

CASE STUDY

DESIGNING TREE, FOREST AND HOME GARDEN PRODUCT ENTERPRISES FOR SUSTAINABLE DEVELOPMENT



BOOKLET F



Food and  
Agriculture  
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United Nations



This case study illustrates the use of the MA&D methodology to identify products and to develop viable tree, forest and home garden product enterprises at community level in Viet Nam without degrading the forest resource base and the environment. It provides examples of the methods and tools used by the facilitating team.

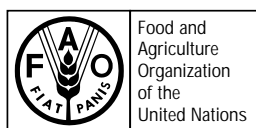
**Community-based  
tree and forest  
product enterprises:  
Market Analysis  
and Development**

**BOOKLET F**

**CASE STUDY:  
DESIGNING TREE, FOREST  
AND HOME GARDEN  
PRODUCT ENTERPRISES  
FOR SUSTAINABLE  
DEVELOPMENT**

A case study on use  
of the Market Analysis  
and Development methodology  
in Tuyen Hoa and Minh Hoa districts,  
Quang Binh province,  
Central Viet Nam

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## Background

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### The project

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The Integrated Food Security Project (IFSP) is a German-Vietnamese collaboration programme designed to improve the basic living conditions of people living in the Tuyen Hoa and Minh Hoa districts, Quang Binh province, Central Viet Nam.

Tuyen Hoa and Minh Hoa districts are mountainous, with a relatively high surface area under forest cover, and the local population is thus unable to produce enough grain to meet its minimum consumption requirements. Malnutrition and diseases associated with inadequate diet are widespread, and possibilities to increase staple food production are limited. One of the tasks of the IFSP off-farm income opportunity component was to assist the local population to identify potential new sources of cash income, especially from tree, forest and home garden products. This would allow the poorest families, those with no agricultural lands, to purchase more food.

### The selected approach: Market Analysis and Development

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The managers of the project decided to use the Market Analysis and Development methodology (MA&D) in order to identify potential sustainable forest-based and non-agricultural cash income generating activities. The aim was threefold:

- MA&D can be used to identify products and/or potential businesses at the village level that can be used to generate income without destroying the forest resource base.
- The MA&D process can be used to assess the feasibility of tree and forest product enterprises, and to plan and design their development within the context of sustainable forest utilization and equitable distribution of benefits. It includes the use of methods and tools for determining when and where enterprises are technically, socially, environmentally, commercially and financially feasible.
- MA&D can be used by community members or by facilitators to identify products and markets based on both wild and domesticated resources, such as trees grown on farms or in community forests and plantations.

It focuses on capacity building and strengthening institutions at the community level to provide the support that local people need in order to develop and operate small enterprises. One of the goals of MA&D is that local people will be able to develop and operate their enterprises independently in the long term.

The MA&D process is conducted in three phases:

Phase 1: Assess the existing situation

Phase 2: Identify products, markets and means of marketing

Phase 3: Plan enterprises for sustainable development

## About this case study

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This case study illustrates the use of the MA&D methodology in order to identify and develop tree, forest and home garden product enterprises for sustainable development in remote areas of Central Viet Nam. It emphasizes the role that supporting institutions or individuals such as governmental or non-governmental project staff can play in facilitating the design of cash-generating enterprises by rural entrepreneurs.

This case study focuses on documenting the methods and tools used by the facilitating team conducting the MA&D and not on the actual results of the research.

**Note:** In the case study, values are expressed in Vietnamese dong (d): US\$1 = 13 000 dong





## **MA&D implementation:**

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# **preliminary planning activities**

### **Underlying principles**

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The underlying principles of the intervention were the following.

- The general purpose was to define income/benefit generation that also allowed sustainable natural resource management.
- The target group members were the main actors and decision-makers. Their active participation was central to the methodology. The role of the facilitator was to assist them in the choice of products and related activities.
- While an intervention may not benefit everyone in the community, it was assumed that no one (especially the poor, the disadvantaged, women, etc.) would be economically harmed by its activities.
- The intervention emerging from MA&D would continue to be viable and efficiently operated after the departure of the facilitator.

### **Preliminary planning activities**

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The Director of the IFSP assigned two staff members to organize and implement the MA&D process in four communes within the project area. In this case study, the assigned project staff members are referred to as facilitators. Their main tasks were to:

- train and facilitate the work of the local information gatherers;
- organize and facilitate workshops for rural producers and other members of the target group;
- obtain additional information at district and provincial levels as required; and
- assist target group members to analyse information and to develop recommendations.

In order to achieve these tasks, the facilitators first undertook a series of preliminary planning activities in order to: (1) define the goals and objectives of their activities; (2) select the site(s); and (3) organize the information-gathering team in order to obtain a sound basis for field implementation.

### **Define the goals**

The project's goal was, through MA&D, to identify products for viable tree, forest and home garden product enterprises at community level to generate income for local communities without degrading the forest resource base and the environment.

### **Define the objectives**

The main objectives were to:

- conduct the three phases of the MA&D approach in two communes of Tuyen Hoa district and in two communes of Minh Hoa district; and
- introduce project staff and local participants to the concepts, process, methods and tools of MA&D.

The planning objectives were to:

- select four communes from the 32 communes of the project area;
- organize and conduct Phase 1 (Assess the existing situation) during 15 days in February;
- organize and conduct Phase 2 (Identify products, markets and means of marketing) during four weeks in March and April; and
- organize and conduct Phase 3 (Plan enterprises for sustainable development) during three weeks in May.

### **Select a site**

The project's facilitators selected Thuan Hoa and Le Hoa communes in Tuyen Hoa district and Xuan Hoa and Yen Hoa communes in Minh Hoa district as pilot sites for implementation of MA&D.

The facilitators set the following criteria for selection of the communes.

- The site has high diversity of resources and products, including the use of forest products in addition to agricultural products.
- PRA had already been conducted in these communes.
- The communes had already indicated that 'the creation of cash income activities' was one of their priorities.
- Most parts of the communes comprise 'mountain' lands of low or medium altitude ranging from 300 to 500 m, which still have significant forest cover.



## Phase 1 | Assess the existing situation

This is an exploratory phase in which the aim is to understand the key issues of the existing situation. The broad limits of the future enterprises can then be determined in terms of possible scale and potential products, markets and means of marketing, as well as potential partners.

MA&D starts from what already exists and considers products that are already traded and provide income.

The facilitating team wanted to assess the readiness of the remote villages to undertake income-generating activities. Consequently, they defined the following specific objectives for Phase 1:

- to identify the target group of men and women already selling trees, forest and home garden products;
- to help the target group members to determine their financial objectives;
- to guide target group members in preparing a list of existing resources and products;
- to assist them in determining constraints that limit the performance of the existing market system;
- to assist them to eliminate non-viable products;
- to raise awareness of the benefits of working together; and
- to identify potential participants in Phase 2.

### Preliminary planning activities

#### *Organize a team*

Conducting Phase 1 of MA&D requires the participatory collection of information at different levels. Therefore, the facilitators of the project organized a team of 12 information gatherers, comprising community members (three per commune) traditionally involved in the trade of tree, forest and home garden products. The information gatherers were selected according to the following criteria:

- their ability to follow oral and written instructions;
- their ability to record information as per instruction; and
- their possession of adequate social skills and ability to meet men and women, discuss with them, obtain the required information, and record it clearly.

The people who met the criteria were found among the members of women's groups and youth unions. Some already had experience in implementation of small development activities.

The facilitators gave the 12 information gatherers a short training course just before the beginning of Phase 1 in order to introduce them to MA&D principles and tools. From this point on, the facilitators and the information gatherers are called the facilitating team.

### **Time schedule for Phase 1**

After spending two days in the provincial town of Dong Hoi getting a broad understanding of the provincial situation, the facilitators moved to the study site in Tuyen Hoa and Minh Hoa districts.

The information gatherers had been gathered at the Minh Hoa project station for a two-day training session on the MA&D conceptual framework and methods. The trainees learned about tools for collecting the information required in Steps 1 and 2 of Phase 1. They then went back to their villages for four days to implement these steps, with the support of the facilitators who went to each commune in turn. When the information for Steps 1 and 2 had been collected, the information gatherers met again for a full day's training on the other tools to be used in Phase 1.

They then spent four days collecting information for Steps 3 and 4, assisted by some members of the facilitating team. Other members of the facilitating team were at the same time completing information collection at the provincial level and in other districts. The four final days of information gathering focused on the elimination of non-viable products and were conducted by rural stakeholders. To this end, one informal workshop was organized in each commune. The information was presented and issues were discussed with the information gatherers at the end of the study.



## STEP 1: Identify the target group

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After developing an understanding of the theoretical framework of MA&D, information gatherers worked with the facilitators to implement Phase 1 in the target villages.

### *How the target group was identified*

It was decided not to consider agriculture and livestock products because they were related to activities dealt with under other components of IFSP. The study focused on activities related to production, processing and marketing of tree and forest products, and of products cultivated on-farm on a marginal basis for cash income.

In order to define the target group, the facilitating team needed to obtain the answers to the following questions.

- How many people are involved in producing, manufacturing, transporting and marketing of home garden and forest products?
- What products are at the centre of the activities of each type of actor? In order to determine who should be involved, so as to ensure that the intervention would have the widest impact, it was necessary to understand the economic importance of the products.
- Who could be best helped by an improvement of the activity?
- Who has expressed an interest in improving the activity?

### HOUSEHOLDS INVOLVED IN PRODUCING FOR THE MARKET

One goal of the project was to promote the creation of sustainable tree, forest and home garden product enterprises by a large number of rural producers who could not get enough food from their agricultural lands. Therefore, the first step towards identifying the target group was to focus on farmers who had insufficient land to produce food year round.

As most of the population depended on home garden and forest products, the facilitating team decided to narrow the target group to men and women who were deeply involved in producing and/or processing tree, home garden and forest products for the market. The results of their research in the four communes are summarized in Table F.1.



**TABLE F.1** Number of households producing tree, forest and home garden products for the market

COMMUNES	NOT PRODUCING FOR THE MARKET	PRODUCING FOR THE MARKET	TOTAL
Le Hoa	18	404	422
Thuan Hoa	66	205	271
Xuan Hoa	64	431	495
Yen Hoa	122	529	651
<b>Total</b>	<b>270</b>	<b>1569</b>	<b>1839</b>

The survey revealed that about 85 percent of the population of 1839 households in the study area were producing for the market. They usually harvested from the forest or grew on the farm a variety of resources or products for the market as part of a livelihood strategy for the family. Only 15 percent were not involved in producing for the market, mostly families in which the labour force was limited, or families that earned cash income from other activities. The 1569 households producing for the market became at this point the *target group* on which the remaining part of the study focused.

