of Xa nhan will have positive impacts on forest protection, the success of this production will encourage villagers to expand and improve production.

**C. The production plan:****- Steps of the production:**

- Defining land area that is suitable for planting Xa nhan, demarcating land areas for the households.
- Digging planting holes
- Getting seedlings from natural resource
- Planting
- Tending (weeding- once per month)
- Harvesting (3 years after planting.)
- Primary processing (drying, exposing to the sun or by fire heat)

**- The group production capacity:**

The group will start with 5 ha of plantation for the first year, and expand to 10 ha for second year. From the third year, the group can get first harvest of 5000 kg of fresh fruit equal to 600 kg of dried fruit (from 0.12 to 0.15 kg of dried fruit per 1 kg of fresh fruit)

From fourth year(second year of harvesting), the group will get about 800 kg of dried fruit ( Xa nhan does not give the same productivity in every year, even in the same weather condition) . From the fifth year, Xa nhan will give better productivity, so this quantity will be higher. Xa nhan can give good harvest in 5 years after the first harvest.

**- The group production plan:**

Year:	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
	5 ha	10 ha	10 ha	10 ha
Product: dried Xa nhan fruit:	No harvest	No harvest	600 kg	800 kg

**- The required fixed assets/ fixed capital for full capacity:**

For the production, there is only main fixed required assets of land, the other equipment are not professionally required (shovels, hoes, baskets), that means they are not included in calculations.

- Land required for the plantation: 10 ha of forest land (from year 2)
- Other(baskets, hoes...):
- Total:

**- The production cost per year for 5 ha (2 first years):**

<u>Production cost items:</u>	<u>Cost per unit:</u>	<u>Amount per year:</u>
Hole digging	10 000 D/ working day	500 000 D
Seedling preparing	10 000 D/ working day	500 000 D
Planting	10 000 D/ working day	500 000 D

Tending	10 000 D/ working day	5 000 000 D
<b>Total:</b>		<b>6 500 000 D</b>

**- The production cost per year for 10 ha (from third year):**

Tending	10 000 D/ working day	10 000 000 D
Processing	10 000 D/ working day	600 000 D
Transporting	10 000 D/ working day	1 20 000 D
Sacks (packing the product)	2 000 D/ sack	24 000 D
<b>Total:</b>		<b>10 744 000 D</b>

(Legend:

- 100 dug holes/ working day,
- 100 prepared seedlings / working day,
- 100 planted seedlings/ working day,
- 100 weeded bushes/ working day, (10 weeding times/ year)
- 10 kg dried fruit/ working day,
- 50 kg transported/ working day )

**- Overhead expenses per year:**

Only about 5 working day for indirect/management labour per year for the group:

5 working days x 10 000 D = 50 000 D

**- Estimated production cost per product unit:** (because the main production cost is labour cost , so it is not excluded):

$$\frac{10\,744\,000\text{ D} + 1\,300\,000 + 50\,000\text{ D}}{600\text{ kg}} = 20\,156\text{ D/ kg}$$

(the labour cost for digging holes, getting seedlings and planting is divided into 5 years of harvesting)

**- Production calendar:**

Month	1	2	3	4	5	6	7	8	9	10	11	12
Activities	Hole digging	Seedling preparation, planting		Tending			Fruit harvest and processing		Selling	Tending		

**D. Marketing plan:**

- Description of the product: Primary processed Xa nhan fruit, the same current market quality requirement standard.
- Competition analysis: For the first years ,there is no local competitors, only a few natural resource harvesters. In larger context, the main competitors are producers of this product in other provinces (Hoa Binh, Son La, Thanh Hoa). However, there is no negative issue of competition.
- The market price: The current price of dried Xa nhan fruit is 40,000 D to 50,000 D per kg (retail price)
- The planned selling price: 40,000 D per kg of dried Xa nhan fruit.
- Sales and price forecast for group:

Product	Forecasted Price/unit	Projected Sales quantity			
		2001	2002	2003	2004
Dried Xa nhan fruit	40 000 VND			24,000,000 VND	32,000,000 VND
Total				24,000,000 VND	32,000,000 VND

- Income forecast for the group:

	Year 1	Year 2	Year 3	Year 4
Sales			24 000 000 D	32 000 000 D

Production cost	6 550 000 D	11 550 000 D	12 100 000 D	12 200 000 D
Income			11 900 000 D	19 800 000 D

(The main production cost is labor cost, so this is the net income and also the real income for the group; With the pilot production size, the expenses for taxes have not been included.)

