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17890

FINAL REPORT

PROJECT NO. : PHI/86/018  
PROJECT TITLE : Development of Entrepreneurs for Cottage,  
Small and Medium-Scale Industries  
SUBCONTRACT NO. : 86/47  
SUBCONTRACTOR : Technology and Livelihood Resource Center  
(TLRC) in collaboration with the Camarines  
Sur Provincial Government (CSPG)  
  
(See Annex 1, subcontract between TLRC and  
UNIDO, and Annex 2, Memorandum of Agreement  
between TLRC and CSPG)

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Actual Starting Date	Actual Date of Completion	Contract Cost (US\$)
July 1, 1986	September 1, 1989	15,100

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**SUMMARY OF SUBCONTRACT:**

To demonstrate the utilization of appropriate technologies in soap-making and essential oil extraction in Camarines Sur.

**1.1 EXPECTED OUTCOMES UNDER THE SUBCONTRACT**

- Promotions and Orientation Workshop
- Technical Training on Soap-making and Essential Oil Extraction
- Mini-Plant Operation Course on Soap-making and Essential Oil Extraction
- Business Planning and Management Course
- Monitoring and Support Services

**1.2 ACTUAL OUTCOMES UNDER THE SUBCONTRACT**

All activities contained under this subcontract were completed satisfactorily. However, certain activities were not completed as planned due to the delay in the delivery of the soap-making and essential oil extraction equipment. The equipment was delivered in February 1990. (See Annex 3)

A one-day orientation workshop (see Annex 3 Orientation Workshop Schedule) was held July 9, 1988 wherein a discussion of the overall project concept was done in order to give would-be participants an idea of what to expect if they joined. Prior to the orientation workshop, a media blitz was conducted to generate awareness among the populace and encourage their participation. Several radio stations and the local TV station aired the announcements for more than a week.

The next activity was tailoring the technical training courses on soap-making and essential oil extraction scheduled July 16-21, 1988. Basic soap chemistry, soap formulation by type, distillation methodologies, oil extract analysis and other technical concepts were included in the course outlines. (See Annex 4 Technical Training Course Outlines.)

To complement their technical know-how, actual hands-on activities were given the participants with the end goal of producing laundry and toilet soaps and extract essences from various planting materials. The mini-plant operation course conducted on August 17-20, 1988, utilized both laboratory-scale and small-scale equipment. (See Annex 5 Mini-Plant Operation Course Schedule.)

The third training element was the Business Planning Management Course conducted September 6-8, 1988, teaching them how to formulate the business plan which shall serve as implementation guidelines for their business ventures. What taught was the formulation of project cost accounting policy which they will be using when starting up their small enterprises. (See Annex 6 Business Planning Outline.)

All the training courses were conducted by 1988 thru 1989. Mr. Pio Andrade as their representative in Europe and the Philippines, Mr. Eusebio Alvarez and Mr. Rafael Garcia both in programming and Mr. Jaime Reyes for the Business Planning and Management Course.

Each participant also had the assistance of personal entrepreneurial characteristics of participants through Focused Interview Technique (FIT) developed by Management Systems International, part of a methodology to produce packages of the participants scheduled January 31-30, 1988, February 10-24, 1989, May 14-27, 1989, and September 1, 1989 (see Annex 7) as a result of the training activities.

A project proposal entitled "Bicol Small-Scale Technology Park" envisioned to promote entrepreneurship development using a similar approach to this pilot was forwarded to the National Economic and Development Authority (NEDA) and UNDP/UNIDO for endorsement to a potential donor for financing (See Annex 10 Project Proposal and Annex 11 Concept Paper).

## 1.1 STATUS OF VENTURES OF THE PARTICIPANTS

Progress of the business ventures of the participants has been documented in detail and is contained in monitoring reports. The status of the businesses at the end of the pilot programme is presented on Table 1. Even for original participants who either pursued their old businesses, developments have been noted. Among the most salient points are as follows:

- 2 started individual businesses of their own on soap-making to the local market needs. While the other one emigrated to the U.S. before the end of the pilot project, the other participant engaged in soap-making entered into a new phase in his business as he later engaged in partnership with a financier he started slow on his own and set up a small-scale soap manufacturing unit in his residence, this being the main source of income for his family.
- 14 of the 21 original participants formed, among themselves the Zamboanga Bicol-Borneo Business Association, Inc. (ZBBBBI), after the formal training courses in 1988 to act as marketing association which eventually would form his own individual manufacturing processing unit.
- In the early 1989, BPI-PHIL, INC. (Bicol) and Bicol Chapter of the Philippines, Inc. were formed as well as a joint group of BPI-PHIL for administrative purposes. The members of BPI-PHIL are Mr. Mariano, former president of BPI-PHIL, Mr. Rodriguez, Mr. Escobedo, Mr. Pascual, among the others, and Mr. Rodriguez, an openly admitted CASABA member. BPI-PHIL has been making inquiries on essential oil markets abroad and has contacted foreign manufacturers and business entities for information. The member, Mr. Escobedo was traveling his wife in the Federal Republic of Germany in September - October, 1989 and was able to participate the local market for essential oils.





the pilot group; the training took place at the training facilities and the laboratory of the Regional Office of the Department of Agriculture in Pili, Camarines Sur (see Annex 12 Training Course Outline).

CSPG/PIFED assigned technical staff to assist CASABA in the formulation of their project feasibility study. (See I.E submitted to TLRC, which TLRC is presently evaluating for possible funding under existing TLRC Loan Programs. Evidence on the prevailing technical regulations (list of standards issued by the ISO, packaging, freight procedures, etc.) has been provided to the pilot group (Annex 13).

Post-training assistance by TLRC trainers and consultants has been made available to three participants who have contacted TLRC in Manila with their specific technical problems.

#### 1.2.1 Financial Support Services

In several occasions during the monitoring period financing problems have been discussed with the participants and advice has been given to them whenever possible.

The pilot group has been provided with a set of copies of the IPI publications "Financing programs and services for cottage, small industries and materials related to the LERIC programs of the Department of Agriculture."

The general concerns of financing of the pilot group have been brought up during meetings of the Board of Directors of PIFED, PIP and the Associate Expert of UNICEF with representatives of UNICEF (National Involvement Support Team) and PIFED (Philippine Business for Rural Progress) in Manila in February and March 1973.

During the monitoring visit in Manila an assessment of CASABA's possibilities to attract working capital and financing requirements and foreign exchange needs to the Philippines was reviewed for potential direct funding sources. However, it was generally agreed that loans would have to be channelled through PIFED as was recommended to the pilot group that they should concentrate their efforts on getting financing for their project feasibility study which has been submitted through CSPG to TLRC for review.

Sourcing of planting materials that they can propagate proved to be difficult prompting the CASABA to seek a little financial support in the amount of P11,000.00. Governor Luis R. Villafuerte saw the merits of being able to help in their immediate concern.

### 3.2.3 Marketing Support Services

CRIC staff formulated a marketing study for soap-making based on local market conditions which was utilized as part of the information dissemination to prospective entrepreneurs.

Upon CASABA's request to TLRG, market information on essential oils was gathered and forwarded to the group in May 1989. (Annex 13)

The possibility to get TLRG's support in finding local buyers for essential oils has been discussed. In the initial stage if local oil production, TLRG could act as a marketing agent, search suitable oils and sell them.

## CONCLUSIONS AND EVALUATION OF THE PILOT PROGRAMME

Implementation of the pilot programme proceeded smoothly except for some revisions of the time schedules. These revisions were requested by the participants themselves who showed preference for shorter periods between training modules. Aside from this, it can be reasonably concluded that everything was implemented as planned.

As a result of the inclusion of a new component, after conducting a field visit, the results of the project have led to the following conclusions:

- The strategy of employing a hands-on approach as a method of instruction, enabled participants to immediately apply the theoretical knowledge they learned from the classroom trainings.
- Despite most of the participants' exposure to running businesses, it is surprising to note that not many of them can formulate business plans and feasibility studies. Hence, the module on Business Planning and Management proved relevant and beneficial, especially since these are needed when applying for loans.



#### 4. RECOMMENDATIONS

Based on the enthusiasm and receptivity of the pilot group to the livelihood training courses given them under the project, it can be concluded that similar projects be implemented. It is suggested that a replication of the project give emphasis on covering a bigger group of prospective small-scale entrepreneurs and offer a wider range of skills of livelihood courses to choose from.

The idea of having to disseminate the utilization of appropriate small-scale production technologies through a conceptual and practical "hands-on" approach, complemented by enhancement of basic business management skills proved to be effective. However, there is also an apparent need to be able to provide entrepreneurs with continuous support services such as technical consultancy, financial sourcing, market linkaging assistance, data banking and information dissemination.

TLRC formulated a concept paper on entrepreneurship development in Samarines Sur incorporating salient points, as stated above, which is presently with NEIA for evaluation and endorsement to funding institutions. Entry to endorsement however, NEIA is awaiting the outcome of this pilot project. Since it can be said that the pilot was a success, there is now every reason the proposed Entrepreneurial Training Center be implemented.

C O N T R A C T  
88/47/RK

Between the

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)  
Vienna International Centre, P.O. Box 300  
A-1400, Vienna, Austria  
Tel. : 26310, Telex 135612

and the

TECHNOLOGY AND LIVELIHOOD RESOURCE CENTER  
Sen. Gil J. Puyat Avenue, Makati, Metro Manila  
Philippines

for

DP/PHI/88/018  
Development of Entrepreneurs for Cottage, Small and  
Medium-Scale Industries  
Pilot Project for Small Business Entrepreneurs Engaged in  
Agro-Based Industries Utilizing Appropriate Technologies for  
Coconut By-Product Processing

Purchase Order No. \_\_\_\_\_

1. Contractors Responsibilities

In accordance with the terms and conditions hereinafter and overleaf the Contractor shall provide for the full and proper performance of his obligations under this Contract, all the facilities and services as described in the Annex B "Pilot Project for Small Business Entrepreneurs Engaged in Agro-Based Industries Utilizing Appropriate Technologies for Coconut By-Product Processing" and made a part hereof. All work required under this Contract shall be completed not later than 30 June 1989.

2. Contract Price and Payment

UNIDO shall pay the Contractor for the full and proper performance of all his obligations hereunder the sum of THREE HUNDRED SEVENTEEN THOUSAND SIX HUNDRED EIGHTY PESOS (P317,680.00). This sum shall cover all expenses incurred by the Contractor including, but not limited to, salaries, indemnities, social charges, overhead, technical assistance and supervision costs. The Contractor shall not do any work which may result in any charges to UNIDO over and above the sum of without prior written consent of UNIDO and a formal amendment to this Contract.

3. Entry into Effect of the Contract

This Contract shall be deemed to be effective from the 1st July 1988.

4. Report

A regular Progress Report on the activities of the project shall be submitted every three months to the project DF/86/018 management.

5. Payment

Payment on account of the contract price set forth in Paragraph 2 hereinbefore shall be made on the basis of the Contractor's invoice accompanied and according to the following schedule:

- a. Upon Contractor's signature of the Contract, the sum of ONE HUNDRED THOUSAND PESOS (P100,000.00).
- b. Every six months thereafter until the 1st of June 1989, the sum of NINETY THOUSAND PESOS (P90,000.00).
- c. Upon acceptance of the Final Report by UNIDO HQ, the sum of THIRTY SEVEN THOUSAND SIX HUNDRED EIGHTY (P37,680.00).

*Handwritten signature*

*Handwritten signature*

6. Submission of Invoice

The Contractor shall submit his invoice in one (1) original and four (4) copies to Mr. Fichler, Head-Purchase and Contract Service UNIDO, P. O. Box 300, A-1400 Vienna, Austria.

7. General Obligations

The Parties hereto agree to be bound by the United Nations General Conditions of Contract, a copy of which is attached hereto as Annex A.

IN WITNESS WHEREOF the Parties hereto have executed this Contract.

TECHNOLOGY AND LIVELIHOOD  
RESOURCE CENTER

and

UNITED NATIONS INDUSTRIAL  
DEVELOPMENT ORGANIZATION

By: \_\_\_\_\_

*Jose M. Kalaw, Jr.*  
JOSE M. KALAW, JR.

Director-General  
Sen. Gil J. Puyat Avenue  
Makati, Metro Manila

*Turhan K. Mangat*

UNDP Resident Representative  
7th Flr. NEDA Building  
Amorsolo St., Legaspi  
Village, Makati  
Metro Manila, Philippines

GENERAL CONDITIONS

1. Confidential Nature of Documents

All maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Contractor under this Contract shall be the property of UNIDO, shall be treated as confidential and shall be delivered only to the UNIDO Project Manager or other authorized officials on completion of work under this Contract; their content shall not be made known by the Contractor to any person other than personnel of the Contractor performing services under this Contract without written consent of UNIDO.

2. Independent Contractor

The Contractor shall have the legal status of an independent contractor. Any person assigned by the Contractor to perform services under this Contract shall remain in the employment of the Contractor. Unless otherwise provided for in this Contract, UNIDO shall not be liable for claims of any kind in connection with the performance of such services. The Contractor and his employees shall conform to all applicable laws, regulations and ordinances promulgated by legally constituted authorities of the Government.

3. Contractor's Responsibility for Employees

The Contractor shall be responsible for the professional and technical competence of his employees and will select for work under this Contract, reliable individuals who will perform effectively in the implementation of the Contract, comply with laws of the Government, respect the local customs and conform to the high standard of moral and ethical conduct.

4. Assignment of Personnel

The Contractor shall not assign any personnel other than those referred to in this Contract for the performance of work in the field without the prior written approval of UNIDO. Prior to assigning any other personnel for the performance of work in the field, the Contractor shall submit to UNIDO for its consideration the curriculum vitae of any person the Contractor proposes to assign for such service.