The source of this information was direct interview of commune and village leaders who kept records of the socio-economic situation of each family. The information was cross-checked through direct interviews with a sample of five households (a total of ten per village) from each group: those producing for the market, and those producing only for their own consumption.

#### **GETTING BETTER KNOWLEDGE OF THE 1569 HOUSEHOLDS PRODUCING FOR THE MARKET**

Families producing for the market were using a combination of livelihood strategies, depending on the size and type of their land, the size of the household labour force, access to knowledge and capital, and family requirements. They earned cash from agricultural products, from livestock and fish raising, and from the harvest, processing or sale in raw form of home garden and forest products. About 80 percent of the families included the sale of forest products in their livelihood strategy. For a majority of these families, this amounted to between 30 and 40 percent of the household income. For other families, the proportion was as low as 15 percent and for some as high as 65 percent of their household income.

Villages were specialized in harvesting specific products for specific buyers, for example, fuelwood in Dong Le, silkworms in Ba Nuong, palm leaves in Yen Duc, and grass flower in Hop Loi. However, every household complemented these main activities with harvesting rattan, collecting wild honey, hunting wildlife and singing birds, and logging. Mainly women and children were involved in harvesting forest fruits, mushrooms, bamboo shoots and other forest products with lower market value.

Farmers went to the forest according to the production calendar of the various forest products, and according to the free time they had available. Households in the poorest rank of the population went more frequently to the forest to harvest a wide range of products, including those with a relatively low market value. The richest families also went to the forest, but not so frequently and in order to collect products of higher value.

The products used as sources of income vary geographically. People were more dependent on forest products in Minh Hoa because of lower access to agricultural land, poorer infrastructure, and the need to travel longer distances to market places and to obtain information. Villages were specialized in certain types of products according to the type of market outlets to which they were linked. Since every commune had a large land surface under forest cover, the distance between the village and the resource did not seem to influence the use of forest products as a source of income. More than the proximity of the resource, the distance to the market place was a key factor in determining the importance of a product as a source of cash income.

## STEP 2: Determine the financial objectives of the target group

Once the target group of potential entrepreneurs was identified, the next step was to determine the extent to which they wanted to improve their financial situation through the future enterprise. In order to do this, the facilitating team selected a sample of target group members and worked with them to calculate their financial objectives.

The facilitating team tried to develop a socio-economic profile of the target group through a wealth ranking exercise. Table F.2 shows the results.

**TABLE F.2** Wealth ranking in number of households of the target group in the four communes

RANK	NUMBER OF HOUSEHOLDS	% OF HOUSEHOLDS
Rich	50	3
Average	430	22
Poor	1462	75
<b>Total</b>	<b>1942</b>	<b>100</b>

The sources of information were village statistics and the results of a participatory rural appraisal (PRA) that was carried out by the project with leaders of the villages and confirmed by direct interview with a sample of 104 households from the target group.

Table F.2 shows that 22 percent of the population fell into the average rank, which means they lacked food for one to three months of the year, and 75 percent were in the lowest stratum, which means they lacked food for more than three months of the year, had no surplus, and had a crucial need for cash income to fill this gap. A minority of households had the capital to invest in new production or an enterprise, but the majority needed external financial support in order to be able to start up any new activities.

This wealth profile of the target group was used for the sampling of informants in the subsequent steps of the research.

### **Sample informants**

Under the guidance of the facilitators, the information gatherers took as informants a sample of 5 to 6 percent of people from the total number of households in each wealth rank of the target group, as detailed in Table F.3.

**TABLE F.3** Distribution of the selected informants from the target group by wealth rank

RANK	NUMBER OF HOUSEHOLDS PER WEALTH GROUP	NUMBER OF INFORMANTS PER WEALTH GROUP
Rich	50	3
Average	430	25
Poor	1462	76
Total	1942	104

### **Conduct a livelihood needs analysis**

The facilitating team then helped the sampled target group members to calculate their financial objectives by using the format shown in Table F.4.

**TABLE F.4 Livelihood needs analysis and expectations for one family**

Date: 2-2-98 Village: Ba Tam Number of family members: 7 Number of labour force: 3

TYPE OF NEEDS	CURRENT CONSUMPTION IN ONE YEAR		ACTUAL AMOUNT NEEDED IN ONE YEAR		BALANCE	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>FOOD</b>						
Rice	670 kg	1 139 000 d	1 800 kg	3 060 000 d	1 130 kg	1 921 000 d
Beans	270 kg	1 458 000	270 kg	1 458 000	0	0
Cassava	670 kg	268 000	670 kg	268 000	0	0
Maize	270 kg	459 000	470 kg	799 000	200 kg	340 000
<b>FUEL</b>						
Dry fuelwood	104 bundles	832 000	104 bundles	832 000	0	0
<b>FODDER</b>						
Cassava	500 kg	200 000	500 kg	200 000	0	0
Maize	250 kg	425 000	830 kg	1 411 000	580 kg	986 000
<b>HOUSING</b>						
Timber	(for repairs)	500 000	(for repairs)	1 000 000		500 000
Palm leaves						
Tiles						
<b>CASH</b>						
Pension	240 000	240 000	(for consumption)	5 768 000		0
Livestock	1 950 000	1 950 000				
Beans	20 kg	108 000				
Limestone		1 500 000	(for starting production)	1 500 000		1 500 000
Large-diameter rattan	58 poles	1 160 000				
Small-diameter rattan	360 kg	540 000				
Honey	8 bottles	270 000				
<b>Total</b>		<b>11 049 000 d</b>		<b>16 296 000 d</b>		<b>5 247 000 d</b>

US\$1 = 13 000 dong (d)

**Note:** Calculations are based on the market price per kg in the two districts at the time of the survey, as follows: rice, 1700 d/kg; maize, 1700 d/kg; cassava, 400 d/kg; beans, 5400 d/kg; fuelwood, 8000 d/burden; large-diameter rattan, 20 000 d/pole; small-diameter rattan, 1500 d/kg; honey, 32 750 d/bottle.

As Table F.4 shows, the total minimum needs minus the current consumption gave financial objectives of \$403 (5 247 000 dong) for this family. This was the minimum amount of income that the household expected to obtain through the new enterprise in order to meet its needs throughout the year.

The results of the calculation of financial objectives showed that US\$221 to \$580 was needed to meet the basic needs of most households. The majority needed the equivalent of \$307 to \$460 per year.

Therefore, the future enterprise could provide farmers with an increase in income ranging from three to six million dong per year. These financial objectives, in effect, then determined the scale of the future enterprise. In the next phase, products were selected that could provide this amount to the majority of the target group.



## STEP 3: List existing resources and products

Once the target group of potential entrepreneurs has been identified and once they have clarified their financial objectives, they should be encouraged to obtain an overview of available tree and forest products.

The facilitating team assisted the farmers in listing tree, forest and home garden resources and products available to them in the four communes.

In addition to a review of secondary sources available in the local forestry and agricultural development offices, information was gathered through observation and direct interviews with target group members who harvested resources from the forest and produce from home gardens. Information gathering focused exclusively on tree, forest and home garden products but was not limited to products sold at the time of the survey. Even if they were not currently exploited, products that had previously been a source of income and products that were harvested in other communes were included in the inventory.

The output of this step was a list of existing resources and products available at the site both for home consumption and for cash income (see Table F.5).

Eleven products and product groups were important to a number of households: silkworms, rattan, eagle wood resin, palm leaves, home garden fruit trees, wild honey, aquaculture, fuelwood, wildlife, quercus seeds and timber. Although the exploitation of eagle wood, wildlife and timber is banned by the government, these products are nonetheless heavily exploited and traded, which causes extensive damage to the forest.

Other products included a variety that have a lower market value, including medicinal plants, forest fruits, grass flowers, mushrooms, and bamboo shoots. These products were, however, a source of income for a large number of families.

There were also products that had been harvested or grown in the past, but for which there was no longer demand, for example, oils of trau, or lai, and grass flowers for brooms, which had previously been exported to Russia. These products, which are still abundant in the forest, may have potential markets outside the area, but the local population had no access to this information.



TABLE F.5 List of resources and products

RESOURCE/PRODUCTS	QUANTITY OF SUPPLY AVAILABLE			QUANTITY SOLD		
	Limited	Moderate	High	Limited	Moderate	High
Wild honey		X				
Large-diameter rattan ( <i>Daemonorops longispathus</i> Becc.)		X			X	
Small-diameter rattan ( <i>Calamus tetradactylus</i> Hance) ( <i>Calamus tenuis</i> Roxb. & <i>Calamus tonkinensis</i> Becc.)			X			X
Wildlife (10 species)		X			X	
Singing birds		X			X	
Fuelwood			X		X	
Eagle wood resin ( <i>Aquilaria crassna</i> )	X			X		
Sassafras oil	X			X		
Medicinal plants (28 species)	X for some	X for some		X		
<i>Acacia montana</i> oil		X		X		
Fish from rivers/streams		X		X		
Timber (6 species)	X			X		
Orchids		X		X		
Grass flower for brooms ( <i>Thysanolaena maxima</i> Roxb. Kuntze)			X		X	
Palm leaves ( <i>Licuala tonkinensis</i> Lour. Merr.)		X		X		
Banana flowers		X		X		
Forest fruits (8 species)	X			X		
Quercus seeds ( <i>Lithocarpus</i> sp.)	X			X		
Wild vegetables (5 species)	X			X		
Star anise ( <i>Illicium verum</i> Hook.)	X			X		
Cinnamomum bark ( <i>Cinnamomum</i> sp.)		X		X		
Wrapping leaves ( <i>Phrynium placentarium</i> Lour. Merr.)		X		X		
Chewing bark ( <i>Artocarpus lakoocha</i> Roxb.)		X		X		
Mushrooms		X			X	
Bamboo			X	X		
Bamboo shoots		X		X		
Wooden furniture		X			X	
Wooden handicraft	X			X		
Beeswax	X			X		
Rattan/bamboo knitting		X		X		

## **STEP 4: Identify key constraints of the existing market system**

Target group members needed to understand the context within which their enterprise will operate. They had to identify the problems that may seriously affect the production, processing and marketing of tree and forest products, and they had to gather information to document them.