### E. Organizational plan

Before starting the production, the following activities should be accomplished:

- Because the implementation of the mission overlapped with the project village planning, it is necessary to make the commune authority more aware of the objectives of the mission
- Strengthening the group abilities through trainings.
- Preparing a detailed business plan for the groups.
- Carefully reassess the land resources for the production, especially with the access to the land resource.
- Readjust the production plan

### F. Resource management plan:

The resource management aspects have been assessed in detail through exercises of this phase. The selected product is a cultivated product, there is no problem of resource management with the production.

The production will practically contribute to resource management as well as forest protection.

### G. Social plan:

- The production of Xa nhan creates job not only for men but also for women. Working in group will promote the community solidarity and collaboration.
- The initiative of Xa nhan plantation is new for local people but it is well accepted by every community members.
- The initiated form of producer groups is not an official organization but it is encouraged by local authority.
- It is necessary to have support to capacity building of the group management.

### 4.2. Sustainable business plan for Canh kien- Seed Lac production:

(The plan is set up based on an average producer group of 10 households cultivating 0.5 ha per household in the first year and 1 ha in the following year. This is a sample for the project or other producer groups to prepare their own plans.)

#### A. Description of goals of the enterprise:

##### - The enterprise profile:

Name of the enterprise: Canh kien producer group of .....village

Village: .....Commune: .....District: .....

##### - The background of the enterprise idea:

The enterprise business idea came out and was confirmed and practically planned during the workshop and group formation in July, 2000, under support activity of SFDP in Trung Thu and Sinh Phinh communes for promoting NTFPs component.

##### - Legal status:

This is an rural entrepreneur in form of spontaneous producer group. It is the first time this form of enterprise has been organized in the community, for long term development, it is necessary to have a staff for coordinating all related activities and the group plans to collaborate with different support organizations including SFDP, local authority, ...The legal status will be selected by the members.

##### - The purpose of the enterprise:

The producer groups will plant Canh kien, harvest and primary process the product to sell by traditional way improved with the supported training from SFDP for creating a cash income resource contributing to common forest management activity.

The groups plan to start with first years : 0.5 ha of Canh kien plantation per household, and 0.5 ha more per household per year in the next year.

After 3 years, they plan to sell 250 kg of dried Seed lac per house hold (0.5 ha = 50 trees x 5 kg of dried Seed lac/ tree = 250 kg of dried Seed lac) and get 3 750 000 VND.

From the fourth year with about 250 kg (dried seed lac), 3 750 000 VND per household (After harvesting, the Seed lac tree is let free (no Lac insect raising) for 1 year for regeneration of branches)

**- Group/ enterprise production cost estimate:**

Investment:  
Three year working capital:  
Total:

**- The resources of funding:**

The production costs are mainly labor cost, the member households do not have to get loan, the funding resource is from their own.

**B. The mission statement of the group/enterprise:**

- The villagers who have been experienced in Seed lac production will receive support technical trainings to improve the traditional way of the production and start this production mainly on their allocated cultivation land to create better cash income resource. The group members will share labor force, experiences, organize protection and selling activity of the product as well as receiving support from indirect actors such as technical training.
- The group will create job for 10 member families with 20 working days per year (60 days / 3 years) and 3 750 000 VND per year (after 3 years) for a family planting 0.5 ha of Seed lac.
- From the fourth year, the harvesting area increases, but the Seed lac tree is let free (no Lac insect raising) for 1 year for regeneration of branches, therefore, the expected average income from this product is kept the same as the third year of 3750000 VND per household . This amount will meet the economic objectives that defined in phase 1.
- The production of Seed Lac will have positive impacts on soil erosion protection, the success of this production will encourage villagers to expand and improve production.

**C. The production plan:**

**- Steps of the production:**

- Reassessing and defining land area that suitable for planting Canh kien among cultivation land of the households.
- Digging planting holes
- Getting seedlings from natural regeneration resource
- Planting
- Tending (weeding- once per month)
- Harvesting (3 years after planting.)
- Primary processing (Storing for drying)

**- The group production capacity:**

The group will start with 5 ha of plantation for the first year, and expand to 10 ha for second year. From the third year, the group can get first harvest of 2 500 kg of dried seed lac.

From fourth year (second year of harvesting), the group will get the same quantity of dried Seed lac (the Seed lac tree is let free (no Lac insect raising) for 1 year for regeneration of branches) . From the fifth year to seventh years after being planted, Seed lac cultivation will give better productivity, this quantity will be higher.