5. Removal of Personnel

Upon written request by UNIDO, the Contractor shall withdraw from the field any personnel provided under this Contract and shall replace such personnel by others acceptable to UNIDO, if the UNIDO so requests. All costs and additional expenses resulting from the replacement for whatever reason of any of the Contractor's personnel shall be at the Contractor's expense. Such withdrawal shall not be considered as termination in part or in whole of this Contract under the provisions of paragraph 12 of the General Conditions.

Assignment

The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof or of any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of UNIDO.

Sub-Contracting

In the event the Contractor requires the services of sub-contractors, the Contractor shall obtain the prior written approval and clearance of UNIDO for all sub-contractors. The approval of UNIDO of a sub-contractor shall not relieve the Contractor of any of his obligations under this Contract, and the terms of any sub-contract shall be subject to and be in conformity with the revisions of this Contract.

U.N. Privileges and Immunities

Nothing in or relating to this Contract shall be deemed a waiver of any of the privileges and immunities of the United Nations.

Non-Employment of UNIDO Staff Members

The Contractor shall not while this Contract is in effect employ or consider the employment of UNIDO employees without prior written approval of UNIDO.

10. Language, Weights and Measures

Except as may be otherwise specified in the Contract, the English language shall be used by the Contractor in all written communications to UNIDO with respect to the services to be rendered and with respect to all documents procured or prepared by the Contractor pertaining to the work. The project surveys shall be based on the metric system of weights and measures, and estimates of quantities involved shall be made and recorded in metric units except as otherwise specified in the Contract.

11. Force Majeure

Force Majeure as used herein shall mean acts of God, laws or regulations, industrial disturbances, acts of the public enemy, civil disturbances, explosions and any other similar cause of equivalent force not caused by nor within the control of either party and which neither party is able to overcome. As soon as possible after the occurrence of any cause constituting force majeure, the Contractor shall give notice and full particulars in writing to UNIDO of such force majeure if the Contractor is thereby rendered unable, wholly or in part, to perform his obligations and meet his responsibilities under this Contract. In this event, the following provisions shall apply:

- (a) The obligations and responsibilities of the Contractor under this Contract shall be suspended to the extent of his inability to perform them and for as long as such inability continues. During such suspension and in respect of work suspended, the Contractor shall be entitled only to reimbursement by UNIDO against appropriate vouchers of the essential costs of maintenance of any of the Contractor's equipment and of per diem of the Contractor's personnel rendered idle by such suspension.

- Contractor shall within fifteen (15) days of the occurrence of the force majeure submit a statement to UNIDO of estimated expenditures for the duration of the period of suspension.
- The term of this Contract shall be extended for a period equal to the period of suspension taking, however, into account any special conditions which may cause the time for completion of the work to be different from the period of suspension.
- (d) If the Contractor is rendered permanently unable, wholly or in part, by reason of force majeure to perform his obligations and meet his responsibilities under this Contract, UNIDO shall have the right to terminate this Contract on the same terms and conditions as are provided for in Section 12, "Termination", except that the period of notice may be seven (7) days instead of thirty (30) days.
- (e) For the purpose of the preceding sub-section, UNIDO may consider the Contractor permanently unable to perform in case of any period of suspension in excess of ninety (90) days. Any such period of ninety (90) days or less shall be deemed temporary inability to perform.

## 12. Termination

UNIDO may terminate this Contract in whole or in part at any time upon thirty (30) days' notice of termination to the Contractor. In the event such termination is not caused by the Contractor's negligence or fault, UNIDO shall be liable to the Contractor for payment in respect of work already accomplished, for the cost of repatriation of the Contractor's personnel, for necessary terminal expenses of the Contractor, and for the cost of such urgent work as is essential and as the Contractor is asked by UNIDO to complete. The Contractor shall keep expenses at a minimum and shall not undertake any forward commitment from the date of receipt of any notice of termination.

## 13. Bankruptcy

Should the Contractor be adjudged bankrupt, or should the Contractor make a general assignment for the benefit of its creditors, or should a receiver be appointed on account of the Contractor's insolvency, UNIDO may, without prejudice to any other right or remedy it may have under the terms of this Contract, terminate this Contract forthwith by giving the Contractor written notice of such termination.

## 14. Workmen's Compensation and other Insurance

- (a) The Contractor shall provide and thereafter maintain appropriate workmen's compensation and liability insurance, with respect to and prior to the departure for overseas employment under this Contract of all employees who are hired outside the country of the Government and who are not citizens of said country.
- (b) The Contractor shall provide and thereafter maintain insurance in an appropriate amount against public liability for loss, bodily injury or damage to property arising from the operation in the country in which the Contract is to be performed of motor vehicles, boats or airplanes owned or leased by the Contractor. The Contractor warrants that similar insurance shall be provided and maintained in respect of all vehicles or boats owned or leased by foreign personnel of the Contractor and used by them in the country in which the Contract is to be performed.
- (c) The Contractor shall comply with the labour laws of the Government providing for benefits covering injury or death in the course of employment.
- (d) The Contractor undertakes that provisions to the same effect as the provisions of this Article will be inserted in all sub-contracts or subordinate contracts made in performance of this Contract, except sub-contracts or subordinate contracts exclusively for furnishing materials or supplies.

## Indemnification

The Contractor shall indemnify, hold and save harmless and defend at its expense UNIDO, its officers, agents, servants and employees from and against suits, claims, demands and liability of any nature or kind, including costs and expenses arising out of acts or omissions of the Contractor or his employees or subcontractors in the performance of this Contract. This clause shall extend to claims or liability in the nature of workmen's compensation claims or liability or those arising out of the use of patented inventions or devices.

## 6. Disputes - Arbitration

Any dispute arising out of the interpretation or application of the terms of this Contract shall, unless it is settled by direct negotiations, be referred to arbitration in accordance with the rules then obtaining of the International Chamber of Commerce. UNIDO and the Contractor agree to be bound by any arbitration award rendered in accordance with this section as the final adjudication of any such dispute.

## 17. Conflict of Interest

No employee of the Contractor assigned to perform work under this Contract shall engage, directly or indirectly, either in his own name or through the agency of another person, in any business, profession, or occupation in the territory of the Government; nor shall he make loans or investments to or in any business, profession, or occupation in said country.

## 3. Source of Instructions

The Contractor shall neither seek nor accept instructions from any authority external to UNIDO in connection with the performance of its services under this Contract. The Contractor shall refrain from any action which may adversely affect UNIDO and shall fulfil his commitments with fullest regard for the interest of UNIDO.

## 19. Title to Equipment

Title to any equipment and supplies which may be furnished by UNIDO shall rest with UNIDO and any such equipment shall be returned to UNIDO at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment, when returned to UNIDO, shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear.

## 20. Rights to Material Produced under Contract

Title, copyrights and patent rights to any and all material produced under this Contract shall be vested in the UNIDO. Unless authorized in writing by the U.N., the Contractor shall not advertise or otherwise make public the fact that he is performing or has performed, services for the UNIDO and/or the United Nations, or use the name, emblem or official seal of the UNIDO and/or of the United Nations or any abbreviation of the name of UNIDO and/or the United Nations for advertising purposes or for any other purposes.

## 21. Amendments

No changes in or modifications of this Agreement shall be made except by mutual agreement, in writing, between UNIDO and the Contractor.

UNIDO, SAC/100  
VIENNA Rev. 2

17 January 1977



Annex B

DF/FHI/86/018

Development of Entrepreneurs for Cottage, Small  
and Medium-Scale Industries  
Pilot Project for Small Business Entrepreneurs Engaged in  
Agro-Based Industries Utilizing Appropriate Technologies  
for Coconut By-Product Processing

21 MARCH 1988

Submitted by: The Technology and Livelihood  
Resource Center of the Philippines

## 1.0 PROJECT BACKGROUND

One of the major thrusts of the Medium-Term Philippine Development Plan (1987-1992) which was approved by the Cabinet in November 1986 is the promotion of cottage, small and medium-scale enterprises as they are seen as potent vehicles for increasing off-farm employment and regional dispersal of industrial development in the countryside. Studies conducted in the Philippines by several national and international organizations indicate that the Cottage, Small and Medium Industries (CSMI) sector plays a significant role in a country's process of economic recovery mainly through the following contributions:

- A. Capital Savings and Creation of Employment Opportunities
- B. Regional Dispersal of Industrial Development
- C. Conservation and Generation of Foreign Exchange

The above-stated contributions have ensured that the CSMI sector has been promoted in the Philippines over the years through government and private institutions and programmes. Because many government and private institutions are involved in and many programmes were developed for the CSMI sector, the growth of this sector has been uneven due to overlaps in activities.

The objective of this project is therefore to assist the government in developing and/or improving the above-stated areas. To enable to promote and develop entrepreneurs, pilot programmes will be implemented among selected target groups/industrial subsectors in selected regions of the country. Under the pilot programmes, different entrepreneurship development approaches and techniques will be tested. These will be incorporated into a model scheme for entrepreneurship development.

A pilot programme will be conducted in Camarines Sur. The target group will be 25 prospective small business entrepreneurs engaged in agro-based industries utilizing appropriate technologies for coconut by-product processing.

Coconut industry plays an important role in the Philippines supporting in one way or another, about 17 million people. Approximately one third of the

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Filipinos. Traditionally, 90% of coconut is converted into copra and the current utilization of coconut by-products is very limited.

Out of the total land area of 526,682 hectares in Camarines Sur, 21%, or 111,363 hectares are planted with coconut, which is the third largest-produced commercial crop. However, concentration on copra production, poor copra quality, poor technological and marketing knowledge together with lack of financing has resulted in the low utilization of resources for coconut by-product processing.

The cottage industries largely constitute the manufacturing sector in the province of Camarines Sur augmenting the income of households and providing an alternative source to sustain living necessities. There are roughly about 19,000 households in the province engaged in some type of cottage industry. Cottage, small and medium-scale industries engaged in copra-based products are relatively scarce although there would be potential markets for products such as soap, cooking oil, essential oil, vinegar, nata de coco and activated carbon.

This pilot programme will expose potential entrepreneurs to the various coconut by-product processing techniques through demonstrations and training activities to acquire the skills and techniques necessary to establish a small business. The pilot programme aims to assist potential entrepreneurs to establish agri-business ventures.

### 2.4 PROPONENT

The conduct of this programme is being offered by the Technology and Livelihood Resource Center (TLRC). TLRC is a governmental organization that responds to the needs of households and communities for information on appropriate technologies and their applications to livelihood and industrial activities.

The objective of TLRC is to implement the following activities:

- a) Information on appropriate technologies and their applications to livelihood and industrial activities.
- b) Resource center for users of technology, bringing together the resources needed to apply the technology.

- c) Technical and financial assistance to small and medium enterprises who want to modernize their production facilities in order to compete in the export market.
- d) Collection of documents, evaluation and dissemination of information on appropriate low-cost and indigenous technologies needed to meet present economic needs.

The TLRC offers the following services to the public:

- Business technology training courses
- Technobank library, databank on appropriate technology
- Free consultancy clinics on agriculture and aquaculture
- Funding assistance to small and medium-scale industries (Agro-Industrial Technology Transfer Program).

The TLRC is quartered on San. Gil J. Suyat Avenue, Makati, Metro Manila.

### 3.0 SCOPE OF WORK

Under the Project PFI 84-018, a pilot programme in entrepreneurship development focussing on technology transfer will be conducted in Cebu province with approximately 25 potential entrepreneurs as an initial target group. Under this pilot programme, soap-making and essential oil extraction technologies were chosen as the main concerns.

Selection of the initial target group will be done in several stages. Initially, the project will be promoted through advertisements so as to reach the general public thereby generating awareness and interest on their part. Respondents will then be given an overview orientation course. Those who are actually seriously considering entering the business will be selected employing a special selection scheme. From the interested respondents, twenty five (25) participants will be chosen to undergo the technical classroom training either on soap-making technology or essential oil extraction. These 25 participants will

also be provided with hands-on-training on the technology of their choice.

The technical training will enable the participants to learn how to apply basic technological concepts on soap-making and essential oil extraction. Included likewise are layout designing, machine fabrication and applications for a viable village level agri-business venture.

For the participants to acquire the practical skills of plant operations, a Mini Plant Operation Course shall be conducted. The participants shall be divided into smaller groups, whereby each group will be given the chance to undergo the hands-on-training.

To integrate the different technological working knowledge and to assist the participants with their individual business plans, a one-week course on Business Planning and Management will be conducted. Participants are expected to come up with their business goals, operational strategies and financial schemes upon completion of the course.

After the training courses, the participants will be provided with follow-up assistance and support services in the form of consultations. The projected critical areas will be on marketing, technology, production, financing and management. The assistance will also include identification and mobilization of appropriate resources from existing private and government institutions and/or agencies.

The experiences gained during the pilot programme, together with those of the other pilot programmes carried out under the project, will be the basis of the Impact Study which will be conducted under a separate subcontract. The Impact Study will analyze the functioning of the existing network of public and private institutions assisting small-scale industries and will thus identify the lack of direction and coordination overlaps of the support activities.

#### 4.0 INPUTS AND ACTIVITIES OF THE PROJECT

4.1 The project will make the following inputs available to the pilot programme:

4.1.1 A one-week Trainers Training Course on the identification and selection methods of entrepreneurs to be attended by TLRC and

provincial government office trainers/  
extension officers (conducted 20-23 January  
1988).

- 4.1.2 A three-week Business Consultancy Course for the TLRC and/or provincial government office trainers/extension officers in preparation for their assistance to the participants. The course will be conducted by the UP-ISSI (conducted 24 Feb.-16 March 1988). The UP-ISSI will also provide additional Business Management and Entrepreneurial inputs to the proponent during the subcontract period as necessary.
- 4.1.3 A Technical Expert on a part-time basis.
- 4.1.4 An Associate Expert for the duration of the subcontract whose main responsibility will be to assist the proponent in the execution of the pilot programme.