The facilitating team assisted information gatherers to use worksheets for collecting information under the four main areas of enterprise development: market/economy, resource management/environment, social/institutional, and science and technology.

The information gatherers obtained the required information from the following informants in Quang Binh province in order to identify the key constraints of the existing market system at provincial and district levels:

- Deputy Director, Forestry Division, Department of Agriculture and Rural Development;
- Director, Extension Service, Department of Agriculture and Rural Development, Quang Binh;
- Director, Tax Department of Quang Binh province;
- Vice Director, Viet Nam Bank for Agriculture of Quang Binh province;
- Deputy Director, Department of Planning and Investment, Credit Development Project;
- Chairman, Viet Nam Centre for Co-operatives and Small and Medium Enterprises;
- Senior Technical Advisor, Strengthening Capacity for Hunger Eradication project;
- Director, Forest Product Company (governmental);
- Director, Long Dai Forestry Industry Company (governmental);
- Director, Quang Binh Pharmaceutical Company (governmental);
- Director, Quang Binh Domestic Goods Trading Company (sells pepper and dried chilli; governmental);
- Manager, Rattan Processing Enterprise (part of Long Dai Corporation of Forestry Industries);
- Manager, Pine Resin Production Factory (part of Long Dai Corporation of Forestry Industries);
- Director, Duc Ninh Credit Cooperative; and
- ten owners of small private enterprises of rattan and bamboo handicrafts, conical hat traders, palm leaves and small rattan traders and producers.

Informants in Quang Trach, Minh Hoa and Tuyen Hoa districts included:

- Director, Imexco (forest products import/export company) branch (governmental);
- Deputy Director, Department of Agriculture and Rural Development;
- Head, Department of Industry;
- Deputy Director, Agriculture Bank/Bank for the Poor;
- Head, Department of Education;
- Director, Forest Enterprise;
- Director, Tax Department;
- Director, Minh Hoa State Mountain Trade Company;
- Deputy Director, Co Cang Agriculture Cooperative;
- Vice Director, Pharma-company of Tuyen Hoa; and
- 11 owners of family enterprises of transportation and trading of palm leaves, medicinal plants, wildlife, rattan and grass flower brooms, and enterprises engaged in limestone burning and brick making.

The information-gathering team used the forms shown in Tables F.6 and F.7 for gathering information based on the market/economy checklists in order to identify obvious constraints.

**TABLE F.6** Sample form for recording market information

Products	Main market places	Time needed to reach the market places	Transport means?	Costs of transporting goods to market places	How many trips to the market places for selling	Amount of tax/legal fees paid	Problems encountered Other costs?
Wild honey	Dong Le Market and traders	45 min	On foot	None	4 days per month, 4 months a year	None	Lack of supply
Small-diameter rattan	Bo Thrach Imexco Cy	3 hours	River motor boat	10 000 d	Once a month	None	Time consuming

**Note:** for easier readability, this example focuses on the market aspects of only two of the products considered in the study.

Table F.6 shows that some producers faced many difficulties in getting to the market, had to include high transport costs, and spent a considerable amount of time selling their products. But the most serious constraint to the development of an enterprise revealed here is the shortage of the supply of wild honey.

**TABLE F.7** Experience of the target group in receiving credit

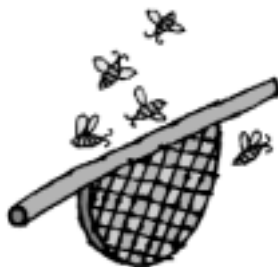
Credit source	Amount	Sponsoring group	Purpose	Credit term	Interest rate	Reimbursement rate	Other credit needs
Poverty alleviation programme	1 200 000 d	Farmers' Association	Aquaculture	18 months	1,2%	Not late	None yet
Bank for the Poor	1 000 000 d	Women's Association	Pig raising	12 months	1 %	Two months late	None

Table F.7 shows that farmers had never obtained credit for developing the production of tree and forest products, and that local people had very little experience in receiving and managing financial support. Lack of access to capital might be a serious constraint for target group members who want to develop the production, processing or trading of tree and forest products.

## STEP 5: Shortlist a range of products

Once the target group members and the resources and products available to them have been identified and the constraints related to their context are understood, the range of promising products can be narrowed by eliminating those which are obviously too risky to be developed.

There are certain constraints that may be impossible to overcome in developing a product for an identified market. In this step, the facilitating team assists the target group in analysing the information gathered earlier in order to understand how to abandon obviously non-viable products.



### **Organize workshops for the target group members**

After aggregation of information, the facilitating team assisted target group members in organizing a workshop in each commune. In one of the workshops, target group members in attendance included three who were involved in the production of palm leaves, three in silk-worm production, three in rattan, three in quercus seeds, three in honey and three in fuelwood. Also at the workshop were the facilitator and the information gatherers. In another commune, those at the workshop included three information gatherers, four producers of black pepper, four of rattan, two of honey from beekeeping, two of honey from bee hunting, three of medicinal plants and three of cinnamomum bark.

### **Guide the participants in the elimination of non-viable products**

Twelve products were eliminated as unsuitable for the following reasons.

**Legal.** There were bans on the exploitation of wildlife, eagle wood, timber, sassafras oil and singing birds.

**Resource conservation.** The following resources were being rapidly depleted: large-diameter rattan, several species of medicinal plants, river fish, chewing bark, cinnamomum bark and fuelwood.

**Market.** The market value of banana flowers, some species of forest fruits and vegetables, and medicinal plants was too low.

This information is shown in Table F.8.

### **Encourage participants to reduce the range of products by expressing their own preferences**

In one commune, participants started the selection with a list of 41 resources and products. Eighteen products were eliminated as a result of the objective elimination exercise. Then 11 other products or groups of products were rejected by the participants, leading to a range of 12 products remaining at the end of Phase 1.



TABLE F.8 Elimination of non-viable products in one commune

RESOURCE/PRODUCTS	ELIMINATION	Criteria for elimination, or areas where more information is needed			
		MARKET/ ECONOMY	RESOURCE MANAGEMENT/ ENVIRONMENT	SOCIAL/ INSTITUTIONAL	TECHNOLOGY AND SCIENCE
Wild honey	X	Seasonal	Rapid decrease of beehives		Far from the village
Large-diameter rattan	X		Depletion, no farming		Far from the village
Wildlife	X		Depleted	Banned	
Fuelwood	X		Risk of depletion		
Eagle wood resin	X		Depleted	Banned	
Sassafras oil	X		Depleted	Banned	
<i>Homalomena odorata</i>		Needs more investigation			Needs more investigation
Vang tea leaf	X	Low market value because of better substitute			
Fish from rivers/streams	X		Rapid depletion		
Timber logging	X		Decrease of stock	Banned	
Orchids	X		Risky		
Grass flower for brooms		Needs more investigation			Needs more investigation of potential processing
Mushrooms		Needs more investigation			Needs more investigation of spores
Palm leaves		Needs more investigation			Needs more investigation
Palm leaves for hats		Needs more investigation			Needs more investigation
Banana flowers	X	Low value			No processing
Forest fruits	X	Low value			Transport difficult
Quercus seeds		Needs more investigation			
Star anise	X	No demand			
Cinnamomum bark		Needs more investigation			
Wrapping leaves		Very seasonal			
Chewing bark		Low market value	Risk of depletion		

X indicates that the product has been eliminated.

## **STEP 6: Raise awareness of the benefits of working together**

Even if target group members make their own decisions about their future business activities, they will still need outside support in order to achieve some of the tasks. Nevertheless, supporting target group members on an individual basis would not have significant economic impact, and this would be hardly feasible within a project context. That is why there is a critical need for an organizational structure (informal or formal) to which further assistance can be directed.

The facilitating team, therefore, helped target group members to understand the benefits of working together, in order to develop a sound basis for the eventual formation of interest groups based on specific products. To achieve this the participants were asked during the workshop to share their experiences with activities for which they had spontaneously organized groups in the past. They were invited to list the benefits of working in groups. They also described the way they traditionally formed groups, and the rules they set for their operation (size, responsibility, creation procedure, role of the representative). They realized then that they should organize themselves in the same way in order to design and develop small enterprises.





## **PHASE 2 | Identify products, markets and means of marketing**

In Phase 2, the target group is helped to select the most promising products and to gather information for their further development. By the end of this phase, interest groups are formed around each of the selected products, and a team will be formed to conduct Phase 3.

### **Preliminary planning activities**

The facilitators organized a new team to conduct Phase 2, because several members who had collected information during Phase 1 were not interested in continuing the research. This new facilitating team comprised the two project staff and 12 people from the villages who had expressed their willingness to participate in Phase 2 during the final workshop of Phase 1.

The list of selected products included items that had a national and international market dimension, therefore it took three weeks to conduct the Phase 2 survey at national and international levels. Two weeks were needed for the survey at community/district/provincial levels, because the field study had to be conducted in four communes.

It was difficult for the information gatherers to travel far from their villages and to conduct the survey out of the province or neighbouring provinces. Realizing that they could not complete the national and international surveys themselves, the facilitating team asked the project to hire a consultant to take over this part of the research.

At the beginning of Phase 2, the staff organized a one-day training session in order to train the team of information gatherers in the concepts and tools required to conduct Phase 2.

### **STEP 1: Analyse the four areas of enterprise development**

A mandate to collect information outside the province was given to the consultant together with a list of information the consultants were expected to provide. For the research within the province, the facilitators organized two groups of information gatherers: one group was to carry out research at district and provincial levels, another group was to collect information within the communes. Information was gathered to analyse the marketing channels and demand for every type of product, to estimate its potential supply and to identify competitors and direct and indirect actors engaged in its production, processing or trading.

### **Scope of the market analysis**

The market analysis outside the province focused on the products selected at the end of Phase 1, available in the four communes. These were:

- 'entry products' (small-diameter rattan, black pepper, honey); and
- products that needed further technical and market potential investigation (dyeing, aromatic and medicinal plants; mushrooms; bamboo; grass flower products and palm leaf products; silkworms; and quercus seeds).

Bamboo, quercus seeds and palm leaf products were not considered in this phase because a preliminary survey showed that too much time was needed to identify the species and to obtain reliable technical and market information.

As in Phase 1, the facilitating team gathered information in the four areas of enterprise development (market/economy, resource management/environment, social/institutional and science and technology) to identify opportunities and constraints in order to select the best products. The two examples below focus on the tools and methods used for the market/economy and the resource management/environment areas.