**- The group production plan:**

Year:	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
	5 ha	10 ha	10 ha	10 ha
Product: dried Seed lac:	No harvest	No harvest	2 500 kg	2 500 kg

**- The required fixed assets/ fixed capital for full capacity:**

For the production, there is only main fixed required assets of land, the other equipment are not professionally required (shovels, hoes, ...), that means they are not considerably included.

- Land required for the plantation: 10 ha of cultivation (for 2 year)
- Other (Shovels, hoes...): (not considered)
- Total:

**- The production cost per year for 5 ha (2 first years):**

<u>Production cost items:</u>	<u>Cost per unit:</u>	<u>Amount per year:</u>
Hole digging	10 000 D/ working day	50 000 D
Seedling preparing	10 000 D/ working day	50 000 D
Planting	10 000 D/ working day	50 000 D
Tending	10 000 D/ working day	500 000 D
<b>Total:</b>		<b>650 000 D</b>

**- The production cost per year for 10 ha (from third year):**

Tending	10 000 D/ working day	100 000 D
Processing	(only storing in the house)	
Transporting	10 000 D/ working day	500 000 D
Sacks (packing the product)	2 000 D/ sack	100 000 D
<b>Total:</b>		<b>700 000 D</b>

(Legend:

- 100 dug holes/ working day,
- 100 prepared seedlings / working day,
- 100 planted seedlings/ working day,
- 100 weeded trees/ working day, (10 weeding times/ year)
- 50 kg transported/ working day )

**- Overhead expenses per year:**

Only about 5 working day for indirect/management labor per year for the group:

5 working days x 10 000 D = 50 000 D

**Estimated production cost per product unit:** (because the main production cost is labor cost , so it is not excluded):

$$\frac{700\,000\text{ D} + 65\,000 + 50\,000\text{ D}}{2500\text{ kg}} = 326\text{ D/ kg}$$

(The labor cost for digging holes, preparing seedling and planting is divided into 10 years of harvest)

**Production calendar: September**

**D. Marketing plan:**

- Description of the product: Primary processed Seed lac, the same current market quality requirement standard.
- Competition analysis: The main competitors are local producers of the same product. In larger context, the main competitors are producers of this product in Lai Chau Seed lac enterprise area. However, there is no negative issue of competition.
- The market price: The current price of dried Seed lac is 13 000 to 17 000 D per kg (retail price)
- The planned selling price: 15 000 D per kg of dried Seed lac.
- Sales and price forecast for group:

Product	Forecasted Price/unit	Projected Sales quantity			
		2001	2002	2003	2004
Dried Seed lac	15 000 VND			37 500 000 VND	37 500 000 VND
Total				37 500 000 VND	37 500 000 VND

- Income forecast for the group:

	Year 1	Year 2	Year 3	Year 4
Sales			37 500 000 D	37 500 000 D
Production cost	650 000 D	1 150 000 D	815 000 D	865 000 D
Income			36 685 000 D	36 635 000D

(The main production cost is labor cost, so this is the net income and also the real income for the group; with the pilot production size, the expenses for taxes have not been included.)

### E. Organizational plan

Before starting the production, the following activities should be accomplished:

- Because when the implementation of the mission was overlapped by the project village planning, it is necessary to make the commune authority more aware of the objectives of the mission
- Strengthening the group abilities through trainings.
- Preparing a detail business plan for the groups.
- Carefully reassess the land resources for the production, especially with the access to the land resource.
- Readjusting the production plan

### F. Resource management plan:

It has been detail assessed the resource management aspects through exercises of this phase, the selected product is a cultivated product, there is no problem of resource management with the production.

The production will practically contribute to resource management as well as environment protection.

### G. Social plan:

- The production of Seed lac creates job for not only men but also for women. The form of working in group will promote the community solidarity and collaboration.
- The Seed lac plantation is familiar to local people it is well accepted by every community members.
- The initiated form of producer groups is not a official organization but it is encouraged by local authority.
- It is necessary to have support to capacity building of the group management.