#### 5.0 INPUTS AND ACTIVITIES OF THE PROPONENT

- 5.1 The proponent shall organize a one-week orientation workshop for the respondents of the public awareness campaign at the end of June 1988.
- 5.2 The proponent shall organize a one-week technical training on soap-making by mid July 1988.
- 5.3 The proponent shall likewise organize a one-week technical training on essential oil extraction by mid July 1988.
- 5.4 The proponent shall organize a Mini-Plant Operation Course on soap-making scheduled to start 1st week of August up to the last week of October 1988.
- 5.5 The proponent shall conduct a Mini-Plant Operation Course on essential oil extraction scheduled to start on the 1st week of August up to the last week of October.
- 5.6 The proponent shall conduct a two-week Basic Business Planning and Management Training Course in November 1988.
- 5.7 The proponent shall provide assistance in monitoring the business ventures of the

participants after completion of the training programs.

- 5.8 The proponent shall make available for the period of the subcontract one (1) supervisor and three (3) trainers/consultants.
- 5.9 The proponent shall provide assistance in extending support services to the participants through consultations.

The Senior Managing Director of the Technology and Livelihood Information Dissemination Department within the TLRC will direct and monitor the implementation of the pilot programme. An outline of the responsibilities of these officers and their staff profile are given in Chapter 9.0.

## 6.0 PROJECT COST

The total cost of the programme in Phil. Pesos is:

<u>A m o u n t</u>	<u>Description</u>
P 229,900.00	Training expenses
- P 83,600.00	Technical Training
- 125,400.00	Mini Plant Operation Course
- 20,900.00	Basic Business Planning and Management
29,260.00	Operational Expenses
	- Promotions, selection of participants, materials, miscellaneous.
58,520.00	Monitoring Activities
	- P 41,800.00 Support Services
	- 16,720.00 Progress/Status Reporting
<u>P 317,680.00</u>	<u>T O T A L</u>
=====	

## 7.0 EXPECTED OUTPUTS

7.1 A Technical Training Course, a Mini-Plant Operation Course on soap-making and essential oil extraction and a Basic Business Planning and Management Course conducted for approximately 25 potential entrepreneurs who participated in this pilot programme.

7.2 Approximately twenty five (25) potential entrepreneurs who have been assisted and monitored in their efforts to set up their own agri-business venture in coconut by-product processing.

7.3 The following reports will be prepared:

- Report on the Technical Training Course
- Report on the Mini Plant Operation Course
- Report on the Basic Business Planning and Management Course



- Once every 2 months, report on the experiences and progress of each participant starting as soon as the final 25 participants are selected.
- A final report summarizing the proponents experiences during the total subcontract period.

## 8.0 WORKPLAN

This Time Schedule is for the activities as per Chapter 5.0 of Annex B of this subcontract:

- Activity I - Promotions/Orientation - June 1988
- Activity II - Technical Training  
One week duration (soap-making and essential oil extraction)  
Mid July 1988
- Activity III- Mini Plant Operation Courses  
13 week duration (soap-making and essential oil extraction)  
August - October 1988
- Activity IV - Basic Business Planning and Management  
Course - One week duration  
2nd week of November 1988
- Activity V - Monitoring Activities  
10 month duration  
Starting August 1988

## 9.0 RESPONSIBILITIES AND PROFILE OF THE STAFF OF THE PROPONENT

### 9.1 Responsibilities:

Sylvia M. Ordonez  
Senior Managing Director  
Technology and Livelihood Information and  
Dissemination Department - TLRC

- Directs and monitors the implementation of the pilot programme.

Dr. Vedasto R. Jose  
Project Head

- Supervises the implementation of the pilot programme.

- Coordinates with the other collaborating agencies and with the Project Management.
- Coordinates all project-related activities.

Francisco P. Cayco  
Trainer/Consultant

- Coordinates business planning and management activities.

Beato H. Griarte, Jr.  
Trainer/Consultant

- Coordinates the technical training activities on soap making.

Pio S.L. Andrade  
Trainer/Consultant

- Coordinates the technical training activities on essential oil extraction.

Project Support Staff  
Extension Officers:

Grace T. Imperial  
Guilbert P. Romero

- Coordinates the activities in Camarines Sur
- Monitors the implementation of the pilot programme in the province.
- Data gathering on the outputs of the pilot programme.

9.2 Staff Profile - see attached pages.

PROJECT PHI/86/018 - WORKPLAN FOR CAMA

Activities	Apr 1	May 2	Jun 3	Jul 4	Aug 5	Sep 6	Oct 7	Nov 8	Dec 9	Jan 10	Feb 1
I-a) Promotions/Orientation Course											
- establishment of institutional support		-----									
- public awareness campaign			---								
- orientation course			---								
b) Selection of Participants			---								
II. Technical Training											
- soap-making				---							
- essential oil extraction				---							
III. Mini Plant Operation (Hands-on-Training)						-----					
- soap-making						-----					
- essential oil extraction						-----					
IV. Basic Business Planning and Mgmt. Course											
V. Monitoring Activities											
a) Support Services on:						-----					
-Technology						-----					
-Production						-----					
-Marketing						-----					
-Financing						-----					
-Management						-----					
b) Progress/Status Reporting						-----					

WORKPLAN FOR CAMARINES SUR PILOT AREA

Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Target Output	Responsible Agency	Cost in US \$
									institutional support identified	Project & UP-ISSI staff	
									awareness respondents	Project staff	\$300.00
									25 participants	"	700.00
									Techno skills transfer	Project Staff	400.00
									Experimental Learning on Operation and Production	"	4,000.00
									Business Plan	"	6,000.00
									Consultancy Services	"	1,000.00
									Formal Reports	"	2,000.00
									TOTAL	=	US \$15,200.00 =====

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## MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This Agreement made and executed by and between:

The TECHNOLOGY AND LIVELIHOOD RESOURCE CENTER, a government corporation with principal offices at TLRC Bldg., Sen. Gil Puyat Ave. Ext., Makati, Metro Manila, represented herein by its Director General, JOSE M. KALAW, JR., hereinafter referred to as TLRC;

and

The CAMARINES SUR PROVINCIAL GOVERNMENT, with principal offices at the Provincial Capitol Complex, Cadlan, Pili, Camarines Sur, represented herein by the Provincial Governor, LUIS R. VILLAFUERTE, hereinafter referred to as CSPG.

WITNESSETH: That-

WHEREAS, TLRC was engaged by the United Nations Industrial Development Organization (UNIDO) to implement the Pilot Project for Small Business Entrepreneurs Engaged in Agro-Based Industries Utilizing Appropriate Technologies for Coconut By-Product Processing;

WHEREAS, the Pilot Project aims to assist potential entrepreneurs to establish agri-business ventures through exposure to various coconut by-product processing techniques;

WHEREAS, the Pilot Project shall be conducted in Camarines Sur and the TLRC deems it best to implement the Pilot Project through the CSPG;

WHEREAS, the CSPG has agreed to participate and assist in the Pilot Project implementation;

NOW, THEREFORE, premises considered, the parties hereby agree as follows:

- I. Project Title. The project shall be known as Pilot Project for Small Business Entrepreneurs Engaged in Agro-Based Industries Utilizing Appropriate Technologies for Coconut By-Product Processing.
- II. Scope of Work. The project shall include the following activities:
  1. Conduct of technical training courses on

2. Provision of support services to participating beneficiaries specifically on marketing, financing, production and management through institutional linkages; and
3. Provision of consultancy services.

III. Specific Activities and Implementation Schedule. The specific activities and implementation schedule of the project shall be as follows:

- \* Promotions/Orientation Course July 1988
- \* Selection of Participants July 1988
- \* Technical Training on Soap Making and Essential Oil Extraction July 1988
- \* Mini-Plant Operation Course on Soap Making Aug-Oct 1988
- \* Mini-Plant Operation Course on Essential Oil Extraction Aug-Oct 1988
- \* Basic Business Planning and Management Training Course Nov 1988
- \* Monitoring Activities:
  - a) Support Services on-  
Technology  
Production  
Marketing  
Financing  
Management After completion of training to end of project
  - b) Progress/Status Reporting
    - Report on Technical Training Courses Upon completion thereof
    - Report on Mini Plant Operation Course Upon completion thereof
    - Report on Basic Business Planning & Management Course Upon completion thereof
    - Report on Experiences and Progress of each participant starting as soon as the final 25 participants are selected Once every 2 months
    - Final report summarizing TLRC/CSFG experiences during the entire project period June 1989

*W/S*

*just*

*Y*

*u*

IV. Undertakings of TLRC. TLRC shall

1. Provide three (3) trainers/consultants on the soap-making, essential oil extraction and business planning/management courses, who shall likewise provide consultancy services to the participants of the project; Provided, that their compensations, transportation and incidental expenses shall be charged to the project funds;
2. Provide the project funds in the amount of THREE HUNDRED SEVENTEEN THOUSAND SIX HUNDRED EIGHTY PESOS (P317,680.00) to CSPG upon receipt thereof from the UNIDO;
3. Provide credit support programs to the participants; and
4. Supervise and monitor the implementation of the pilot project.

V. Undertakings of CSPG. CSPG shall:

1. Implement the specific activities of the project in accordance with the implementation schedule provided for in Article III above through a project staff which it shall organize for the purpose;
2. Assign counterpart personnel who shall work with TLRC on the specific requirements of the project;
3. Disburse the project fund in accordance with the following schedule:

Training Expenses	P229,900.00
Technical Training (P33,600)	
Mini-Plant Operation Course (P125,400)	
Basic Business Planning and Management (P20,900)	
Operational Expenses	P 29,260.00
Promotions, selection of participants, materials & miscellaneous	
Monitoring Activities	P 58,520.00
Support Services (P41,800)	
Progress/Status Reporting (P16,720)	
TOTAL	P317,680,00
	=====

4. Keep accurate and systematic records and accounts with respect to the project activities and expenses in such form and detail as customary and as shall be sufficient to establish accurately that the cost and expenditures under the pertinent clauses of this Agreement have been duly incurred;
5. Ensure the timely completion of the activities under the project; and
6. Prepare and submit to TLRC the reports on the project as required in Article III above.

*W/S*

*Project*

*pp*

VI. Other Terms and Conditions

It is hereby agreed and understood that CSPG shall assume all the duties and responsibilities of TLRC under the Contract (89/47/RK) between the United Nations Industrial Development Organization (UNIDO) and the TLRC, including the General Conditions of the UNIDO attached thereto. A copy of the said Contract is attached hereto as Annex A and made an integral part hereof.

VII. Effectivity

This Agreement takes effect upon signing hereof.

SIGNED on this \_\_\_\_\_ day of \_\_\_\_\_, 1988 at \_\_\_\_\_

CAMARINES SUR PROVINCIAL GOVERNMENT

By:

*V. R.*

LUIS R. VILLAFUERTE  
Provincial Governor

TECHNOLOGY AND LIVELIHOOD RESOURCE CENTER

By:

*Jose M. Kalaw, Jr.*  
JOSE M. KALAW, JR.  
Director General

CONFORME:

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION  
By:

Signed in the presence of:

ACKNOWLEDGMENT

Republic of the Philippines)  
S.S.

At the above stated locality, on this \_\_\_\_\_ day of \_\_\_\_\_, 1988, before me personally appeared:

Name	Reg. Cert. No.	Date/Place Issued
LUIS R. VILLAFUERTE		
JOSE M. KALAW, JR.		

known to me to be the same persons who executed the foregoing instrument and acknowledged to me that the same is their free and voluntary act and deed as well as the free and voluntary act and deed of the principals they represent.

Doc. No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of 1988.

Notary Public

*pa*



Sirkka Numminen

Pigeon Hole  
PLS

~~CONFIDENTIAL~~

9/1

UNDP MANILA	
FILE NO.	PH 186/118
JAN - 7 1989	
ACTION	INFO
SIDE FILES	

MEMORY FULL  
 2 6  
 P 22251 UNA PH  
 PHILCOM JAN 08 1710

UNDEVPRO MANILA PHILIPPINES  
 VIENNA UNIDO 271 1987  
 RR00710 MANSUM SP/PHI/88/018 CONTRACT 88/47/RK REVERMISO 4131 UNIDO  
 HAS NO OBJECTION TO PROPOSED MEMO OF AGREEMENT PROVIDED IT IS  
 ESTABLISHED THAT TLRC REMAINS FULLY COMMITTED TO UNIDO FOR  
 SATISFACTORY EXECUTION OF THE ENTIRE CONTRACT BETWEEN UNIDO AND TLRC  
 IN CONSIDERATION OF WHICH TLRC ENTITLED TO PAYMENT OF CONTRACT VALUE  
 ONLY. PAYMENT SCHEDULE AS AGREED. PIDS  
 INFORMOV UNIDO VIENNA  
 COLCHO MS  
 NIKK

VIA CCI 6 JAN 1989 0912 GMT

P 22251 UNA PHMMK

SUBJECT : GENERAL ORIENTATION WORKSHOP IN COGNUT BY-PRODUCT PROCESSING TECHNOLOGIES.