#### **COLLECT INFORMATION ON MARKET/ECONOMY ASPECTS**

In this case, the local market survey conducted under the market/economy area of enterprise development began with a review of printed materials and interviews with key informants, from retailers, traders and manufacturers at the provincial level, and down through the market channels to the village producers. The national and international surveys had been mandated to two people with experience in conducting market surveys.

#### **THE MARKET SURVEY: ANALYSIS OF THE MARKET CHANNELS**

Information was gathered to analyse the market channels of small-diameter rattan; black pepper; honey; dyeing, aromatic and medicinal plants; mushrooms; bamboo; grass flower products and palm leaf products; and silkworms.

The sources of information were printed materials and direct interviews. For each type, market information was gathered at community/district and provincial levels and at national levels. Research at international level was necessary for some.

Table F.9 presents an example of types of market information and the sources of information collected within the market/economy area of enterprise development.

TABLE F.9 Sources of information in the market/economy area

TYPE OF INFORMATION	SECONDARY SOURCES OF INFORMATION (WRITTEN)			PRIMARY SOURCES OF INFORMATION (DIRECT INQUIRY)		
	Community/district/province	National	International	Community/district/province	National	International
Market/economy focus  Demand/buyers  Competitors  Quality requirements		General Statistic Department records on cooperatives and small and medium enterprises	(Internet, fax, e-mail, mail) Assistance to exporters in developing countries Import promotion and trade facilitation Offices of traders, manufacturers	Local markets Consumers Private, middle and government trade and processing companies Private and government traders and manufacturing companies	Private and government producers, traders, storers, transporters, manufacturers, small cooperatives and large companies	Private traders, import, export, manufacturing companies (small and large)
Supply/potential quantity, calendar	Forest sustainable supply assessment report German Agency for Technical Cooperation (GTZ) previous project reports	Bulletins of research institutes		Villages and communes Producers and traders Direct actors (private and government) involved in trading these products	Direct actors (private and government) involved in trading these products	
Economic forces and constraints		Rules and regulations on trade, transport, processing of forest products		Village and commune leaders Producers and traders Industry and agriculture departments Direct actors (private and government)	Ministry of Agriculture, Forest Institute Research institutes (mushroom, honey, medicinal plants, etc.)	Import/export regulations
Taxes	Tax Department records			Tax Department	Tax Department	
Access to credit	Records of branch of Bank for the Poor			Farmers who received loans from Agri-Bank or projects	Credit/financial project	
Infrastructure and communication				Farmers, traders Private and government transport agencies or individuals Industry and construction departments	Private and government direct actors (traders, manufacturers and transporters)	

The facilitating team carried out the analysis of the market channel of each type of product. The following is a sample of the information collected about the domestic market of honey.



#### **EXAMPLE**

##### **Domestic production and market of honey**

In 1998, the total production of honey in Viet Nam is 4500 tonnes, out of which 3500 tonnes are exported. Currently the domestic knowledge about quality of honey is increasing. The domestic market is 1000 tonnes and is expected to reach 2000 tonnes in the year 2000, with the main domestic market in urban areas such as Ho Chi Minh, Ha Noi, Vung Tau and Dong Nai.

The export price is much lower than the domestic price. The export price is US\$0.95 to \$1.45 per kg while the domestic market price is about \$1.5 to \$3 per kg. In tourist areas like Cuc Phuong National Park, the producer is paid \$4.5 per kg of honey.

The reasons are that honey is traditionally believed to be of very high value as a medicine, especially for women's health care. It is considered a valuable gift for relatives at festival time. The labelled and packed quality is sometimes regarded as 'industrial' honey that has lost its natural qualities. Some buyers like to see the hives and pay hunters to go and get the honey. Buyers pay a high price, whatever the moisture content. For this reason, prospects for development of a niche market for pure, natural, certified honey for the domestic market should be studied. There is a need to study the technological options available, the training possibilities, etc. Support is greatly needed for organizing the market channels and for organizing and training producers to respect market and quality requirements.

Although no records are available, significant quantities of honey from Australia and Spain are imported into Viet Nam. These imports could be easily substituted by local production, if proper control of quality and proper purification and packing operations could be put in place.

#### **COLLECT INFORMATION ON RESOURCE MANAGEMENT/ENVIRONMENT ASPECTS**

In parallel with the analysis of the marketing channels, the facilitating team used several tools for collecting information on resource management. An example follows.



#### **EXAMPLE**

##### **A forest profile by rapid assessment**

The facilitators invited a national forest resource management expert and selected information gatherers. They also invited knowledgeable people (for example a famous traditional doctor who has already been a member of a medicinal plant inventory team in this area), and they fixed study times that did not disrupt local activities. The facilitating team recorded the name of the forest, its location, the legal status of the land, and the date that the information was collected. The facilitating team estimated the area of the selected forest, the crown cover of the forest, the stocking of shrubs or trees, the three most common species in the forest, and the condition of the forest (based on the opinions of the group and visual measurement). The reliability of information was checked through direct observation and by using triangulation.

**COLLECT INFORMATION ON SOCIAL/INSTITUTIONAL ASPECTS**

In parallel with the two other surveys, the facilitating team used several tools for collecting information on social/institutional aspects. An example follows.

**EXAMPLE****The design of the harvesting and production calendar of tree and forest products**

The team collected information on the harvesting and production seasons of tree and forest products, thus on the duration of the supply for potential enterprises. This helped entrepreneurs to figure out how different productions could be combined in order to harvest products and earn income throughout the year. They obtained the calendar shown in Table F.10.

**TABLE F.10** Harvesting and production calendar of tree and forest products in the four communes

RESOURCE/PRODUCTS	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
<i>Natural resources/forest</i>												
Wild honey				x		x	x					
Rattan		x	x	x	x	x	x	x	x	x	x	
Rattan fruits		x										
Wildlife	x	x	x	x	x	x						x
Fuelwood	x	x	x	x	x	x	x	x	x	x	x	x
Nhan Tran						x	x	x	x	x	x	
Bo Ket (hair)		x										
Kim Tuyen										x	x	x
Vang tea leaf	x	x	x	x	x	x	x	x	x	x	x	x
Timber for logging			x	x	x							
Orchids			x	x								
Grass flower for brooms		x										
Palm leaves	x	x	x	x	x	x	x	x	x	x	x	x
Quercus seeds									x	x	x	
Wild vegetables		x										
Cinnamomum bark								x				
Wrapping leaves		x										
Bamboo			x	x	x	x	x					
Bamboo shoots							x	x		x		
<i>Home garden</i>												
Fruits/vegetables			x	x	x	x	x	x	x	x		
Pepper			x	x	x							
Silkworms/food		x						x				
Honey	x				x				x			

## **STEP 2: Select the most promising products**

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### ***Process the information gathered in Step 1***

The facilitating team assisted the producers in aggregating and analysing the results of the surveys. As a result, two types of products were identified: those which can be developed through immediate intervention, such as rattan, honey, black pepper, palm leaves, silkworms and brooms, and those which required preliminary trials before being developed, such as dyeing, aromatic and medicinal plants, and mushrooms.

It was decided to operate the first selection among products that could be developed through immediate intervention: rattan, honey, black pepper, palm leaves, silkworms and brooms.

### ***Organize workshops with the members of the target group***

Once information had been compiled, the facilitating team organized a workshop. In this workshop, the facilitating team presented the results of the market survey at both local and national/international levels, and additional analysis of the market environment, to the other members of the target groups of potential entrepreneurs in order to give them a sufficient basis for selecting the products.

Equipped with this new knowledge, local entrepreneurs were better able to compare opportunities for each potential product and to assess them against criteria that proved critical for the successful development of any development and business venture.

The facilitating team introduced a tool called the product assessment table to the workshop members. Through this exercise, entrepreneurs further analysed the results of the marketing channels survey in order to identify opportunities and constraints of the products, as shown in Table F.11, which summarizes the outputs of the exercise conducted under the guidance of the facilitating team.

Before this exercise, 'honey' was named as one of the potential products. At the end of this exercise, everyone agreed that 'packed honey from beekeeping' should be considered for selection. This meant that, after addressing the constraints of the existing 'honey' and enhancing its specific qualities, entrepreneurs suggested raising bees for honey production and packing the honey, thereby proposing a new product.

After this exercise the future entrepreneurs had enough information to fill in a product selection form for each product, such as the sample presented in Table F.12.

TABLE F.11 Product assessment - conclusions for honey at community level

▲ MARKET/ECONOMY	▲ RESOURCE MANAGEMENT/ENVIRONMENT	▲ SOCIAL/ INSTITUTIONAL	▲ SCIENCE AND TECHNOLOGY
<p><b>Opportunities</b></p> <p>Low investment is required</p> <p>Production costs are low</p> <p>Little labour is required</p> <p>Honey has high market value</p> <p>It is in large demand</p> <p>Product acts as catalyst for development of other crops</p> <p>It has potential income from side products (beeswax, pollen)</p> <p>It is a speciality of the two districts</p>	<p><b>Opportunities</b></p> <p>It is suitable to the local ecosystem of the two districts</p> <p>It maintains biological diversity through pollination</p> <p>It acts as an influence to keep environment free of poison harmful for the bees (pesticides, etc.)</p>	<p><b>Opportunities</b></p> <p>Product has long tradition</p> <p>There is no legal restriction</p> <p>Activity can be carried out close to the house</p> <p>Activity involves little time investment</p>	<p><b>Opportunities</b></p> <p>Activity requires simple equipment and tools</p> <p>There is no need for skilled labour</p> <p>Technical knowledge is easily obtained</p>
<p><b>Constraints</b></p> <p>There is need to adapt to request of the buyer to pack honey in clear bottles</p> <p>It is difficult to find clear bottles</p> <p>It is difficult to sell a large quantity at one time</p> <p>The price of honey from beekeeping is lower than that of wild honey</p> <p>Producers do not know exactly what quality the market demands</p>	<p><b>Constraints</b></p> <p>Flower resources are reduced because of degradation of the forest</p> <p>It is difficult to control poison/pesticide used by non-beekeepers close to the gardens</p>	<p><b>Constraints</b></p> <p>Individual producers do not know how to improve</p> <p>There is lack of knowledge and experience of how to keep the groups functioning and active</p> <p>Activities are controlled only by men</p>	<p><b>Constraints</b></p> <p>There is lack of knowledge of new technology</p> <p>Seedling bee resources are difficult to obtain</p> <p>More instruments are needed to extract honey, to build the beehives and to refine honey</p> <p>Storage is difficult if honey is extracted the wrong way</p>

In the selection form, parameters are ranked (1, 2 or 3) according to their potential contribution or influence in achieving the product and market development goals. If the contribution of the factor is positive for the further development of the product it is ranked 3; if the contribution is neither positive nor negative, it is ranked 2; but if the contribution is negative, it is ranked 1. In this case, as the leverage rate of the future enterprises was an important objective of the project, the social factors 'Contribution to income' and 'Potential for creating employment' were ranked 4 in the highest ranking and 0 in the lowest.