## ANNEX 1: WORK PLAN & TIME SCHEDULE – MA&D PHASE II - TUA CHUA, LAI CHAU

### I- Confirmation of market and technique aspects: (8 days)

Date	Activities	Where?	Who?	Required support
June 25 <sup>th</sup>	Market / technique information confirmation of Seed Lac	Ha Dong Ms. Phi - NTFP project, Hanoi	Tu	Travel , lodging cost
June 26 <sup>th</sup> , 27 <sup>th</sup> , 28 <sup>th</sup> , 29 <sup>th</sup>	Market / technique information confirmation of Xa nhan, Cautich, medicinal plants (Do trong, Thien nien kien, ... )	Govt. Medicine companies, Hanoi, Ninh Hiep-Gia lam Written data, NEDCEN, MARD	Tu	Travel, lodging cost
June 30 <sup>th</sup> , July 1 <sup>st</sup> , 2 <sup>nd</sup>	Market/technique information confirmation of medicinal plants	Laocai Medicinal plant company, Sapa Medicinal plant research station	Tu	Travel, lodging cost

### II- In field activities: (21 days included travel and report writing time)

Date	Activities	Where?	Who?	Required
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				support
July 11 <sup>th</sup>	Travel to Tua Chua	Son la - Tua Chua	Tu	The project car
July 12 <sup>th</sup>	Briefing the phase I result, market survey results at national level and the mission of phase II with project staff; training on roles/ responsibilities; Preparation for following days	Tua Chua SFDP office	Tu, project staff	Some stationery provision
July 13 <sup>th</sup> to 18 <sup>th</sup> (6days)	<ul style="list-style-type: none"> <li>July 13<sup>th</sup> : Interviewing , data collection - Sa nhan group</li> <li>July 14<sup>th</sup> : Interviewing, data collection - Canh kien group</li> <li>July 15<sup>th</sup> : Interviewing , data collection - Cau tich group</li> <li>July 16<sup>th</sup> : Workshop with 3 groups- Selection of promising products</li> <li>July 17<sup>th</sup>: Formation of interest groups</li> <li>July 18<sup>th</sup>: Workshop with 3 groups- Initiating business strategies</li> </ul>	Trung Thu commune	Tu, the project staff, the villagers	The project facilitators and vehicle
July 19 <sup>th</sup> to 24 <sup>th</sup> (6 days)	<ul style="list-style-type: none"> <li>July 19<sup>th</sup> : Interviewing , data collection - Sa nhan group</li> <li>July 20<sup>th</sup> : Interviewing, data collection - Canh kien group</li> <li>July 21<sup>st</sup> : Interviewing , data collection - Cau tich group</li> <li>July 22<sup>nd</sup> : Workshop with 3 groups- Selection of promising products</li> <li>July 23<sup>rd</sup> : Formation of interest groups</li> <li>July 24<sup>th</sup>: Workshop with 3 groups- Initiating business strategies</li> </ul>	Xinh Phinh commune	Tu, project staff, the villagers	The project facilitators and vehicle
July 25 <sup>th</sup>	Data analysis	Tua Chua SFDP office	Tu, project staff,	
July 26 <sup>th</sup> , 27 <sup>th</sup>	- Additional data collection (also for Do trong, Song-large diametre rattan)  - Travel to Dien bien	Tua Chua district	Tu, project staff,	The project facilitators and vehicle
July 28 <sup>th</sup>	Travel to Hanoi	Dien bien - Hanoi	Tu	Plane ticket, the project car
July 29 <sup>th</sup> to 31 <sup>st</sup>	Report writing		Tu	

## ANNEX 2: LIST OF INFORMANTS

No	Name	Organization, location	Position
1	Mr. Vuong	Private Seed Lac processing Enterprise, Ha Dong	Owner
2	Mrs. Hoa	Private Seed Lac processing Enterprise, Ha Dong	Owner
3	Mr. Phong	Private Seed Lac processing Enterprise, Ha Dong	Owner
4	Mr. Khuong	The People's Committee, Ninh Hiep Commune, Gia Lam, Hanoi	Head, Administration
5	Mr. Nguyen Tu	Village No 8, Ninh Hiep Commune, Gia Lam, Hanoi	Vice, People's council
6	Mr. Chinh	Ninh Hiep Commune, Gia Lam, Hanoi	Processor
7	Mr. Hai	Ninh Hiep Commune, Gia Lam, Hanoi	Processor
8	Mrs. Phi	NTPP Research Center, Hanoi	Officer
9	Mr. Tien	Lao cai Pharmaceur Company	Director
10	Mr. Mai	Sapa Medicinal Plant Research Station	Vice director
11	Mr. Hanh	Tranphaco, Hanoi	Vice director
12	Mr. Toai	Mai Chau Forest Protection Station, Hoa Binh	Director
13	Mr. Thao	Suoi Nanh village, Tan Mai commune, Mai Chau, Hoa Binh	Head, People's council
14	Mr. Tuan	Suoi Nanh village, Tan Mai commune, Mai Chau, Hoa Binh	Villager
15	Mr. Tu	Agriculture section, Tua Chua district, Lai Chau	Head
16	Mr. Dinh Na	The People's Committee, Tua Chua district, Lai Chau	Chairman