DATE : July 8, 1988

VENUE : BRSDC Training Center, CSSAC, Pili, Cam. Sur

LECTURER/ ; Sirkka Numminen, UNIDO Associate Expert  
 Person Arturo Mangabat, UPISSI Staff Member  
 Incharge Beato Griarte, Jr. TLRC Training Officer

A T T E N D A N C E

- |                           |                          |
|---------------------------|--------------------------|
| 1. Escobar, Clarencio     | 24. Yu, Fidel            |
| 2. Chavez, Willy          | 25. Zaragosa, Belen      |
| 3. Martinez, Ruben        | 26. Asuan, Elvira Ma. A. |
| 4. Federizon, Salvador    | 27. Ventura, Mary-yol S. |
| 5. Valencia, Danilo A.    | 28. Resuena, Marilou     |
| 6. Gatuslao, Angustias A  | 29. Atad, Amalia Ma. C.  |
| 7. Martinez, Maricion     | 30. Briones, Natividad   |
| 8. Benjamin, Dennis       | 31. Viñas, Nestor        |
| 9. Adote, Villaruel       | 32. Destura, Belen C.    |
| 10. Lavadia, Julian       | 33. Redina, Dominga D.   |
| 11. Estrella, Arnel       | 34. Uy, Willy            |
| 12. Lijon, Jose           | 35. Adupe, Jose M.       |
| 13. Perez, Romeo          | 36. Rivera, Fidel        |
| 14. Pielago, Edmundo      | 37. Ramor, Ruel M.       |
| 15. Fernandez. Abelardo   | 38. Rodriguez, Hermina   |
| 16. Blancada, Ricardo     | 39. Lee, Edward          |
| 17. Celetaria, Lourdes    | 40. Bascuña, Edward      |
| 18. Batsain, Belinda      |                          |
| 19. Solalin, Lito         |                          |
| 20. Ayo, Reino Stephen A. |                          |
| 21. Pabines, Nephthali R. |                          |
| 22. Cynthia Orcine        |                          |
| 23. Shirley Tible         |                          |

jag/9/8/89

08 July 1958  
(9-12 a.m.)

: Orientation Workshop on Soap-Making and Essential Oil Extraction.

Venue: BRSDC - Sicol River Basin Development Corporation Training Center, C6540 (Comarines Sur State Agricultural College), Cadlan, Pili.

Progress:

7:00 a.m. - Approximately 25 respondents gathered to the venue and they were provided with registration forms/questionnaires.

8:00 a.m. - Opening Ceremonies  
Opening remarks by Attorney Bonhele, Provincial Administrator; Ms. Grace T. Imperial, POPED and Ms. Sylvia Naborian, UNIDO.

10:15 a.m. - Introduction to soap-making and essential oil extraction - Mr. Berto Brizante, Jr., TLRD.

10:45 a.m. - Open forum for discussion, questions and inquiries about the training courses.

Major concerns from the respondent's part was the length of the Training Course (initially one year) and the participation fee (initially \$2000).

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-The respondents expressed their interest also in other types of training courses provided by the TLRD, like soil flower, studied soils and soil water. According to the provincial oil and officers, this has been discussed by Governor Villafuerte too; in his briefing to Mr. Imperial, he had stressed the need to link up these technical training courses under the oil program with other technologies made available by the TLRD.

-During the open forum, the provincial extension officers discussed also the possibility of the soap-making equipment fabricated at half-price by the Sicol College of Arts and Trade.

The representative of STI, Mr. El. Ramos attended the workshop together with the regional representative of STI.

ESSENTIAL OIL TRAINING WORKSHOP DESIGN COURSE SCHEDULE 18-21 JULY 58Objectives:

This three and a half day course aims to acquaint the participants about the significance of the essential oil, the promising essential oil yielding plants of the Philippines, the technology of the production of essential oil and the compounding of perfumes and other fragrance products and flavors.

Lecturer: Mr. Rio Indrade

- Day I (Monday)  
8:00-12:00 p.m.
1. The wealth in commercial essential oils contrasted with a non-existent essential oil and perfume industry.
  2. Commercially producing essential oil plants with reference to Desmodium sp.
  3. Commercial uses of essential oils.
- Day II (Tuesday)  
8:00-12:00 p.m.
1. Description of water distillation of essential oils e.g., clove-leaf oil and clove stem oil.
  2. Business bases on essential oil plants and other types of plants from local.
  3. Basics of perfumery.
  4. Water distillation, process and equipment.
- Day III (Wednesday)  
8:00-12:00 p.m.
1. Distillation, concentration of "Eucalyptus" and "Eucalyptus" oil.
  2. Fertilization of local essential oil plants.
  3. Discussion of steam distillation, solvent extraction and on other methods.
- Day IV (Thursday)  
8:00-12:00 p.m.
1. Perfume compounding demonstration.
  2. Questions and answers on essential oil production.

8:21 JULY '88

SOME FINANCIAL TRAINING WORKSHOP DESIGN

COURSE SCHEDULE

Date/Time	Topic/Content Objectives	Objectives: By the end of the training workshop, the participants will be able to:	Methodology/ Lecturer
Day 1 (Monday) 8:00-4:00 p.m.	1-a) Leveling of expectations	-Identify the expectations for the training workshop in terms of what the participants can learn and contribute to the training programs.	-Structured learning exercise with process- ing for clarification
		-Discuss their expectations of the facilitator/ resource persons.	- Discussion
	1-b) Orientation/introduction to the training workshop	-Understand the objectives of the training workshop.	- Discussion
		-Know the topics/resource persons and the methodologies that will be utilized.	-Lecturer: Beato H. Griarte
	2) Basic chemistry in soap making	-Explain characteristics, uses of different ingredients in soapmaking.	-Lecture/Workshop/ Practicum Lecturer: Beato H. Griarte
	3) NSIA requirements for quality testing	-Know and be clarified of the requirements of NSIA	-Lecture
	Dept. of Trade and Industry -Bureau of Product Standards Guidelines for Registration and Licensing	-Be clarified of the guidelines set by DTI for registration and licensing.	-Lecturer: Rafael Ibarra

Pre-Med- AFC  
May 14

26-A de Anis, Ateneo  
Avenue, Naga City  
5400

XXXXXXXXXX

Day II (Tuesday)  
11:00-12:00 pm.

Basic chemistry in soap-  
making (continued)

-Lecturers:  
Beato H. Griarte  
Rafael Ibarra

4) Making of special soap  
(Cleanser and bath soap).

-Identify the ingredients and the produc-  
tion process involved in soap-making.

-Lecturette/  
Workshop

-Demonstrate improved skills in the pro-  
duction of herbal soap.

-Practicum/Demostra-  
tion

-Formulate financial/costing projection  
for the soap production.

-Lecturers:  
Beato H. Griarte  
Rafael Ibarra

5) Film: "Chemistry of  
Soap-Making"

-Following parts were shown:

- Audio-visual/Film

- Title: Soap-Making  
- Video-tape

- "Fundamentals of Chemistry"

- "Practical Soap-Making"

- "Plant Operation"

Day III (Wednesday)  
11:00-12:00 pm.

(Continuation of Making  
the soap)

6) Purchasing and Marketing

-Discuss various purchasing and marketing  
plans.

-Lecturette/Workshop

-Demonstrate improved skills in purchasing  
and marketing.

-Lecturers:  
Rafael Ibarra

-Basic chemistry in related products  
(cosmetics).

Day IV (Thursday)  
11:00-12:00 pm.

7) Wrap up session with the  
participants.

-Identify activities to strengthen the group. -Workshop

-Discuss means for organizing the group  
(cooperative).

-Group Evaluation

TRAINING COURSE  
FOR THE DEVELOPMENT OF COTTAGE, SMALL AND MEDIUM INDUSTRIES  
18-21 July 1988

PROFILE OF PARTICIPANTS (RESOURCE PERSONS/PROGRAM STAFF)

A. PROFILE OF PARTICIPANTS

<u>NAME/EDUCATION/B-DAY/SCHOOL</u>	<u>POSITION/EMPLOYMENT</u> <u>Business ADDRESS</u> <u>TEL. NO.</u>	<u>HOME ADDRESS</u> <u>TEL. NO.</u>
1. ESCOBER, CLARENCE E. "Clarence" BS Agronomy - UPLB Feb. 14	Rice Farming Quipayo, Calabanga	La Purisima, Quipayo Calabanga, Cam. Sur
2. CHAVEZ, WILLY C. "Willy" Master in Urban Planning - UP Diliman AB Economics - Ateneo de Naga April 24	2 Sandeman Bldg. Balintawak Street Naga City	2 Sandeman Bldg. Balintawak Street Naga City
3. MARTINEZ, RUBEN "Ben" BS Agronomy-Araneta Univ. May 1	GRM International Inc. 345 Bagumbayan, Naga City	345 Bagumbayan, Naga City
4. FEDERIZON, SALVADOR "Sadong" BSBA - UNC Feb. 2	Professional Pension Plan, Inc.; Naga City 24-45	707 Penafraancia Avenue, Naga City
5. VALENCIA, DANILO A. "Danny" High School-Naga College May 24	TABEGUIAN, CARAMOAN Camarines Sur	TAWOG, CARAMOAN Camarines Sur
6. GATUSLAO, ANGUSTIAS A. "Tias" BS Pharmacy Sept. 27	GatuslaO Pharmacy Tinambac, Cam. Sur	Tinambac, Cam. Sur
7. MARTINEZ, MA. DIGNA ASUNCION "Maricion" Pre-Med- APC May 14		345 Bagumbayan Street, Naga City
8. BENJAMIN, DENNIS M. "Dennis" Economics/Mgt. Feb. 4		26-A de Asis, Ateneo Avenue, Naga City 44-00
9. ADOTE, VILLARUEL "Ruel" Grade VI Jan. 31		Sta. Maria, Lagoney
10. LAVADIA, JULIAN JR. "Jun" BSBA/Marketing-UNC Sept. 8		793 Plaridel Street, Naga City 35-11

<u>NAME/EDUCATION/5-DAY/SCHOOL</u>	<u>POSITION/EMPLOYMENT BUSINESS ADDRESS TEL. NO.</u>	<u>HOME ADDRESS TEL. NO.</u>
✓ 11. ESTRELLA, ARNEL "Neli" BSCE-Mapua Inst. of Technology Cam, Sur Feb. 3	Star Food Products Poblacion, Balatan	Poblacion, Balatan Camarines Sur
✓ 12. LLIJON, JOSE G. "Joe" High School Oct. 29	Yu Sante Training # 6 Gen. Luna Street Naga City	332 Kapilihan Street, Naga City
✓ 13. PEREZ, ROMEO SR. "Romy" BSC-Naga College Jan. 25	17 I. H. M. V. Concepcion Pequena, Naga City	17 I. H. M. V. Concepcion Pequena, Naga City.
✓ 14. PIELAGO, EDMUNDO H. "Epi" AB/Pol. Science-UNC March 30		34 Princeton Street, Monterey Village Subd., Naga City
✓ 15. ORCINE, CYNTHIA G. "Cindy" BS/Botany-FEU June 25		125 Abella Street, Naga City
✓ 16. FERNANDEZ, ABELARDO "Abe" Elementary Dec. 15		Dona Clara Subd. 32 Concepcion Pequena, Naga City
✓ 17. BLANCAJA, RICARDO P. "Carding" College Feb. 7		San Ramon, Baco, Camarines Sur
✓ 18. CELETERIA, LOURDES "Ludy" ESSED-Valiente Tech. Inst. June 4		San Jose Manpower Project Pili, Cam. Sur
✓ 19. BAGSIN, BELINDA "Linda" BSHE-CSI August 10	Baco, Cam. Sur	Baco, Cam. Sur
✓ 20. BOLALIN, LITO E. "Nonoy" College Sept. 7		Buluang, Baco, Camarines Sur

B. PARTICIPANTS FROM THE COLLABORATING AGENCIES

1. PABINES, NEPTHALI P. "Tali" BSCE-UNC Feb. 27	Legislative Asst. I Congressman Roco 636 Berlin Street, Naga City	58 Misericordia, Naga City
2. AYO, REY A. "Ray" BSCE-UNC April 22	BREDP San Jose, Pili, Cam. Sur	37 Kayunga Road, Mariano Village Subd.



<u>NAME/EDUCATION/B-DAY/SCHOOL</u>	<u>POSITION/EMPLOYMENT</u> <u>BUSINESS ADDRESS</u> <u>TEL. NO.</u>	<u>HOME ADDRESS</u> <u>TEL. NO.</u>
3. TIBLE, SHIRLEY "Shirl" BSC- <sup>L</sup> ADEN Jan. 24		Magarao, Cam. Sur
<u>CONSULTANT</u>		
1. GRIARTE, BEATO M. JR. "Beato" ESCHE August 21	Planning Officer Technology and Livelihood Resource Center (TLRC) Urban Bldg. Gil Puyat Avenue, Makati M.M. 85-98-11.	# 21 Malvar Street Project 4, Quezon City 921-04-06
2. ANDRADE, PIO "Pio" Food Technology Chemist Nov. 3	Consultant Essential Oil Extraction/Food Science, TLRC Urban Bldg. Gil Puyat Avenue, Makati, Metro Manila	# 655-B Ma. Cristina St., Sampaloc, Metro Manila Tel. No. 61-37-29
3. IBARRA, RAFAEL "Raffy" Chemist	Consultant Soap - do -	# 1651-A Sisa Street, Sampaloc, Metro Manila 741-96-39

UNIDO STAFF

1. ERIK, BOS "Erik" M.Sc.(Eng.)	TECHNICAL EXPERT UP-ISSI, Diliman Quezon City, Metro Manila # 99-70-76	UNDP P.O. Box 7285 ADC MIA Road, Pasay City, Metro Manila
2. SIRKKA, MUKKAINEN "Sirikka" M.Sc.(Eng.)	ASSOCIATE EXPERT - do -	- do -
3. RAPOSA, DENNIS GIL A. "Dennis" AB-Eco./ES Buss.Mgt. Sept. 1	RESEARCH ASSISTANT UP-ISSI, E. Virata Hall UP-Campus, Diliman Quezon City #99-70-76 to 79	# 321 Katipunan Road Loyola Hts., Quezon City #96-69-34

CAMARINES SUR PROVINCIAL STAFF

1. IMPERIAL, GRACE CORAZON "Ge" BS Statistics - UP Diliman Jan 5	Supv'g. Dev't. Project Analyst PDFO, Provincial Capitol Complex, Cadlan, Pili, Cam. Sur #66-44	#15 Solid Street, Dayangdung, Nagasaki City #38-27/31-61
2. ROMERO, GUILBERT "Guilbert" BSCE/GE/MPA - UNC Dec. 14	Incharge Project Development Division - do -	NCHV Subd., San Agustin, Caramoran, Cam. Sur

<u>NAME/EDUCATION/B-DAY/SCHOOL</u>	<u>POSITION/EMPLOYMENT BUSINESS ADDRESS TEL. NO.</u>	<u>HOME ADDRESS TEL. NO.</u>
3. BORJA, MA. FRANCIA C. "Borjay" BSIE-UNC Sept. 21	Technical Staff PDPEO, Provincial Capitol Complex, Cadlan, Pili, Cam.Sur	#255 San Isidro, Bombon, Cam. Sur
4. GRIMPLUMA, JULIE A. "Julis" BSB./Mgt.-UNC June 5	- do -	19-C Arana Street, Naga City 43-42
5. GUPO, JOSE PEPITO B. "Jopet" BSC/Accounting-UNC July 1	- do -	#30-A Igualdad Street, Naga City,



## ACCOMPLISHMENT REPORT

### Camarines Sur Training Project:

- Technical Training on Soap Manufacturing  
(series 3; Plant Operation and Management)

Date : August 15 - 20, 1988

#### A. Program of Activities

1. A recap of technical training on the chemistry of soap making.
2. Group exercise on Batch operation; problem solving, discussion on plant layout, design, plant operation; management and safety operation.
3. Hands-on exercise on laundry and bath soap.
4. Bar cutting and stamping.
5. Business ideas; how to start a small scale business.
6. Introduction to marketing and salesmanship.