TABLE F.12 Sample of product selection form for domestic honey

CRITERIA	SCALE	SCORE
<b>▲ MARKET/ECONOMY</b>		
Raw materials supply	large	3
	moderate	2
	limited	1
Market potential	large	3
	moderate	2
	limited	1
Competition (for finding a market niche)	weak	3
	moderate	2
	strong	1
Constraints to business entry (market channels policies expertise, financial needs)	slight	3
	moderate	2
	severe	1
Margins/profitability	high	3
	moderate	2
	low	1
<b>▲ RESOURCE MANAGEMENT/ENVIRONMENT</b>		
Availability (in time): seasonality	almost always	3
	occasionally	2
	rarely/seasonally	1
Availability (in space): time needed to find and harvest	widespread	3
	moderate	2
	rare	1
<i>For farm products form only</i> Length of time from planting to harvest	short	3
	moderate	2
	long	1
<i>For forest products form only</i> Regenerative potential	high	3
	moderate	2
	low	1

CRITERIA	SCALE	SCORE
<i>For forest products form only</i>		
Impact of harvesting on survival of the species	positive	3
	neutral	2
	negative	1
Impact of production on environment	positive	<b>3</b>
	neutral	2
	negative	1
<b>▲ SOCIAL/ INSTITUTIONAL</b>		
Indirect benefits for the community	high	3
	moderate	2
	limited	1
Contribution to income	high	4
	moderate	<b>2</b>
	low	0
Experience with the product	high	3
	moderate	<b>2</b>
	low	1
Potential for creating employment	high	4
	moderate	<b>2</b>
	low	0
Gender impact	women	3
	both men and women	<b>2</b>
	only men	1
<b>▲ SCIENCE AND TECHNOLOGY</b>		
Suitability for rural interest groups: processing location	village	<b>3</b>
	district	2
	province/ other	1
Suitability for rural interest groups: processing technology required	high	3
	moderate	<b>2</b>
	low	1
Infrastructure status	high	3
	moderate	<b>2</b>
	low	1
Human resources/skills expertise	available	3
	moderate	<b>2</b>
	limited	1
Human resources/number	available	3
	moderate	<b>2</b>
	limited	1
<b>Total</b>		<b>42</b>

**Note:** the numbers in bold in the score column are the scores given for domestic honey by the workshop members after having completed the assessment table.

### COMPARISON OF THE PRODUCTS' SCORES

Once the selection forms were filled in for each product, the future target group members compared the scores of the different products under the guidance of the facilitating team, using Table F.13 as a guideline.

Table F.13 indicates the most promising products to develop under the local circumstances.

In this case, domestic honey, silkworms and cultivated rattan obtained the best scores. Forest rattan and black pepper trees seemed also to be promising, while grass flowers for brooms, palm leaves and wild honey showed a higher risk, or needed more correcting measures.

The table also provides evidence of strengths and weaknesses of each product. It shows which areas had to be reinforced if the product and market aspects were to be successful. For example, broom making could be a very profitable activity if the demand could be identified and if more customers could be linked to the group. This would require specific market development work.

At the end of this workshop, farmers who carried out the selection went back to their villages and started to form groups based on their common interest to develop one or more of these most promising products.

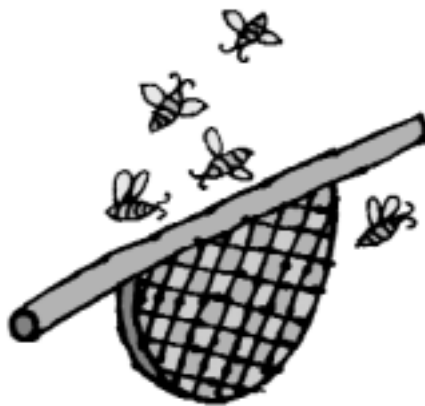


TABLE F.13 Comparison of the scores of the different products

CRITERIA	PRODUCTS									
	Wild honey	Domestic honey	Forest rattan	Planted rattan	Bamboo	Black pepper	Silkworms	Grass flower brooms	Palm leaves	
<b>▲ MARKET/ECONOMY</b>										
Raw materials supply	1	2	2	3	2	3	3	2	2	
Market potential	3	3	3	3	2	2	3	2	2	
Competition (for market niche)	2	2	1	1	1	2	3	1	2	
Constraints to business entry	3	3	2	2	2	3	3	2	2	
Margins/profitability	3	2	2	2	1	2	2	1	2	
<b>Subtotal</b>	<b>12</b>	<b>12</b>	<b>10</b>	<b>11</b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>8</b>	<b>10</b>	
<b>▲ RESOURCE MANAGEMENT/ENVIRONMENT</b>										
Availability (in time)	1	3	3	3	3	2	1	1	2	
Availability (in space)	1	2	2	3	3	3	3	3	2	
<i>For farm products form only:</i>										
Time from planting to harvest		3		1	2	2	3			
<i>For forest products form only:</i>										
Regenerative potential	1		2					3	2	
Impact of harvesting on the survival of species	2		2					2	1	
Impact of production on environment	2	3	2	3	3	2	2	3	2	
<b>Subtotal</b>	<b>7</b>	<b>11</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>9</b>	<b>12</b>	<b>9</b>	
<b>▲ SOCIAL/INSTITUTIONAL</b>										
Indirect benefits for the community	1	1	2	3	2	3	2	2	2	
Contribution to income	1	2	2	2	1	1	2	1	1	
Experience with the product	3	2	3	3	3	2	2	3	3	
Potential for job creation	1	2	1	3	1	1	1	1	1	
Gender impact	1	1	1	1	1	2	3	1	1	
<b>Subtotal</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>8</b>	
<b>▲ SCIENCE AND TECHNOLOGY</b>										
Suitability for rural entrepreneurs: processing location	1	3	1	2	1	1	2	2	1	
Suitability for rural entrepreneurs: processing technology required	1	2	1	2	1	1	2	2	1	
Infrastructure status	1	2	1	2	1	2	2	2	1	
Human resources/skills, expertise	2	2	2	2	2	2	2	2	2	
Human resources/number	1	2	2	2	2	2	1	1	1	
<b>Subtotal</b>	<b>6</b>	<b>11</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>6</b>	
<b>TOTAL</b>	<b>32</b>	<b>42</b>	<b>37</b>	<b>43</b>	<b>34</b>	<b>38</b>	<b>42</b>	<b>37</b>	<b>33</b>	

## STEP 3: Create interest groups for selected products

As one-to-one assistance to small rural entrepreneurs would not be cost-effective within the project context, there was a critical need for an organizational structure (informal or formal) from and to which the development effort should be directed.

At the end of Phase 1, target group members began to form interest groups. In Step 3 of Phase 2, two main types of interest groups were organized according to products, to affinities based on familial and friendship relations, and to geographical settings, as follows:

- people who organized themselves around a product already recognized as promising (honey, rattan, silkworms and black pepper); and
- people who traditionally worked with palm leaves and grass flowers, but who were not yet aware of which other, more profitable, activities they might start.

**TABLE F.14** Number of interest groups for selected products

PRODUCTS	NUMBER OF INTEREST GROUPS IN THE FOUR COMMUNES	NUMBER OF HOUSEHOLDS IN THE GROUPS
Rattan	18	124
Honey	18	170
Black pepper	19	168
Silkworms	8	40
Grass flowers	6	19
<b>Total</b>	<b>69</b>	<b>513</b>

The facilitating team did not influence participants about the size, the location and the selection of representatives of their groups. The initiators informed and got approval from the communal authorities to gather together these informal groups. Then they grouped themselves according to products, to affinities related to familial and friendship relations, and to geographical settings.

### **Identify the leader entrepreneurs**

During both Phase 1 and this phase, the interest group members and the team identified individuals who showed strong motivation and the ability to become leader entrepreneurs among their peers.

Three types of leaders' profiles emerged:

- those with a strong business entrepreneur profile, who already had experience in investigating market possibilities and in managing small enterprises;
- those with a good education (such as retired teachers and officers) and experience in management of village affairs (these people were social leaders, recognized as better educated people, and they already played a role in village affairs; being older, they were perceived as being more experienced, and they generally received respect accordingly); and
- those with specific technical experience.





## **Phase 3 | Plan enterprises for sustainable development**

In Phase 3, the facilitating team helped entrepreneurs to develop and consolidate the plan by analysing the information thoroughly. Entrepreneurs formulated the goals and objectives, developed the strategy and assessed the profitability of the enterprise, and drew up a realistic action plan.

### **Preliminary planning activities**

The facilitating team was comprised of the representatives of the interest groups formed at the end of Phase 2, assisted by the two project facilitators.

The facilitating team spent two weeks conducting Phase 3, excluding the time required for the formal registration of the interest groups and the delivery of financing.

The major activities in Phase 3 consisted of workshops of a duration of only two or three days, where group members worked out the concept and the details of their enterprise strategies and action planning. As there were several interest groups developing the same product, representatives from all the groups met and developed overall strategies for coordination.

Representatives went back to their groups and reviewed the proposed action plan with all members in order to ensure agreement. At the same time, a team of selected group members and the facilitators worked out the financial details of the enterprise development plan based on the strategies proposed by the groups. Finally one more workshop between representatives of groups was organized in order to finalize the details and develop the action plan.

### **STEP 1: Examine the business environment of the selected products**

In Phases 1 and 2, the facilitating team assisted entrepreneurs by gathering information on the four areas of enterprise development at community, national and international levels in order to select a product initiative. This formed the basis for the analysis of the business environment for the product that takes place in Phase 3. This analysis consists of factors that can influence the marketing of the product, such as information on the relevant market (size, growth, consumer behaviour, trends); on demographic, social, cultural and economic condi-

tions; on resource base status; and on political and technological trends. This analysis enabled entrepreneurs to assess the constraints within the subsector, the obstacles to overcome, and the most effective strategies to obtain more equitable benefits from marketing the product.