**ANNEX 3: LIST OF PARTICIPANTS IN THE FIRST WORKSHOP DAYS**

No	Name	Ethnic group	Age	Education level	Village
1	Trung Thu commune:				
2	Vu A Che	H'mong	27	9/12	Pu Ka Dzao
3	Thao A Ky	H'mong	40	6/10	Ban Phu
4	Vu Vang Ko	H'mong	42	4/10	Chong Phan Kho
5	Sung Giang Pua	H'mong	46	illiterate	Chong Phan Kho
6	Sung A Dzin	H'mong	43	1/10	Chong Phan Kho
7	Sung A Cho	H'mong	27	illiterate	Trung Thu
8	Vang A Lau	H'mong	34	3/10	Trung Thu
9	Vu A Su	H'mong	44	2/10	Pu Ka Dzao
10	Vu A Mang	H'mong	26	2/12	Trung Thu
11	Song A Vu	H'mong	46	2/10	Pu Ka Dzao
	Vu A Kau	H'mong	45	10/10	Comm. Party secretary
1	Sinh Phinh commune:				
2	Giang A Su	H'mong	26	4/12	Phi Dzin 2
3	Vang A Chang	H'mong	40	6/10	Phi Dzin 2
4	Cu A Ky	H'mong	24	4/12	Vang Chua
5	Cu A Chang	H'mong	46	2/10	Vang Chua
6	Cu A Ky	H'mong	23	5/12	Vang Chua
7	Cu A Lenh	H'mong	25	4/12	Vang Chua
	Sung A Co	H'mong	62	1/10	Ta La Cao

**ANNEX 4: LIST OF REPRESENTATIVES OF INTEREST GROUPS WHO PARTICIPATED IN LAST WORKSHOP DAYS**

No	Name	Ethnic group	Age	Education level	Village
1	Trung Thu commune:				
2	Song A Vu	H'mong	45	2/10	Pu Ka Dzao
3	Vu Dzua Ma	H'mong	26	2/12	Trung Thu
4	Thao A Dzenh	H'mong	26	3/12	Chong Phan Kho
5	Thao A Ky	H'mong	40	6/10	Ban Phu
	Ly a Chang	H'mong	26	3/12	Trung Thu
1	Sinh Phinh commune:		26		
	Giang A Su	H'mong	40	4/12	Phi Dzin 2
	Vang A Chang	H'mong	42	6/10	Phi Dzin 2
	Giang A Dze	H'mong	27	4/10	Ta La Cao
	Sung A Khai	H'mong		8/12	Ta La Cao

## ANNEX 5: SAMPLE OF PRODUCT SCORING SEED LAC

<b>Market economy area</b>		
Raw material resource	large medium small	2 2 1
Market potential / level of demand	high medium low	4 2 1
Competition	low medium high	3 2 1
Constraints to business entry	low medium high	3 2 1
Profitability	high medium low	3 2 1
<b>Resource management / environment area</b>		
Availability in time	always sometime rare / seasonally	3 2 1
Availability in space	large medium small	3 2 1
Time of the production	short medium long	3 2 1
Regeneration potential	high medium low	3 2 1
Impact of harvesting on survival of species	positive no impact negative	2 2 1
Impact production on environment	positive no impact negative	3 2 1
<b>Policy/ Social/ Institutional area</b>		
Benefits for the community	high medium low	3 2 1
Contribution to income	high medium low	4 2 0
Experiences with the product	high medium low	3 2 1
Potential of employment creation	high medium low	4 2 0
Gender impacts	women involved both men & women only men involved	3 2 1
<b>Science/ Technology area</b>		
Suitability to rural entrepreneurs-production location	village district province & others	3 2 1
Suitability to rural entrepreneurs-technology requirements	high medium low	@ 2 1
Infrastructure status	high medium low	3 2 1

Human resource/expertise	available medium limited	3 2 1
Human resource/quantity	available medium limited	3 2 1
<b>Total:</b>		<b>52</b>