#### B. Activity report

First day: The participants were given a recap of the chemistry on soap making. All the 21 pax were divided into 4 groups and each were assigned group activities, ie, raw materials preparation, lye making; the use of fragrances, additives, fillers colors, etc. In the saponification process for example, pbblems were threshed out on how to improve the quality of soap even if the process used is "Cold Process". In the exercise, everybody shared in the arithmetic process to simplify common formulation that<sup>was</sup> neither big or small. In the process therefore, it drew so much common sense from everyone - which was the very purpose of the first day workshop so that they can do best their hands-on activity for the second and third day.

Second day: As early as 8:30 AM, the pax had already readied their materials for the batch process. As was in the schedule, each had their assignment, that is why they were able to finish two batches each, one on laundry and the other on bath soap. The time the participant formulated their own soap they found the activity rather missy though exciting. And for their price, they were given each several bars of soap so they can test them for product sampling. The pax also did light exercise on stamping.

Third day: The last day of soap making exercise was a continuation on how to perfect the batch formulation. Two of the group has to redo the formulation for another laundry soap and toilet soap. After each formulation, and when the soap was ready for cutting and stamping, each member of the group has to undergo cutting and stamping exercises. In the afternoon, and after everybody had his share of the activities, they were presented an introduction to business ideas. Very evident from the faces of each of them was a question of wether he or she can realy sell the product. And so, they had to be lectured on how to sell the product best.

SUBJECT : MINI-PLANT OPERATION COURSE ON SOAP -MAKING  
AND ESSENTIAL OIL EXTRACTION.  
DATE : August 15-20, 1988  
VENUE : CSSAC TRAINING Center, Pili, Camariens Sur  
LECTURER/ : Mr. Beato Griarte, Jr., TLRC, Training Officer  
Mr. Pio Andrade, TLRC

A T T E N D A N C E

1. Clarence Escobar
2. Willy Chavez
3. Ruben Martinez
4. Salvador Federizon
5. Danilo Valencia
6. Augustias Gatuslao
7. Maricion Martinez
8. Dennis Benjamin
9. Villaruel Adotez
10. Julian Lavadia
11. Arnel Estrella
12. Jose Lijon
13. Romeo Perez, Sr.
14. Edmundo Pielago
15. Cynthia Orcine
16. Abelardo Fernandez
17. Ricardo Blancada
18. Lourdes Celetaria
19. Belinda Bacsein
20. Lito Bolalin
21. Shirley Tible

## ANNEX

## BUSINESS PLANNING COURSE SCHEDULE

Date : 6-8 September 1988  
 Lecturer : Mr. Jaime Reyes, TLRC Consultant  
 Venue : CBS-C Training Center, Cadlan, Pili, Camarines Sur

=====

06 Sept. 1988  
 (Tuesday)

- 9:00-12:00 p.m. - Mini-Business Plan Module  
 1:00- 2:00 p.m. - " " " "  
 2:00- 4:00 p.m. - Group Exercise: Organizing the Business  
 (The participants formed groups depending on the form of business they are going to be engaged in. They filled up forms in preparation for the next day's group presentation).

07 Sept. 1988  
 (Wednesday)

- 9:00-11:00 a.m. - Pre-feasibility Study Preparation Module  
 11:00-12:00 p.m. - Presentation of Tuesday's Group Activities  
 1:00- 3:30 p.m. - Pre-feasibility Study Preparation Module  
 (Continuation)  
 3:30- 5:00 p.m. - Open Forum and Panel Discussion on Financial Aspects, Support Services and Institutional Linkages

08 Sept. 1988  
 (Thursday)

- 9:00-12:00 p.m. - Pre-feasibility Study Preparation Module (Continued):  
 Financial and Technical Aspects  
 1:00- 3:00 p.m. - " " " "  
 3:00- 5:00 p.m. - Presentation of Group Activities, Individual Plans  
 5:00- 5:30 p.m. - Closing Ceremonies and Graduation  
 (Closing Remarks by Atty. Sonnewie, Provincial Administrator)

BUSINESS PLANNING COURSE  
PHI/36/018  
Camarines Sur

SCHEDULE

Dates : September 6, 7, 8, 1983.  
Duration : Three days at six hours a day.  
Time : 9:00 AM TO 12:00 AM / 1:00 PM TO 3:00 PM

GENERAL OUTLINE

A. MINI BUSINESS PLAN MODULE

1. OBJECTIVE AND METHODOLOGY

The objective of the course is to prepare the participant who is about to engage in business. The objective is achieved by making the participant know:

- what a business is;
- how it is organized;
- where it may be registered;
- who is going to run it; and,
- how much it costs to establish.

With the above knowledge, the participant should be able to define what his business is, determine the resources he needs, plan how he should organize it, and then implement his plan accordingly.

The training approach would be through a three-hour lecture (at about 30 minutes per point) on the above five points coupled with a half hour mini-business planning exercise. The participants may be grouped according to their planned organizational groupings, if necessary.

The participants need only their paper and pencil, and an ordinary calculator to get them through this module.

2. TOPIC OUTLINE

a. What is a business?

1. Purpose of a Business
2. What Is Your Business
3. Classifications and Terms

b. Obtaining Legal Personality

1. Business Name



2. Business Permit
3. SSS/Medicare Registration
4. P.I.R. Tax Account Number
5. Articles of Incorporation/By-Laws
6. Stock & Transfer Book

c. Estimating Initial Cost of Establishment

1. Identifying Pre-Operating Costs
2. Estimating Pre-Operating Costs
3. Estimating Fixed Assets Cost
4. Estimating Working Capital

d. Organizing Your Business

1. Choosing the Appropriate Form of Organization
2. Acquiring the Required Resources

e. Building and Running the Organization

1. Defining the Structure
2. Building the Structure

B. PRE-FEASIBILITY STUDY PREPARATION MODULE

1. OBJECTIVE AND METHODOLOGY

The objective of this module is to impart on the participants adequate know-how on pre-feasibility study preparation. This objective is achieved by briefing them the salient points about the most important key functional areas of a business: namely:

- a. The Market and Marketing Aspects
- b. The Technology Aspect
- c. The Financial Aspect
- d. The Economic Aspect

With the knowledge gained from the lecture, the participants should be able to do their draft pre-feasibility study at the end of the training module.

The training approach would be through a 12-hour lecture coupled with exercises that will last for a total of about four hours. The time allocated for the lecture cannot possibly cover a thorough treatment of the various study approaches (or outlines) used in practice by public and private entities. Hence, the study outline of a private bank in Metro Manila will be singled out for good reason. It is brief, simple, well-structured, and similar to the outline used by the Regeng MKK.

The participants may need to bring along a scientific calculator

or a financial calculator to get them through the one discs.

## 2. TOPIC OUTLINE

### a. General Discussion of the Study Outline/Other Aspects

1. The Borrower
2. The Project Description

### b. Market Aspect

1. Description/Uses of the Product
2. Demand & Supply Analysis/Projection
3. Price Analysis
4. Marketing Strategy
5. Sales Projection

### c. The Technical Aspect

1. Project Site
2. Production Process
3. Machinery & Equipment
4. Production Schedule
5. Building & Other Structures
6. Utilities/Services
7. Manpower Requirements

### d. Financial Aspect

1. Projected Income Statement Preparation
2. Projected Cash Flow Statement Preparation
3. Projected Balance Sheet Preparation
4. Financial Analysis

Report on the  
BUSINESS PLANNING/RE-FEASIBILITY STUDY PREPARATION TRAINING  
Held at Camarines Sur State Agricultural College

BACKGROUND

The training on Business Planning/Feasibility Study Preparation (referred to as the BP COURSE) was intended for the beneficiaries of the NCIPB-funded project of which the UP-ICSI and the TRAC are lead agencies. The lead beneficiaries had already undergone a technical training course on agro-business technology in particular: soap making and essential oil extraction. This BP Course was meant to prepare the participants in establishing their own small businesses and in preparing their own pre-feasibility studies which financing institutions, including the NRCB, may require.

The seminar-workshop schedule was from 9:00 A.M. to 5:00 P.M. for three days (i.e., September 6, 7, and 8, 1988). The seminar content was broken down into two modules: Module 1--Business Planning; and, Module 2--PRE-F.S. Preparation. (Please see attached seminar-workshop schedule.)

SEMINAR-WORKSHOP ACTUAL SCHEDULE

The seminar-workshop did not exactly proceed as planned. First of all, Module 1--Business Planning, which was supposed to be for only three to four hours in all, went on from 9:00 A.M. to 4:00 P.M. The participants were asked to accomplish their seatwork which lasted for more than an hour. In their enthusiasm, many questions were raised by the participants regarding the organizational and financing aspects of a new enterprise. This further lengthened the time used up for Module 1. Shorting the seminar-workshop abruptly just to conform to the schedule was impossible without the participants losing interest or responding in a negative way.

The pre-feasibility study preparation aspect too had to be lengthened. A brief analysis of the cross-section of the participants' background showed that not all the participants were already in business. There were a lot who had no business background at all. Some were only high school graduates. To make them appreciate the lessons being taught, the presentation of concepts and the subsequent discussions had to be slowed down. Thus, the second day--which covered the preliminary chapters and the marketing aspect--was from 9:00 A.M. to 5:00 P.M. The last day, wherein the technical and the financial aspects were considered, had to start early at 8:00 A.M. and end at 5:00 P.M. for the seminar-workshop proper to be completed.

The graduation exercises, which were scheduled to start at 4:00 P.M. on said the schedule of the Provincial Administrator, started at 5:00 P.M. because of the extended time limit of the participants' presentation of their business plans. The Provincial Administrator and the participants' representatives had to arrive since it was planned above the schedule.

## ACCOMPLISHMENTS

Within Module 1, the participants were made to decide as to:

- (1) the form of their business organization, and
- (2) the product they were going to produce and sell.

They were also made to do the following things:

- (1) identify and estimate their preoperating costs,
- (2) identify and estimate their fixed assets for acquisition,
- (3) estimate their working capital expenses, and finally,
- (4) estimate the cost of establishment of their business.

These were all recorded in their business plans.

Within Module 2, the participants were made to do their own pre-feasibility study. In particular, they were made to:

- (1) prepare their market analysis and their marketing program,
- (2) prepare their technical plan, including product cost estimation,
- (3) estimate their financing needs.

Due to lack of time, only one of the collegegraduate participants was able to almost accomplish his pre-feasibility study. Most of the college graduate participants felt they could finish the pre-feasibility study had they been given more time. The other participants who did not reach college level education had a difficult time catching up, particularly with the use of cost accounting. The projected financial statements preparation was also difficult enough for even a pharmacist without accounting background whatsoever to understand the concepts and the exercises.

Overall, the objectives of the seminar-workshop was deemed accomplished. It may be verified with the reports and documents of the proceedings that will be prepared by the UP-ISSI. That the Provincial Administrator was pleased with the presentation of final outputs of the seminar-workshop is an indication of the accomplishments of the said activity.