Although the entrepreneurs had already gathered information on the product during Phase 2, they collected more specific information about the four areas of enterprise development, as follows.

#### ▲ **Market/economy**

- the potential markets (customers) for the product (how large, how diverse, and where they are located)
- competitors and their pricing policies, market strategies, and relative share of the market
- constraints in marketing the product
- current market channels/proposed channels of distribution
- potential strategic alliances and partnerships

#### ▲ **Resource management/environment**

- resource availability and volumes and rates of sustainable extraction
- seasonal cycles of production
- existing community management systems for the resource

#### ▲ **Social/institutional**

- existing community groups that can ensure equitable distribution of benefits
- institutions that can support the enterprise
- the legislative environment for the enterprise

#### ▲ **Science and technology**

- appropriate technology available for adding value to the product through quality improvements that satisfy customer requirements
- infrastructure status

## **STEP 2: Define the enterprise mission, goals and objectives**

In Step 2, the entrepreneurs were encouraged to consolidate the information collected in the examination of the business environment in a specific mission statement, goals and objectives for the enterprise.

The facilitating team coordinated a workshop of beekeeper interest groups in order to assist them in defining their enterprise mission, goals and objectives.

### **Mission**

The interest groups' members wanted to increase their income through the production of honey from beekeeping and from the refinement and packing of honey. They wanted to continue selling to the current local buyers and extend sales to other domestic market channels outside the province. They estimated that the honey group would create jobs for five members for about 150 days per year, thus yielding an income of 1 500 000 dong.

The interest groups intended to share labour forces, organize protection of hives in turn, share extraction equipment and thus save investment capital, share competence for selling, receive experience of other groups, and receive support from other indirect actors, such as technical and market quality training. This would enhance sales and return for the members of the groups, thus improving their household economy.

The groups' activities would have a positive impact on the environment, as no chemical substance would be spread to avoid killing the bees. This would contribute to maintaining biological diversity of plants through pollination. Their activities would contribute to raise positive competition by encouraging other producers to improve their quality.

### **Goals**

The group was to sell honey from beekeeping extracted according to the methods taught during past technical training, and the honey was to be presented in bottles made of transparent glass holding 650 cc.

### **Objectives**

The first year the group planned to sell 525 kg of honey, equal to 1050 bottles, which would increase in the second year to 750 kg and 1500 bottles.

## STEP 3: Develop strategies in each of the four areas of enterprise development

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For Step 3, during the same workshop, the facilitating team assisted the interest groups in going over the information that was gathered and discussed during the product assessment phase.

The members of the interest groups chose to break up into four working groups, and each group chose to focus on one of the areas of enterprise development, as they had done in order to formulate objectives.

At the conclusion of their session, they were able to make a list of their proposed strategies and to identify additional information needs for planning the methods or the cost of each strategy.

### Market/economy strategy

#### PRODUCT/MARKET OPTIONS

The beekeepers' groups decided to continue making the existing product, and to target existing markets, and also to try to improve the market performances that might result in expanded sales of the product. They decided to continue selling honey to the district middlepersons, and also to store honey in the village in order to have a greater quantity so as to overcome the seasonal limitation of production. They also decided that in a second step, once the quantity and quality of honey were stable, they would expand to new markets. They would sell their products not only to the district collector but would expand the sales of the product by selling them to Vinapi, a national honey production company. They included in their medium-term marketing strategy introduction of new products to existing markets. They planned to purify and pack honey in standard transparent glass and to try to convince their existing customers to buy their new packaged products.



## THE MARKETING MIX

### PRODUCT

Interest groups producing honey decided to produce and sell a mix of two products: honey they used to collect from the forest and, at the same time, honey obtained from beekeeping.

Some producers' groups decided also to mix the honey production with rattan and/or pepper production.

### PRICE

The interest group members attending the workshop tried to identify the factors that influence the setting of prices. They compared the prices offered by the villages and district collectors and the buyer processor in the capital. Entrepreneurs were able to obtain a higher price from the processor, although they also had to factor in additional costs, such as storage, packing, transportation and management.

They tried to see the difference between the different types of consumers: those who are willing to pay more for a well-packed, certified, pure honey, and those who will pay more for honey sold in bulk because it is more convenient for them than sending their own agents to collect honey from all the villages.

They realized that they could not compete in price with larger competitors, such as Vinapi. But if they could understand the needs of their customers better than the bigger businesses, they might be able to provide better products and later to demand the higher prices that they would need to ask in order to have a reasonable profit margin.

### PLACE OF DISTRIBUTION

The interest groups realized that getting the products from the village to the buyer requires a carefully planned distribution system. In the existing market channel, transactions usually take place between village traders and agents buying for processing firms. The facilitating team guided the interest groups in assessing whether they could take over some of the functions of the intermediary trader in order to increase their share of profits. They concluded that it would be possible only if they could obtain more market information, could gain more control over prices, and devise a strategy for improving the product.

The beekeepers decided, for example, that it was critical for them to be in touch directly with buyers outside the area in order to get up-to-date information on the distribution channel for products, prices and trends in demand. Therefore, their marketing strategy involved training and sending members of the groups to collect information on a regular basis, or developing a communication arrangement with partners living close to markets for the product.

They understood that if they wanted to penetrate the urban market, they would have to compete with other, established brands of honey. These brands might be allowing distributors 30 days to pay their bills to the honey company, and the beekeepers would have to offer the same payment terms if they wanted to be successful.

#### PEOPLE

The interest group members attending the workshop were then assisted in identifying the interests and needs of the prospective buyers of their product. A visit to the buyer's processing factory was organized for representatives of all the interest groups. They obtained information from the buyer about demand, quality and packaging preferences, which traders had not shared with them so far.

#### PROMOTION

The interest group members attending the workshop also reviewed the means of promotion available to them. For example, the honey interest groups decided to use one of their objectives, 'producing clean honey free of chemicals', as a promotion tool for gaining market share. They also recognized the importance of attractive and informative labels and packaging.

#### STRATEGIC ALLIANCES FOR MARKETING

During the same workshop, the interest groups' representatives formed work groups for each area of enterprise development and discussed which kinds of partnerships could help them overcome some of the constraints in that area. As a result, the honey producers, for example, decided to create links with Vinapi in order to receive technical training, market information about the quality required by the customers, and market distribution arrangements.

#### TYPES OF ORGANIZATIONAL STRUCTURE

Once they had discussed the financing needs, marketing support requirements, technical assistance requirements and objectives for distributing profits to participants and sharing decision-making, the interest groups' representatives confirmed the need for structuring their partnership in the medium term. They assigned themselves the immediate task of clarifying the functions of the partnership and of exploring the legal possibilities available to them.



### **Resource management/environment strategy**

In this case study, one of the biggest threats to the sustainability of forest rattan, honey, grass flower and medicinal plants is intensive harvesting by villagers who need cash before the important new year festival. Talking to them about improved harvesting methods has no effect, since they have no control over the plots and therefore no incentive to leave a part of the plant in the ground for regeneration since someone else may come along and harvest it. According to the group members, the most effective strategy for assuring sustainable resources was to gradually replace harvesting of resources from the forest by domestication of the products on allocated lands. This meant that they needed to obtain the capital required to start raising or planting the products, and that they also needed to obtain control over the resources through allocation or long-term contract for land use.

### **Social/institutional strategy**

The final selection of the products was done according to social criteria. Although other activities could have been a source of higher income, production of silkworms and of grass flower brooms were also selected because women and disadvantaged groups are more highly involved in these activities. The development of silkworm production may slightly increase women's workload, but women will also be the ones who will get the benefits. The development of grass flower broom production may not have a brilliant potential in terms of market expansion, but it was considered important for the survival of some of the poorest households in the four communes.

### **Science and technology strategy**

The interest groups' representatives were assisted in anticipating the risks that could arise, for example, during storage or during transportation to the processor, or if the buyer breaks the contract and refuses to purchase the product. They were encouraged to find solutions to ensure that none of these risks could actually become reality.

The production process of domestic honey includes the following steps:

- building the wooden box and the wooden stand;
- purchasing the centrifuge machine;
- preparing frames and knives;
- purchasing the bee colony;
- feeding the bees with sugar preparation;
- providing treatment with medicine when required; and
- harvesting ten times over nine months.

The beehives will not exceed seven per ha, so as to have sufficient flower resource.

## STEP 4: Formulate the action plans to implement the strategies

Once strategies for the enterprise had been developed, action plans were then assigned to each strategy in order to ensure its implementation. It was not enough to identify a task, but it was necessary also to get a commitment from individuals to carry out the tasks and report back to the other enterprise participants. The facilitating team encouraged interest groups' representatives to think through every strategy and to plan in detail all the steps necessary in order to get the enterprise started.

In order to turn their strategies into reality, the interest groups' representatives developed an action plan by going through each of the four components of the enterprise development, strategy, subdividing it into topics, and, for each topic, formulating an objective, strategy and action plan.



### EXAMPLE

#### Gender issues

**Objective** To ensure that women have improved decision-making and share in the income benefits.

**Strategy** To ensure women's participation by including a minimum number of female representatives from each interest group on the central committee and to promote transparency in record-keeping so that women know how much money their families are earning.

**Action** To begin identifying women, in each interest group for the product, who can serve in positions of decision-making and to organize workshops for existing local women's groups in order to ensure that the enterprise development plan is understood.



**EXAMPLE****Production plan**

The group/enterprise production capacity will be 35 hives, equal to 525 kg and 1050 bottles in the first year, and it can expand to 50 hives, 750 kg and 1500 bottles in the following years. If the demand increases, the groups can attain a maximum quantity of 10 hives per member per 1.3 ha of land, because of the need of flower resource. That is to say, 50 hives equals 750 kg of honey.

**Production plan of the group**

The plan for production in the two-year period is shown in Table F.15.

**TABLE F.15** Production plan

PRODUCT	YEARLY PRODUCTION FORECAST	
	1998/99	1999/2000
Domestic honey	35 hives 525 kg 1050 bottles	50 hives 750 kg 1 500 bottles
Beeswax	175 kg	250 kg

**Type and source of equipment**

The equipment will be manual equipment that does not use energy.

The equipment (hives and other small tools) will be built locally in the village, while the bee colony, mask and centrifuge machine will be bought from the project, or from a local producer who can copy the original model.

Transportation costs for the equipment will be low.

**Side products (if any)**

In this production the beekeepers will obtain 5 kg of beeswax per hive, which will be sold in the form of raw cakes of 1 kg at a price of 35 000 dong per kg.