*James C. Rey*  
9-12-84

SUBJECT : BUSINESS PLANNING COURSE  
DATE : Sept. 6-8, 1988  
VENUE : CSSAC Training Center, Pili, Cam. Sur  
LECTURER : Mr. Jaime Reyes, TLRC Consultant

A T T E N D A N C E

1. Clarence Escobar
2. Willy Chavez
3. Ruben Martinez
4. Salvador Valencia
5. Danilo Valencia
6. Angustias Gatuslao
7. Maricion Martires
8. Dennis Benjamin
9. Villaruel Adote
10. Julian Lavadia
11. Arnel Estrella
12. Jose Lijon
13. Romeo Perez, Sr.
14. Edmundo Tielago
15. Cynthia Orcine
16. Abelardo Fernandez
17. Ricardo Balacada
18. Lourdes Celataria
19. Belinda Sacasin
20. Lito Bolalin
21. Shirley Tible

DEVELOPMENT OF ENTREPRENEURS FOR COTTAGE, SMALL  
AND MEDIUM SCALE INDUSTRIES

STATUS OF THE BUSINESS VENTURES OF THE PARTICIPANTS OF THE PILOT PROGRAMME  
MONITORING VISIT TO CAGAIINES SUR 25-30 OCTOBER 1988

1. JOSE G. LIJON

Background information

- Naga City
- age 36
- works for "Yu Sante Trading", grocery and retail stores in Naga(3) and Balatan(1)
- has set up a new business early in 1988 in partnership w/ Mr. Fidel Yu, who also attended the technical training courses under the pilot programme; this business, "Lijon-Manufacturing" is under registration, the total capitalization is about P25,000, the products are vinegar and laundry soap, plus clorox(bleaching detergent) in the near future
- the volume of the production up till the end of October was 5,000 bottles of vinegar and 4,000 bars of laundry soap

Status of the new business venture

- Mr. Lijon has been producing laundry soap with a manual method in the premises adjacent to the "Yu Sante Trading" outlet in Gen. Luna St., Naga City for a couple of months. It takes 3 hours to get 150 bars of soap. "Amor" is selling at P6.50 per bar, "ACBAR" is another brand he has just started to produce.
- "Amor" and "ACBAR" are distributed and sold in the outlets of "Yu Sante Trading"; according to Mr. Lijon there are no problems in marketing the soap and especially "Amor" has been selling well
- He has been experimenting the manufacture on toilet soap, too, but has encountered problems with the essence
- Mr. Lijon would like to get more know-how on the processing of soap-stock and the manufacture of synthetic detergent

## 2. SALVADOR H. FEDERIZON

### Background information

- Naga City
- age 63
- a retired PNB Manager( Provincial level for 35 yrs)
- has a business on the sale of dry goods since 1987 w/ capitalization of P75,000; a fire last year slowed down the operations
- Mr. Federizon has been producing soap as his hobby for a couple of years; he has an organized business on soap-making( not yet registered) since 1986, w/ total assets at the time of organization P50,000; himself, his wife and the maid are engaged in the business

### Status of the new venture

- Mr. Federizon has a well-organized mini-plant for soap in the premises in the backyard of his residence including a mixer acquired from Mr. Rafael Ibarra, consultant of TLRC in February 1988.
- He has been producing 600 bars of his "Natural Soap" since September this year and 1,000 bars since he acquired the mixer in Feb. 1988
- Mr. Federizon's target market are friends and relatives; he wants to continue "small" in spite of the increasing demand for his soap; he thinks the political & economic situation is not stable enough for expansion (market situation, barangkay elections bases agreement) and has not started with his business plan, which he presented during the business planning course in September
- He has no problems with regards to the technological aspects; should such problems arise, he consults with Mr. Ibarra in Manila through long-distance

### 3. JULIAN LAVADIA, JR.

#### Background information

- Naga City
- age 27
- He is engaged in a family business, "Gueng's Enterprises" in retail and wholesale, since 1985; the present capitalization is P500,00 plus w/ six full-time employees.
- He plans to set up "The World Enterprise" for laundry and "natural" bath soap manufacture with the estimated capital input of P100,00

#### Status of the new business venture

- Mr. Lavadia has been experimenting on the manufacture of his bath soap with his brother and sister-in-law; according to him, toilet soap is difficult to make
- He is planning to launch his bath soap in connection with the city-wide basketball clinics with the target group of about 1000 10-16 -year old boys. (19 Nov.) Mr. Lavadia is the president of the local basketball/sports association
- The selling price of his soap will be P4 per piece, which would bring 50 % profits

### 4. DENNIS BENJAMIN

#### Background information

- Naga City
- age 29
- working on his thesis
- Has a Buy-and-Sell business (dried fish, eggs, etc) since 1979, w/ capitalization of about P40,000 and two full-time employees
- presently, he is preparing a feasibility study for setting up an enterprise "Horizon Enterprise" for the manufacture of bath and laundry soap
- according to his original business plan, this business will start operations in January 1989

#### Status of the new business venture

- Mr. Benjamin has been experimenting on the manufacture of bath and laundry soap, but the quality of the soap has not been good enough
- He plans to visit TLRC in Manila in early November for some additional information.



#### 4. RUBEN MARTINEZ

##### Background information

- Naga City
- age 48
- Has a business on cargo forwarding and customs brokerage "GEM International Inc." since Jan. 1966 the company has an office in Manila and a branch in Naga City w/ present capitalization of P100,00, out of which P45,000 is his own cash; the company has two part-time employees
- Mr. Martinez plans to organize an enterprise on soap/ essential oil development and marketing; the estimated capital requirements are P50,000 for soap and P20,000 for essential oil
- Mr. Martinez completed his thesis in 1962 on essential oils; he has attended several courses on ess.oils and related subjects at the TLRC , the last one was in February 1988
- He has been collecting plants systematically for years, owns distillation equipment and has a mini-laboratory in his residence in Naga City

##### Status of the new business venture

- Mr. Martinez has made calculations in connection with the feasibility study for the new business and its viability. His calculations show an estimated income of P652,260 for a period of nine months with the expenses of P50,000 for the same period; this includes the export of the essential oils; according to Mr. Martinez, his existing business has the necessary business contacts in the U.S.A, U.K. and Germany already.
- He has established contacts with several landowners in Camarines Sur who are willing to offer their lands for planting the plants suitable for essential oil extraction at a corporate share of 20%. This would include planting, weeding and harvesting and Mr. Martinez would be in charge of the capitalization of the plants (seedlings) and he would provide the technological know how and equipment for the extraction. Mr. Martinez is even willing to borrow his own equipment and demonstrate the technology for those interested.
- Mr. Martinez has had discussions with Dra. Fe Laysa of Camarines Sur State Agricultural College with regards to the training offered by CSSAC. Dra. Laysa has indicated the possibility of applying funds for the projected cooperative from the LEAD-assistance program ( LEAD- Livelihood Enhancement for Agricultural Development) (Buklod Yaman Program)
- The papers for setting up a cooperative among the participants of the Pilot Programme are recently under preparation

#### 5. MARICION MARTINEZ

- Naga City
- age 21
- daughter of Mr. Martinez
- attended all the training courses
- Business Plans: see Mr. Ruben Martinez

5. RICARDO BLANCADA

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Background information

- 5aac
- age 45
- Mr. Blancada had a business (tire dealer) earlier in Samar; it failed because of insufficient capital
- He has plans to set up a new business by the name "Esso Products" with the initial products clorox, shampoo and soap. The estimated capital requirement will be around P50,000. He has already made market surveys for his products

Status of the business venture

- Mr. Blancada has been preparing samples of soap, shampoo, clorox and acetone. He has also contacted plastic bottle manufacturers and label makers in Naga. He has made statistical surveys on the market demand and viability of these household products, for instance, by interviewing the owner of the Robertson's department store
- Mr. Blancada has exact plans how to get 1% of the markets for his products, which would generate him a P9,000 monthly income
- He plans to introduce his products in January 1989 and has planned an expansion of his business in Samar
- He has 0.5 ha's planted for lemongrass and has recently acquired a stock of 1,000 seedlings of Ilang-Ilang for trading at a price of P10 each
- He has previously encountered financial setbacks and is anticipating similar kind of problems this time, too, especially in raising the initial capital for this venture

7. AUGUSTIAS A. DATUSLAC

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Background information

- Tinambac
- age 71
- Mrs. Datuslao has had a pharmacy "Botica Datuslao" since 1950; the present capitalization is P50,000 with one full-time employer (daughter)
- She plans to add new products to her business, namely Ilang-Ilang perfume and its by-products; she will get all the required capital from her existing business, raw materials from her own Ilang-Ilang trees or from friends; she also owns the distillation equipment

Status of the new business venture

- Mrs. Datuslao is right now waiting for the harvest of her trees. Her house and pharmacy, located by the sea, suffered slight damages during the latest typhoon; the Ilang-Ilang trees remained unaffected

8. ARNEL ESTRELLA

Background information

- Poblacion Balatan
- age 27
- He has a business "Starfood products", organized in 1966, total capitalization is P300,00; initial products are soy sauce, vinegar and patis
- He plans to add new products to his existing business: trading of soap manufactured by the other participants of the pilot programme and selling it to his existing clientele

Status of the new business venture

- in the questionnaire submitted through another participant he strongly indicated the need for financial support before starting the new venture

9. EDMUNDO W. PIELAGO

Background information

- Naga City
- age 40
- engaged in a business, rice-mill since 1968 with the present capitalization of P300,000
- He has planned to set up a new business "PSMI" ("Princeton soap manufacturing industry") for bath and laundry soap with a working capital of P11,550/year

Status of the new business venture

- He was not available during the time of the visit but according to another family member he has been making some experiments on soap-making

10. CLARENCE E. ESCOBER

Background information

- Quiapo, Calabanga
- age 44
- has a rice farm with the capitalization of about P500,000 since 1971
- He plans to set up a new business "E & T'Co" ("Escobar & Title Enterprise") in January 1989 for essential oil and nursery, bath and laundry soap with another participant, Shirley Tible(cousin); the estimated capital requirement is P350,000
- Mr. Escobar has his own distillation equipment

Status of the new business venture

- He was not available during the time of the visit but according to his wife, he had been distilling Ilang-Ilang from his own trees

11. SHIRLEY C. TIBLE

Background information

- Magaray
- age 30 (estimate)
- cousin of Clarence Escobar
- plans to set up a business "Campaguita Soaps and cosmetics", with the principal business of selling campaguita essential oils

Status of the business venture

12. VILMARUEL ADOTE

- Background information
- Sta. Maria, Laguna
  - age 44
  - was engaged in a handicrafts business before which failed, probably because of lack of capital
  - He has plans to set up a new business "Vinol Soap" for laundry soap in February 1989, with special concern on the essence
  - He has reportedly essential oil distillation equipment of his own; capital requirements for his new business will be P20,000

Status of the new business venture: N.A.

13. DAVIDO VALLEJO

- Background information
- Taweg, Caramoran
  - age 37
  - He has earlier been engaged in business, buy-and-sell of hogs, which failed due to financial problems
  - presently, he has plans to start raising pigs and ducks in his farmland, but will concentrate on essential oil extraction and soap making, if it proves profitable; estimated capital requirement for soap making is P30,000

Status of the new business venture: N.A.

14. ROMEO PEREZ SR.

- Background information
- Naga City
  - age 57
  - a retired policeman
  - He has currently a business for home-made banana chips since August 1988, with a capitalization of P25,000
  - He plans to go to soap making and essential oil extraction with the initial capital of P3,500

Status of the new business venture

- Mr. Perez was not available during the time of the visit, but according to his daughter he has been experimenting on the soap making

15. BELINDA BACSAIN

- Background information
- Baco
  - age 40
  - She is engaged in the family business, merchandising and livestock, since 1978 (her family started the business already in 1950); the total capitalization is P1,500,000, out of which P300,000 is her own cash, with 12 full-time and two part-time employees
  - She plans to start a nursery for essential oil plants (pachioli and others) but has not yet defined a business plan

16. LOURDES CELETARIA

- Fili
- age 28
- never in business before
- plans to set up a business on poultry or swine raising
- business plans related to the training: N.A.

17. WILLY CHAVEZ

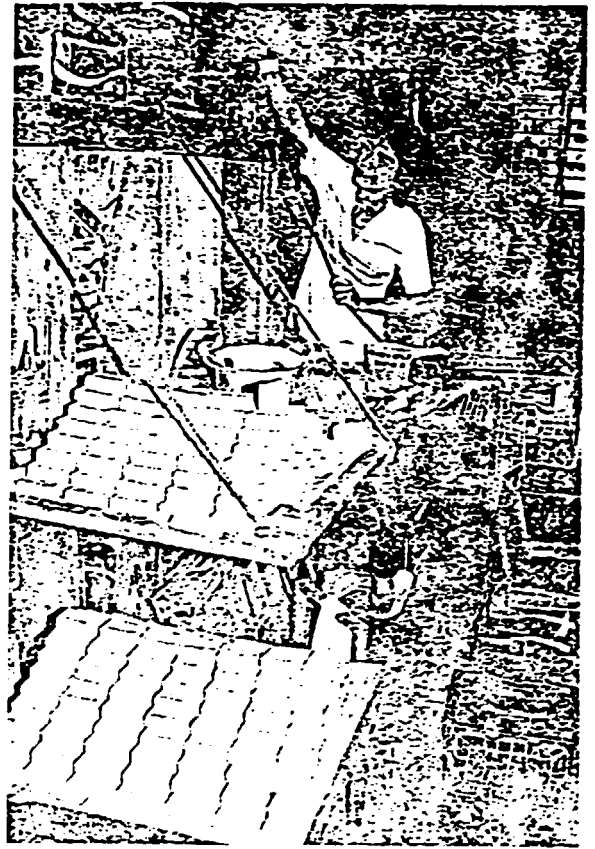
- Naga City
- age 34
- He has a trading business since 1986 (foodstuffs, general merchandise, agriculture)
- wants to expand his existing business, estimated capital requirement will be P50,000 - P100,000

18. ABELARDO FERNANDES

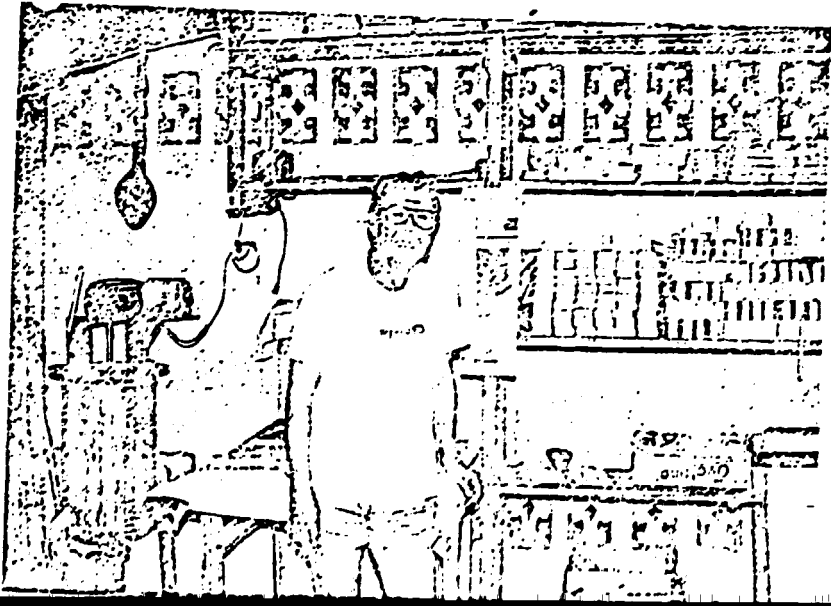
- age 58
- never in business before
- intended to start a business on soap making after the training

19. LITO E. BOLALIN

- Baao
- age 29
- never in business before
- attended the training because might start a business on soap or essential oil sometime in the future
- no definite plans yet, estimates the capital requirement at P10,000



Mr. Jose Lizon & his "Amor" and "ACBAR" Soaps



Mr. Silvester Federico  
in his soap-making plant



TABLE 1  
GENERAL OBSERVATIONS OF THE PARTICIPANTS

	have started a business or invested in equipment, nursery, seedlings, etc.	have immediate plans to start a business (feasibility study submitted to fin. institution)	have plans to start a business sometime in the future	CASABA member	already in the business prior to the start of the Pilot Program (x) business profitable)	age group	interviewed in this survey	type of business planned or started
1. Jose Lijon	+	NA	NA	+	+ x)	30-40	+	soap-making
2. Ruben Martinez	+	NA	NA	+	+ x)	40-50	+	essential oils
3. Clarencio Escobar	+	NA	NA	+	+	40-50	+	ess. oils, nursery
4. Ricardo Blancada	+	NA	NA	+	+	40-5-	+	ess. oils, nursery
5. Belinda Sacasain	+	NA	NA	+	+ x)	30-40	+	Nursery, ess. oils
6. Danilo Valencia	+	NA	NA	+	+	30-40	+	ess. oils, nursery.
7. Villaruel Adote	+	NA	NA	+	+	40-50	+	soap-making ess. oils, nursery
8. Salvador Federizon	+	NA	NA	+	+	60-70	+	soap-making
9. Edmundo Pielago	-	+	NA	+	+	30-40	+	soap, essential oils
10. Arnel Estrella	-	+	NA	+?	+ x)	20-30	+	trading (soap), liveli- hood association
11. Romeo Perez	-	-	+	+	-	50-60	+	soap, ess. oils
12. Jun Lavadia	-	-	+	+	+	20-30	-	soap making
13. Maricion Martinez	-	-	+	+	-	20-30	+	essential oils
14. Augustias Gatuslao	-?	-	+	+?	+ x)	70-80	-	essential oils
15. Shirley Tible	-	-	+	-	-	20-30	+	handicrafts
16. Dennis Benjamin	-	-	+	+	+	20-30	+	soap, ess. oils
17. Lito Bolalin	-	0	0	-	0	20-30	-	-
18. Abelardo Fernandez	-	0	0	-	0	50-60	-	-
19. Willy Chavez	-	0	0	-	+	30-40	-	-
20. Cynthia Orcine	-	0	0	-	-	20-30	-	-
21. Lourdes Celetaria	-	0	0	-	-	20-30	-	-
Total participants	8	2	6	13	14		14	

+ positive, yes  
- negative, no  
? not clear

0 data not available  
NA not applicable



nursery for further extraction purposes of the oils has been regarded as an indication of the start-up of the business, since the growing plants have a market value and can be traded already.

Out of the rest of the group, two have immediate plans to start a business (feasibility study submitted to the appropriate agency or potential source of financing), six (6) have plans to start a business in the near future or sometime in the future and five (5) have no more plans to start a business: two are no more interested and three have sought employment in Metro Manila or abroad.

## 2.2. TYPE OF BUSINESSES

Table 2

Number of participants	Type of business started or planned
7	Essential oils & Nursery
4	Soap-making
3	Soap-making & Essential oils
1	Trading of soap manufactured by other participants, Livelihood association
1	Handicrafts
-----	
Total	16

## 2.3. THE CARABINES SUR AGRI-BUSINESS ASSOCIATION, INC. (CASABA)

Thirteen (13) of the P. participants have formed among themselves the Carabines Sur Agri-Business Association, Inc. (CASABA). CASABA will act as a marketing association while each member constitutes his own production unit.

CASABA has recently been active in acquiring information on essential oil markets abroad from countries such as the United States of America and Federal Republic of Germany directly and from their embassies in Manila. CASABA has sought further technical support from the Province. For instance, the Regional Office of the Department of Agriculture is scheduled to conduct a laboratory training course on essential oils distillation for CASABA members on 2-10 March 1988.

Reportedly, new members, not associated with the Pilot Programme, have sought membership with CASABA.

## 2.4. FINANCING

Most of the participants who have started a business or invested in equipment, nursery, etc. have financed them from their own resources or from existing businesses. The estimated capital requirements to start a full-scale production varies from a few thousand pesos to 1.5 - 2 million pesos depending on the line and the size of the business of each participant. Financing was stated as the major problem in eleven (11) cases out of the fourteen (14) participants interviewed (see table 3).

## 2.5. ASSISTANCE

Aside from the financial support, the participants indicated that they would require technical support, mainly to acquire the skills for the right compounding and purification of the essential oils into refined products. Guidance was also necessary for the installation of the essential oils distillation equipment and on the prevailing standards and regulations for the technology and the products (see table 4).

Another area of major concern is the prospected export market and the market price of essential oils abroad. The participants considered information on the trade statistics, pricing and the marketing channels abroad essential before venturing into the business for the essential oils.

After the training courses were conducted four participants have contacted the TLRC consultants and trainers in Manila with specific technical problems. Another agency where the participants have successfully acquired assistance is the Regional Office of the Department of Agriculture in Pili, Camarines Sur (see 2.3.).

## 2.5. TRAINING COURSES

The usefulness of the training courses was asked in the Monitoring questionnaire. The scoring was from useful, somewhat useful to not useful. (three participants did not answer this question).

	useful	somewhat useful	not useful
technical classroom training on soapless oil	5 (44%)	1 (7%)	1 (7%)
mini-plant operation course on soapless oil (hands-on training)	3 (57%)	2 (14%)	1 (7%)
business planning seminar	3 (44%)	1 (14%)	1 (14%)

TABLE 3  
FINANCING

	estimated capital requirement	possible source of financing	problem encountered
1. Jose Lijon	?(expansion of existing soap-business)	-	increase of present capitalization for expansion
2. Ruben Martinez	P 300,000	-	capital outlay is a major problem
3. Clarencio Escobar	P 50,000-2,000,000	-	financing of capital expenditures
4. Ricardo Blancada	P 1,500,000	-	financing
5. Belinda Bacsain	-	-	-
6. Danilo Valencia	P 30,000	-	financing
7. Villaruel Adote	P 25,000	-	financing
8. Salvador Federizon	-	-	-
9. Edmundo Pielago	P 6,000 (for every 2 ha's of planted lemongrass)	-	financial support needed
10. Arnel Estrella	P 300,000	existing credit programmes	identification of the appropriate loan program
11. Romeo Perez	P 60,000	possibly borrow from private banks	financing
12. Maricion Martinez	?	-	financing
13. Shirley Tible	P 1,000	Borrow from family & friends	-
14. Dennis Benjamin	P 50,000	-	financing

TABLE 4  
SUPPORT/ASSISTANCE

	Technical needs	Market-related needs	Problems encountered
1. Jose Lijon	-	-	-
2. Ruben Martinez	Info on compounding of ess.oils, apparatus, equipment	Market price for ess.oils abroad	Lack of planting materials
3. Clarencio Escobar	Info on cost of installation of equipment, packaging standards, etc. for ess. oils	Cost estimates of exported oils, trade statistics	-
4. Ricardo Blancada	Info on compounding of ess. oils	Marketing channels, price abroad for ess. oils	-
5. Belinda Bacsain	Technical info on ess. oils	-	-
6. Danilo Valencia	Technical assistance for compounding ess. oils into consumer products	-	-
7. Villaruel Adote	-	-	-
8. Salvador Federizon	-	-	Constant supply of raw materials(caustic soda)
9. Edmundo Pielago	-	Market price for ess. oils abroad	-
10. Arnel Estrella	-	-	-
11. Romeo Perez	Guidance on Government regulations, standards	Market price for ess. oils abroad	-
12. Maricion Martinez	Info on the purification of ess. oils	-	-
13. Dennis Benjamin	-	Target markets. price of ess. oils abroad	-

### 3. TENTATIVE CONCLUSIONS

Under the project the UP/ISSI/SERDEF will conduct an impact study and prepare case studies on this Pilot Programme in the 1989. The conclusions presented here are meant to be only tentative and help to determine the key issues that the impact study and the case studies could deal with.

Under this Pilot Program, the utilization of two appropriate technologies for replication were demonstrated for the participants, soap-making and essential oil extraction.

At the start of the program most of the participants seemed to be interested in engaging themselves in the soap-making due to the fact that the technology to make laundry soap of sufficient quality is somewhat easy to acquire and there is an immediate market in every baranglay and local community. However, it can be noted that the group grew aware of the unexploited possibilities to extract essential oils and the prospective export markets for essential oils abroad. Accordingly, the interest shifted among man, from fabricating soap into essential oil extraction.

Since the technology of extracting perfume oils is more complex and the risks involved in the business grow considerably, the need to form CASABA becomes obvious. As a group the participants can maintain strengths and eliminate some of the weaknesses.

In the case of essential oils, the tendency of the group is to try to secure the markets (price, demand, existing trade channels, buyers' interest and commitment) before starting at full scale.

On the other hand, the process from planting the raw materials for extraction and harvest to the actual distilled essential oils is rather slow, which has to be taken into account in the monitoring of such an endeavour. Therefore, it is recommended that the impact study and the preparation of the case studies would take place no sooner than at the end of the pilot phase in August - September 1988.

STATUS OF THE BUSINESSES OF THE PARTICIPANTS

Survey conducted on 16 May by Ms. Neonita Enriquez, TLRC

ANNEX 9

NAMES	LINE	STATUS			REMARKS	
		GROWING		available lot size		MANUFACTURING started (date)
		seedlings (qty/pcs)	planted (qty/hills, pcs)			
1. Jose Lijon	soap making				Feb 1988 laundry soap (AMOR) for local market w/ 2 lab. helpers + 4 promo girls; capacity 650 bars/day for 6 hours; started producing vinegar & clorox, too	
2. Ruben Martires 3. Mariclon	essential oil	200 pachouli vertiver mint	15,000 hills lemongrass planted in 1/4 Ha	40 Ha	has a mini-lab. at home; makes soap & extracts different kinds of oils w/ his mini distillation apparatus: moras, citronella, ilang <sup>2</sup> , pachouli, lemongrass, fixatives	
4. Clarencio Escobar	essential oil nursery	1,300 ilang <sup>2</sup> camia vertiver	600 ilang <sup>2</sup> planted on 1/2 Ha	backyard type in Calabanga	has distillation apparatus at home; producing soap & essential oils of different kinds of leaves & flowers: moras, ilang <sup>2</sup> , citronella, lemongrass	
5. Ricardo Blancada	essential oil nursery	400 ilang <sup>2</sup> 25 vertiver	15,000 hills lemongrass, 600 hills citronella planted on 1/2 Ha	20 Ha	has distillation apparatus at home; produces soap & extracts essential oil of different kinds of leaves: citronella, moras, lemongrass	
6. Villaruel Adote	essential oil nursery	300 ilang <sup>2</sup> (500 ilang <sup>2</sup> sold)	700 hills ilang <sup>2</sup> 3,000 hills lemongrass planted on 1/2 Ha	9 Ha	Sept 1988 has distillation apparatus; extracts oil of lemongrass & ilang <sup>2</sup> ; sold out 500 ilang <sup>2</sup> seedlings	
7. Romeo Perez	essential oil soap		2,500 hills lemongrass 100 hills citro- nella planted on 1/4 Ha land	30 Ha	Aug 1988 produces soap for family & neighborhood consumption	

STATUS OF THE BUSINESSES OF THE PARTICIPANTS ( continued )

NAME	LINE	STATUS			REMARKS	
		GROWING		MANUFACTURING		
		seedlings (qty/pcs)	planted (qty/hills, pcs)	available lot size		started (date)
Alinda Bacsain	essential oil nursery	600 ilang <sup>2</sup> 40 meleguas 200 lemoncillo 20 acuzera	20 hills lemongrass 150 hills cania	5-10 Ha		distributed 300 seedlings to neighbours, which were planted at their backyards
Arnel Sitrella	soap trading					waiting for producers (Naga, Camarines Sur)
Armando Buedas	essential oil	100 ilang <sup>2</sup>	10,000 hills lemongrass planted on 2 Ha	30 Ha		has improved distillation apparatus at home (size 11" x 11 1/2", made of stainless steel)
Benvenido Reyta	essential oil farming			30 Ha		will start planting upon signal that there will be buyers on market
Abiano Almag	farming/ manu- facturer of post-harvest equipment		8,000 hills lemongrass planted on 1/2 Ha	5 Ha	1986	producer of post-harvest equipment (3 years in business)

## EXECUTIVE SUMMARY

## I. BRIEF DESCRIPTION OF THE PROJECT

A. Name of PropONENT: Technology & Livelihood Resource Center, Office of the President, TLRC Bldg., Sen. Gil J. Fuyat Ave., Ext., Makati, Metro Manila.

B. Project Title: Technology-cum-Livelihood Program (Pilot Small-Scale Technology Demonstration Park)

C. Funding Requirements:	UNDP
(1) Entrepreneurship Dev't. Programme	\$100,000
(2) Technology Demonstration Center	685,000
(3) Common Service Facilities	80,000
(4) Administrative Support	25,000
(5) Service Equipment	20,000
(6) Miscellaneous	50,000
	-----
	\$960,000
	(P20,160,000)

## II. BRIEF DESCRIPTION

## (1) Objectives

To promote and develop entrepreneurship through the implementation/establishment of a formal mechanism designed to assist potential small-scale industrial entrepreneurs by giving easy access to various support systems.

To promote rural industrial development through the establishment of a Technology Demonstration Center for other areas technology development and



dissemination providing consultancy and advisory services on the choice and application of appropriate technology for the processing of indigenous raw materials.