**Calendar of production**

Throughout the year, except for three winter months (November to January).



**EXAMPLE****Example: marketing plan****Description of the product**

This includes the shape, size and qualities that make it different from others, according to the quality test and results of analysis by the Institute for Domestic Honey.

**Competitor analysis**

For the first year the direct competitors of the group will be the other members of the groups of producers of the honey that will be sold through the existing marketing channels, in Dong Le, Quy Dat and Ba Don markets.

In a later stage, when the refinement and packing unit is working smoothly, part of the production will be sold through the channel of the Vinapi company; then the certification process will be initiated, and new 'green-market' possibilities will be investigated among the potential buyers identified in Phase 2.

**Market price**

The market price for one bottle of domestic honey in a bottle containing 650 cc/500 g is between 25 000 and 35 000 dong.

**Selling price**

The domestic honey will be sold for 28 000 dong per bottle.

**TABLE F.16 Sales and price forecast for group/enterprise**

TYPE OF PRODUCT	PROJECTED SALES VOLUME		
	Price/unit	First year (35 hives)	Second year (50 hives)
Domestic honey in bottles	28 000 d	29 400 000 d	42 000 000 d
Beeswax	35 000	6 125 000	8 750 000
<b>Total</b>		<b>35 525 000 d</b>	<b>50 750 000 d</b>

**Quality control measures**

The quality control measures for the honey produced by the group's members will be ensured by the head of the group.

The criteria will be that the honey is not mixed with water or other external elements, nor has crystallization taken place.

The control of quality will be repeated later by the purchase officer from the packing unit (if it is set up), who can refuse honey of bad quality.

**Calendar for sales**

There are two main seasons for sales: in June/July and before Tet in January/February.

**EXAMPLE****Organizational plan**

Before starting production, the following activities should be accomplished:

- strengthening of the group's abilities through training;
- strengthening of the main group's ability to coordinate and control production of the sub-groups;
- preparing a detailed business plan for each group and also for the main group for production and for refinement and the packing unit;
- applying for a loan and approval;
- contacting equipment suppliers;
- constructing equipment;
- planning labour tasks;
- installing equipment;
- directly purchasing production materials;
- producing for market trial;
- checking market quality;
- analysing market trial; and
- readjusting the production plan.



## STEP 5: Calculate financial projections for the enterprise

Once the sales objectives had been worked out and formulation of strategies and activities for overcoming constraints had taken place, the next step was for the entrepreneurs in the interest groups to estimate the income and the costs involved and to ensure that the enterprise would be cost-effective.

The team led producers to assess what information was available to date, and what information and steps were still needed for calculating the financial projections. Immediate gathering of missing information was organized in the communes by the representatives. Then the team trained them to calculate the profitability of the projected enterprise as well as to plan production and sales for the first years. Production planning for the subsequent years could not be finalized by the producers themselves, since they were not well organized and trained. Nevertheless, the following are indicative projections of production and of the sales plan for the subsequent years so as to reach profitability in the shortest time, according to the financial objectives set by the producers in Phase 1. The first part presents a costs and benefits analysis on the basis of the information collected in the field during the mission. The second translates the calculation done with the farmers into a standard, more sophisticated financial calculation format.

### ***Financial calculations done in the field***

The present calculations are based on an average producers' group of five households raising seven hives each in the first year, and ten hives in subsequent years. The group planned to sell 525 kg, equal to 1050 bottles of domestic honey, in the first year.

The income expected from first-year sales is 29 400 000 dong for the group of five members, and 42 000 000 dong from the second year, with 50 hives, 750 kg and 1500 bottles.

#### GROUP/ENTERPRISE COST ESTIMATE

TABLE F.17 Estimated start-up costs

The total enterprise cost amount	9 620 000 d	equipment
	3 051 000	4 months' working capital
Start-up costs	12 671 000 d	

**EXPECTED SOURCES OF FUNDING****TABLE F.18** Projected sources of funding

Members' own capital	2 830 000 d	(566 000 d per member)	(20%) (participation in labour costs).
Bank loan	9 841 000 d	(1 968 000 d per member)	(80%)

The loan term was one year, as the first harvest occurs within the first year, at 1 percent interest per month.

**REQUIRED FIXED ASSETS/FIXED CAPITAL FOR FULL CAPACITY**

The equipment needed for the projected production is for an average capacity of 15 kg per hive per year, assuming ten extractions per year within five to seven months from April to October. The group will have 35 hives in the first year.

For the production in the first year (35 hives), the group needs the following assets:

**TABLE F.19** Assets required for year 1 (35 hives)

ASSETS	AMOUNT PER UNIT	TOTAL AMOUNT
<i>Land for flower resource (5 ha)</i>		
<b>Equipment</b>		
Boxes and frame (35)	50 000 d	1 750 000 d
Bee colonies (35)	190 000	6 650 000
6 frames per hive (210)	3 000	630 000
Knives and other small tools (5)	18 000	90 000
Mask and nets for extraction operation (5)	40 000	200 000
Centrifuge machine (1)	300 000	300 000
<b>Total</b>		<b>9 620 000 d</b>

**DEPRECIATION OF THE FIXED ASSETS/CAPITAL ACCORDING TO THEIR LIFE SPAN**

Because the equipment will gradually deteriorate over the years, the group needs to reserve money every year to be able to pay for replacements.

The life of equipment is three years, which gives 33 percent of 9 620 000 dong depreciation costs every year = 3 174 600 dong

**Repairs and maintenance**

Repairs and maintenance will be undertaken with locally available equipment and using local skills.

**PRODUCTION COSTS FOR THE FIRST YEAR****TABLE F.20** Production costs for year 1 (35 hives) and year 2 (50 hives)

	AMOUNT PER UNIT	AMOUNT FOR 35 HIVES	AMOUNT FOR 50 HIVES
<b>Auxiliary materials</b> Sugar (5 kg/hive)/175 kg Medicine (12 000d/hive)	7 000 d	1 225 000 d 420 000	1 750 000 d 600 000
<b>Packing</b> White glass bottles (650 cc) (1 bottle = 500 g honey, as 1 liter = 1,3 kg) 35 hives/525 kg/1 050 bottles	1 500	1 575 000	2 250 000
<b>Labour</b> 15 days/hive/year	10 000	5 250 000	7 500 000
<b>Total</b>		<b>8 470 000 d</b>	<b>12 100 000 d</b>



**PACKING AND AUXILIARIES AVAILABILITY, AND COSTS IN FIRST YEAR**

The minimum stock of raw materials required is for four months of production, in order to maintain a comfortable working position.

**TABLE F.21** Raw materials required for 4 months (35 hives)

Sugar 58 kg	406 000 d
Medicines	140 000
Bottles	525 000
<b>Total</b>	<b>1 071 000 d</b>

**LABOUR**

The group will use the labour force of its members. The projected production represents the following labour needs in number of workdays. The daily work rate of a person hired in our village is estimated at 10 000 dong per day.

The members of the group will share the task load equally, and will also share the costs before sale and profit after sale. For the production-level group, there is no need to hire management staff. The only contribution to sharing management costs will be for the management of the large honey producers' group.

The number of workdays for the first year is 525 days, and 750 days in full capacity, for a total of 5 250 000 dong and 7 500 000 dong. These costs will not be disbursed by the group members, as they will do the work themselves, but they should be considered in the profitability calculation.

The group will be linked to the large honey producers group from the four communes, which will help the group receive technical training, find new buyers, organize the labour force, etc. If one person is paid by the different groups for coordinating the support for production and sales of the large group, each small group will share the costs as shown in Table F.22.

TABLE F.22 Cost of sharing honey producers group management staff salary per year

COST PER MONTH	COST PER YEAR
10 000 d	120 000 d

TABLE F.23 Overhead expenses per year

	COSTS PER YEAR
Indirect labour/management contribution	120 000 d
Repairs and maintenance	50 000
Stationery, communications	60 000
Depreciation of equipment	3 175 000
<b>Total overhead</b>	<b>3 405 000 d</b>
<b>Total cost per unit = <math>\frac{8\,470\,000\text{ d} + 3\,405\,000\text{ d}}{1050\text{ bottles}} = 11\,309\text{ d}</math></b>	

TABLE F.24 Income forecast for the group

	YEAR 1 - 35 HIVES	YEAR 2 - 50 HIVES	YEAR 3 - 50 HIVES	YEAR 4 - 50 HIVES
Sales/revenues	35 525 000 d	50 750 000 d	50 750 000 d	50 750 000 d
Production costs	8 470 000	12 100 000	12 100 000	12 100 000
Overhead	3 405 000	3 473 000	3 473 000	3 473 000
Total costs	11 875 000	15 573 000	15 573 000	15 573 000
Gross income	23 650 000	35 177 000	35 177 000	35 177 000
Bank loan	9 841 000	0	0	0
<b>Net income</b>	<b>13 809 000 d</b>	<b>35 177 000 d</b>	<b>35 177 000 d</b>	<b>35 177 000 d</b>

### Training facilitators to present the financial calculations

Facilitators were trained to present the financial calculations done with the farmers in the following format.

#### CALCULATING THE BREAK-EVEN POINT

The interest groups' representatives were trained in calculating the break-even point of the honey enterprise.

**TABLE F.25** Variable costs of one unit of the product

Average variable costs per unit	=	$\frac{\text{Total variable costs of honey production}}{\text{number of bottles}}$	=
		$\frac{8\,470\,000\text{ d}}{1\,050\text{ bottles}}$	= 8 067 d/bottle

**TABLE F.26** Total fixed costs of the enterprise

Indirect labour/management contribution		120 000 d	x 83%	99 600 d
Repair and maintenance		50 000	x 83%	41 500
Stationery, communications		60000	x 83%	49800
Depreciation of equipment over 3 years	9 620 000	3 175 000	x 83%	2 634 918
Interest (18%)	959 499	959 499	x 83%	796 384
<b>Total fixed costs</b>		<b>4 364 099 d</b>		<b>3 622 202 d</b>

TABLE F.27 Break-even point

The break-even point in units (bottles) =	$\frac{\text{total fixed costs}}{\text{selling price (per unit) - variable cost (per unit)}} =$	
	$\frac{4\,364\,099\text{ d}}{28\,000\text{ d} - 8\,067\text{ d}} =$	171 bottles
The break-even point in revenue	= break-even point (per unit) x selling price (per unit) =	
	171 bottles x 28 000 d	= 4 782 400 d

The example shows that once 171 bottles have been sold out of a total of 1050 bottles projected for the season, the fixed costs have been covered, as well as the variable costs of producing 171 bottles. Beyond that volume (i.e. the remaining 879 bottles), the only cost is the variable cost of producing and selling the product. There is, therefore, a comfortable margin with which to make a profit. Alternatively, once the enterprise has brought in 4 782 400 dong in revenue from sales, the fixed costs have been covered for the season. With any future sales, only the variable costs have to be deducted in order to see how much profit the enterprise is making. This is quite a comfortable margin since the total sales projected come to 29 400 000 dong.

#### WORKING OUT THE START-UP COSTS AND CAPITAL NEEDS

As shown in Table F.17, the facilitators calculated that the honey interest groups needed an initial capital of 12 671 000 dong for at least four months of operation. The five members of the interest groups would provide 566 000 dong each as a contribution, or a total of 2 830 000 dong. A loan had to be requested from the bank for the remainder of 9 841 000 dong, with a one-year repayment period.

TABLE F.28 Start-up costs for 4 months

	QUANTITY	UNIT PRICE	TOTAL AMOUNT
<b>EQUIPMENT:</b>			
Boxes and frames	35	50 000 d	1 750 000 d
Bee colonies	35	190 000	6 650 000
Frames (6 frames per hive)	210	3 000	630 000
Knives and other small tools	5	18 000	90 000
Mask and nets for extraction operation	5	40 000	200 000
Centrifuge machine	1	300 000	300 000
<b>Total</b>			<b>9 620 000</b>
Indirect labour/management contribution		120 000	120 000
Repair and maintenance		50 000	50 000
Stationery, communications		60 000	60 000
<b>Total</b>			<b>230 000</b>
<b>MATERIALS:</b>			
Sugar (175 kg/3 times per year)	58	7 000	406 000
Medicines (420 000/3 times per year)			140 000
Bottles	350	1 500	525 000
<b>Total</b>			<b>1 071 000</b>
Direct labour (5 250 000/3 times per year)			1 750 000
<b>Total start-up costs for 4 months</b>			<b>12 671 000</b>
Less member's own capital (566 000 d each x 5)			2 830 000
<b>Remainder to be financed</b>			<b>9 841 000 d</b>

### FORECAST OF PROFIT AND LOSS

The facilitators then defined which costs were fixed costs and which were variable costs. The three-year objectives predicted the sales, based on which the expenses and the annual profit could be worked out. (The example shows gross profit. Once taxes are deducted it becomes net profit.)

TABLE F.29 Forecast of profit and loss

	UNIT PRICE	YEAR 1			YEAR 2	
		35 HIVES: HONEY, 525 KG BEESWAX, 175 KG			30% INCREASE 50 HIVES: HONEY, 750 KG BEESWAX, 250 KG	
INCOME FROM SALES		Units	Year 1	% of sales	Units	Year 2
Domestic honey (bottles)	28 000 d	1 050	29 400 000 d		1 500	42 000 000 d
Beeswax (kg)	35 000	175	6 125 000		250	8 750 000
<b>Total sales/revenues</b>			<b>35 525 000</b>			<b>50 750 000</b>
<b>EXPENSES</b>						
<i>Fixed costs</i>						
Indirect labour/ management contribution (increases 30% in year 2)			120 000	0.3		152 250
Repair and maintenance (increases 30% in year 2)			50 000	0.1		50 750
Stationery, communications			60 000	0.2		101 500
Depreciation of equipment over 3 years (33% each year)	9 620 000		3 174 600			3 174 600
Interest (18%)	959 499		959 499			0
<b>Total fixed costs</b>			<b>4 364 099</b>			<b>347 900</b>
<i>Variable costs</i>						
<i>Raw materials:</i> Sugar = 5 kg/hive	7 000 d/kg	175 kg	1 225 000		250 kg	1 750 000
Medicine = 12000d/hive	12 000 d/hive	35 hives	420 000		50 hives	60 000
Bottles (650 cc bottle = 500 g honey)	1 500 d/bottle	1050 bottles	1 575 000		1 500 bottles	2 250 000
<i>Labour:</i> 15 days per hive per year	10 000 d/day	525 days	5 250 000		750 days	7 500 000
<b>Total variable costs</b>			<b>8 470 000</b>			<b>11 560 000</b>
<b>Total fixed + variable costs</b>			<b>12 834 099</b>			<b>15 039 100</b>
<b>Profit</b>			<b>22 690 901 d</b>			<b>35 710 900 d</b>

TABLE F.30 Cash flow analysis

	Total for the year	MONTH					
		1	2	3	4	5	6
Cash on hand		12 671 000 d	6 225 002 d	1 911 305 d	3 268 242 d	7 137 481 d	5 360 688 d
Sales	35 525 000 d	0	0	5 920 833	5 920 833	0	0
Total cash		12 671 000	6 225 002	7 832 138	9 189 075	7 137 481	5 360 688
<b>Expenses</b>							
Fees and royalties	0	0	0	0	0	0	0
Purchase of equipment	9 620 000	4 620 000	2 500 000	2 500 000	0	0	0
Equipment depreciation	3 174 600	264 550	264 550	264 550	264 550	264 550	264 550
Indirect labour/management	120 000	10 000	10 000	10 000	10 000	10 000	10 000
Repairs and maintenance	50 000	4 167	4 167	4 167	4 167	4 167	4 167
Stationery, communications	60 000	5 000	5 000	5 000	5 000	5 000	5 000
Sugar	1 225 000	102 083	102 083	102 083	102 083	102 083	102 083
Medicine (12 000 d per hive x 35 hives)	420 000	35 000	35 000	35 000	35 000	35 000	35 000
350 bottles x 1500d	1 575 000	0	0	262 500	262 500	0	0
Labour: (15 days/hive/year)	5 250 000	437 500	437 500	437 500	437 500	437 500	437 500
Interest payments (18%)	959 499	147 615	135 314	123 013	110 711	98 410	86 109
Principal payments	9 841 000	820 083	820 083	820 083	820 083	820 083	820 083
Total expenses	0	6 445 998	4 313 697	4 563 896	2 051 594	1 776 793	1 764 492
Total cash		12 671 000	6 225 002	7 832 138	9 189 075	7 137 481	5 360 688
Cash minus expenses		6 225 002	1 911 305	3 268 242	7 137 481	5 360 688	3 596 196
Principal balance		9 841 000	9 020 917	8 200 834	7 380 751	6 560 668	5 740 585
Payment towards principal		820 083	820 083	820 083	820 083	820 083	820 083
Remaining principal		9 020 917	8 200 834	7 380 751	6 560 668	5 740 585	4 920 502
Interest payments	959 499	147 615	135 314	123 013	110 711	98 410	86 109

US\$1 = 13 000 dong (d)

MONTH						Total for the year	
7	8	9	10	11	12		
3 596 196 d	7 502 338 d	11 522 865 d	9 795 277 d	8 079 990 d	12 035 337 d		Cash on hand
5 920 033	5 920 833	0	0	5 920 833	5 920 833	35 525 000	Sales
9 517 029	13 423 171	11 522 865	9 795 277	14 000 823	17 956 170		Total cash
							<b>Expenses</b>
0	0	0	0	0	0	0	Fees and royalties
0	0	0	0	0	0	9 620 000	Purchase of equipment
264 550	264 550	264 550	264 550	264 550	264 550	3 174 600	Equipment depreciation
10 000	10 000	10 000	10 000	10 000	10 000	120 000	Indirect labour/management
4 167	4 167	4 167	4 167	4 167	4 167	50 000	Repairs and maintenance
5 000	5 000	5 000	5 000	5 000	5 000	60 000	Stationery, communications
102 083	0	102 083	10 2083	102 083	10 2083	1 225 000	Sugar
35 000	35 000	35 000	35 000	35 000	35 000	420 000	Medicine (12 000 d per hive x 35 hives)
262 500	262 500	0	0	262 500	262 500	1 575 000	350 bottles x 1500d
437 500	437 500	437 500	437 500	437 500	437 500	5 250 000	Labour: (15 days/hive/year)
73 808	61 506	49 205	36 904	24 603	12 301	959 499	Interest payments (18%)
820 083	820 083	820 083	820 083	820 083	820 083	9 841 000	Principal payments
2 014 691	1 900 306	1 727 588	1 715 287	1 965 486	1 953 184	0	Total expenses
9 517 029	13 423 171	11 522 865	9 795 277	14 000 823	17 956 170		Total cash
7 502 338	11 522 865	9 795 277	8 079 990	12 035 337	16 002 986		Cash minus expenses
4 920 502	4 100 419	3 280 336	2 460 253	1 640 170	820 087		Principal balance
820 083	820 083	820 083	820 083	820 083	820 083		Payment towards principal
4 100 419	3 280 336	2 460 253	1 640 170	820 087	4		Remaining principal
73 808	61 506	49 205	36 904	24 603	12 301	959 499	Interest payments

**THE BALANCE SHEET**

The balance sheet is an accounting tool that tells an entrepreneur on a given day how much the entrepreneur's business is worth and who owns it. It is also known as a statement of condition. It shows the financial strengths and weaknesses of the business and can help show a banker the working capital ratios in the business. It provides a rough estimate of the financing that will be required to support long-term plans.

**TABLE F.31** Balance sheet for year 1

	BEGINNING OF YEAR 1	END OF YEAR 1
<b>ASSETS</b>		
<i>Current assets:</i>		
Cash on hand	1 980 000 d	16 002 986 d
Accounts receivable	0	0
Raw materials inventory	1 071 000	0
<i>Total current assets</i>	3 051 000	16 002 986
<i>Fixed assets:</i>		
Equipment	9 620 000	9 620 000
(Less accumulated depreciation)	0	(3 174 600)
<i>Total fixed assets</i>	9 620 000	6 445 400
<b>Total assets</b>	<b>12 671 000</b>	<b>22 448 386</b>
<b>LIABILITY</b>		
Bank loan	9 841 000	4
Accounts payable	0	0
<b>Total liability</b>	<b>9 841 000</b>	<b>4</b>
<b>EQUITY</b>		
Equity	2 830 000	2 830 000
Profits re-invested	0	19 618 384
<b>Total equity</b>	<b>2 830 000</b>	<b>22 448 382</b>
<b>TOTAL LIABILITY + EQUITY</b>	<b>12 671 000 d</b>	<b>22 448 386 d</b>

US\$1 = 13 000 dong (d)

## **NOTES**

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