(2) Technical Aspects.

The proposed project will serve as:

- an Entrepreneurship Development Training Center
- a Technology Demonstration Center
- a common service facility with fabrication capability to replicate technologies being demonstrated.

First, an entrepreneurship development programme will be implemented to be complimented by technology demonstration and training and finally, the actual hands-on experience will be incorporated using the common service facilities available.

The technology demonstration center will serve as a venue for various commerciable agriculture-related businesses and rural-based industries through the introduction and dissemination of appropriate technologies to enhance livelihood opportunities, at the same time serving as on-site training laboratory for would-be entrepreneurs.

The main concern of the demonstration center is to showcase locally fabricated small-scale technologies and their machinery requirements using indigenous raw materials.

The technologies to be demonstrated are the following:

Integrated coconut processing technologies

- charcoal
- vinegar
- carbonated softdrink
- nata de coco
- activated carbon
- soap-making
- coconut oil mill/refinery (wet process)

Essential oil extraction

Post-harvest facilities and other special projects.

Training modules on these technologies will be developed and conducted in the technology demonstration center to showcase them and to disseminate information of their commerciable uses.

Aside from being a show-window of the technologies, the Bicol Small-Scale Technology Demonstration Park will be used as a common service facility. The rural residents may avail of the fabrication capability of the processing facilities and replicate the technologies they have been demonstrated in the start-up phase of their enterprises, thus lowering the funding requirements of their individual entrepreneurial activities.

(3) Implementation

The Technology and Livelihood Resource Center (TLRC), as the proponent, will be the lead agency to source and introduce the technologies in the Technology Demonstration Center it will disseminate information on the commercial applications of the technologies made available by the Department of Science and Technology (DOST) in the form of training modules, material and consultancy inputs.

The site of the project will be in the province of Comarines Sur. The project will draw support from the Provincial Government of Comarines Sur and other private and government institutions in the implementation of the project, who are now involved in the pilot program (PHI/36/913).

The involvement of the Department of Trade and Industry (DTI) as the primary agency tasked with national industrial development will be given emphasis. A network organization will eventually be formed from among the relevant local public and private agencies supporting entrepreneurship development programmes and small-scale rural industrialization.

(4) The estimated duration for the implementation of the project is 2.5 years.

(5) Target beneficiaries

1) Entrepreneurship Development Training Center

the target beneficiaries will be an initial group of approximately 50 potential entrepreneurs who will be evaluated and assessed on the progress of their business ventures.

2) Technology Demonstration Center

the target beneficiaries will be would-be entrepreneurs and special groups to whom appropriate technologies will be showcased and disseminated for further livelihood opportunities.

### 3) Common Service Facilities

the target beneficiaries will be the rural residents who may avail of the fabrication capability of the facilities and the technical expertise and support services of the Center.

## III. JUSTIFICATION

The Technology-cum-Livelihood Program (Bicol Small-Scale Technology Demonstration Park) will be located in Cadlan, Tili, province of Camarines Sur. Its activities will cover the whole Bicol Region: the total land area of 525,692 hectares and a population of 1.3 million people.

It has vast agricultural tracts and is endowed with natural resources, offering great potentials for development.

Presently, the people of the province rely heavily on agriculture, fishery and livestock production as a main source of livelihood. However, the province is beset with problems and struggles in its effort to attain economic stability and growth. Eighty-five (85%) percent of the total households are in the poverty threshold with a very low per capita income at P2,237 (1985). There is lack of employment opportunities, resulting to high rates of unemployment (12%), underemployment, (36%) and emigration (1.4%) mostly to highly urbanized centers and countries, fishery and forestry sector, 26.3% in the service sector and 8% in the industrial sector.

Due to the poor economic conditions of the Province, insurgency had been on the rise with an average annual increase of 7% in insurgency influenced areas.

The Provincial Government is gearing its efforts towards neutralizing the negative effects of the foregoing problems and arresting further deterioration of its socio-economic conditions.

A Proposal for the  
Establishment of a Technology-cum-Livelihood Program  
(Bicol Small-Scale Technology Demonstration Park)

I. OBJECTIVES:

A. Development Objective

The development objective of this project is to promote small-scale off farm rural-based entrepreneurship development through the establishment of a Small-Scale Technology Demonstration Park.

Specific Objectives

1. To promote and develop entrepreneurship through the implementation/establishment of a formal mechanism designed to assist potential small-scale industrial entrepreneurs by giving easy access to various support systems which provide:
  - 1.1 Information and guidance in developing viable ideas into small-scale industrial projects; training modules for the development of entrepreneurial traits and skills;
  - 1.2 Technical assistance required during the initial period of productive operations as well as for sustained steady growth required to keep new industry competitive;
  - 1.3 A network of institutional support required for the planning, monitoring and evaluation of an industrial venture.
2. To promote rural industrial development through the establishment of a Technology Demonstration Center for appropriate technology development and dissemination providing consultancy and advisory services on the choice and application of appropriate technology for the processing of indigenous raw materials.
  - 2.1 To showcase models or schemes of innovative working technologies both in modular forms as well as integrated systems given the raw materials available in the Bicol Region;
  - 2.2 To create an environment to stimulate development, innovation and transfer of applicable technologies appropriate for the region;

3. To provide common service facilities to encourage the growth of key technologies and viable small integrated industries among rural residents.

## II. BACKGROUND/JUSTIFICATION

In the Medium-Term Bicol Region Development Plan (1987-1992) (Regional Development Council, Bicol Region - Region V - Dec. 1986, Republic of the Philippines), the goal of the industry sector is to steer the direction towards gradual transformation of the Region's predominantly agriculture dependent economy to a more appropriate agri-business-cum-industrial-mix economy.

Committant to this goal, the Region shall strive to enhance capacity utilization and manufacturing industries.

Specifically, the sector addresses itself to the attainment of the following objectives:

- a) To normalize and expand capacity utilization of existing establishment and industries by adopting sound policies conducive to such expansion and by stream-lining the organizational mechanisms of government support systems.
- b) To promote and support the development of micro-scale and cottage industries in rural and poverty-oriented communities.
- c) To accelerate the development of new labor-intensive industries as its long-run component, particularly those which utilize indigenous resources.

The strategy that the Region shall henceforth adopt is to strengthen the horizontal and vertical support to employment-based agricultural development. The government support and assistance shall be geared towards generation of information, elimination of bottlenecks which hamper industrial growth and provision of financial support particularly to rural-based agri-business enterprises. The information that will be generated will be on the areas of pre-investment and related studies, investment promotions, market research and information, policy studies and science-and-technology research studies. Information that will be generated should dovetail with the needs of the private sector. Equal attention shall similarly be given in terms of consultancy services, entrepreneurial development and

other management services to upgrade management skills and capabilities of the private sector, particularly the micro-enterprises.

Camarines Sur is located about 450 kilometers from Manila in the Bicol Peninsula which forms the southeastern part of the Island of Luzon. It is the largest province and is geographically located in the heart of the Bicol Region, with a total land area of 526,882 hectares and a population of 1.3 million people.

It has vast agricultural tracts and is endowed with natural resources, offering great potentials for development.

Presently, the people of the province rely heavily on agriculture, fishery and livestock production as a main source of livelihood. However, the province is beset with problems and struggles in its effort to attain economic stability and growth. Eighty-five (85%) percent of the total households are in the poverty threshold with a very low per capital income at P2,267 (1985). There is lack of employment opportunities, resulting to high rates of unemployment (12%), underemployment (30%) and outmigration (1.4%) mostly to highly urbanized centers and countries. Of the gainfully employed, 63.5% are in the agriculture, fishery and forestry sector, 28.5% in the service sector and 8% in the industrial sector.

Due to the poor economic conditions of the Province, insurgency had been on the rise with an average annual increase of 7% in insurgency influenced areas.

The Provincial Government is gearing its efforts towards neutralizing the negative effects of the foregoing problems and arresting further deterioration of its socio-economic conditions.

Under the Provincial Government's 5-year Comprehensive Development Plan, an evident strategy that can be employed is the pilot of agriculture-related, rural-based and people-centered businesses utilizing appropriate technologies through a demonstration park, thus enhancing livelihood opportunities of farmers, fishermen and entrepreneurs. Technologies deemed suitable are those that utilizes indigenous raw materials readily available in the province. Likewise, entrepreneurship development will be given emphasis to encourage small business and eventually catalyze industrialization.

Currently, PHI/86/018, Development of Entrepreneurs for Cottage, Small and Medium-Scale Industries is on-going. Under this pilot project, technologies on soap-making and essential oil extraction will be disseminated to provide alternative viable income for the people.

Entrepreneurial behaviour trainings complement technical trainings with the former being given emphasis. Participants are expected to engage in business after the training.

The Bicol Small-Scale Technology Demonstration Park will expand on this concept adopting from PHI/86/018 with provisions and emphasis for continuous introduction of tested new technologies with applications in the Bicol Region.

### III. A BRIEF SUMMARY OF THE PROJECT

#### A. Name of the Project

The proposed project is entitled "Technology-cum-Livelihood Program" (Bicol Small-Scale Technology Demonstration Park) which will serve as:

- an Entrepreneurship Development Training Center.
- a Technology Demonstration Center
- a common service facility with fabrication capability to replicate technologies being demonstrated.

First, an entrepreneurship development programme will be implemented to be complimented by technology demonstration and training and finally, the actual hands-on experience will be incorporated using the common service facilities available (see Annex I - Conceptual Framework).

#### 1. Entrepreneurship Development Training Center

The entrepreneurship development programme will involve the following phases:

##### 1.1 Preparatory Phase

- identification and assessment of the target development areas and groups; recommendation on the organizational and expected requirements of the set-up
- planning and designing of the entrepreneurship development programme for specific levels and groups
- conducting a trainer's workshop for provincial extension officers/trainors on identification and selection of entrepreneurs
- consultants will assess the personal entrepreneurial characteristics in the region and recommend measures to enhance entrepreneurial development.
- entrepreneurial training modules will be developed for use of the provincial extension officers and a number of selected entrepreneurs will undergo EDP programmes from time to time



### 1.2 The Formative Phase

This phase will be centered upon a group of approximately 50 potential entrepreneurs with equally promising entrepreneurial characteristics. They will be divided into two groups; for the first, experimental group, a complete entrepreneurship development programme (EDP) will be conducted, whereas the second, control group, is expected to directly undergo the technical training and manufacturing activities without an EDP. Both groups will be monitored and a comprehensive assessment will be made to evaluate the successes and failures in their businesses for further recommendations on conducting an EDP for entrepreneurs with promising entrepreneurial profile.

**Pre-Incubation Phase:** identification and selection of candidates by screening methods following a promotion campaign and dividing them into the control group and the experimental group.

**Incubation Phase:** conduct of a complete entrepreneurship development workshop for the experimental group whereby entrepreneurial traits and skills are enhanced through motivation techniques, problem-solving exercises, organization-building, communication skills and exposure to the whole business of marketing a product, candidates identify product or product lines, and formulate plans for their industrial projects.

**Post-Incubation Phase:** candidates subject their ideas and plans through vigorous pre-investment activities such as feasibility studies, market surveys, trial runs, pilot operations, exploration of capital resources, application for licenses and organization of plant installations.

### 1.3 Follow-up and Reinforcement Phase

Both groups will be showcased the different technologies available in the technology Demonstration Park. After the technical training modules, they may use the common service facilities and equipment available for a certain time period for the initial

start up phase of the business of their choice.

Covering a period of start-up of manufacturing operations to a break-even in the business, both groups will be monitored and provided with counselling.

Evaluation of the EDP programme for the planning, designing and implementation of long-range programs to develop and coordinate a network of support systems will be conducted.

#### Institutional Requirements/Integrated Approach

Aside from setting up the organizational machinery for overseeing and implementing the EDP, an essential concern and activity is that of establishing an institutional network of support systems, extension services, financial support in the form of funding/lending programs for small businesses, technology demonstration, and common service facilities, the two last ones being the integrated components in the physical set-up of the Bicol Small-Scale Technology Demonstration Park.

#### 2. Technology Demonstration Center

The technology demonstration center will serve as a venue for various commercially agriculture-related businesses and rural-based industries through the introduction and dissemination of appropriate technologies to enhance livelihood opportunities, at the same time serving as on-site training laboratory for would-be entrepreneurs.

The primordial concern of the demonstration center is to showcase locally fabricated small-scale technologies and their machinery requirements using indigenous raw materials.

The technologies to be demonstrated are the following:

##### Integrated product processing technologies

- charcoal
- vinegar
- carbonated softdrink
- nata de coco
- activated carbon
- soap-making

- coconut oil mill/refinery (wet process)

Essential oil extraction

Post-harvest facilities

- mill for agricultural crops with dryers using biomass

Others

- rice paper making
- wallboard making
- feeds

Criteria for the selection of these technologies are:

- 1) Availability of raw materials in the province
- 2) Simplicity of processing technology
- 3) Cheap labour inputs
- 4) Tried, tested small-scale technologies which have been applied in other localities ("Inventory of Machinery and Equipment on Coconut-Based Food Processing", research studies conducted in March 1988 by Small Enterprises Research and Development Foundation (SERDEF), Billman, Quezon City, Metro Manila.

Training modules on these technologies will be developed and conducted in the technology demonstration center to showcase them and to disseminate information of their commercial uses.

Training modules will also be conducted for target groups/areas such as:

- Training on simple easy-to-learn technologies for future livelihood opportunities will be offered for special groups like out-of-school youths and women.
- Training for home business development will be conducted for households with a certain amount of capital as the initial investment.

### 3. Common Service Facilities

Aside from being a show-window of the technologies, the Rizal Small-Scale Technology Demonstration Park will be used as a common service facility. The rural residents may avail of the fabrication capability of the processing facilities and replicate the technologies they have seen.

demonstrated in the start-up phase of their enterprises, thus lowering the funding requirements of their individual entrepreneurial activities.

Processing facilities will be available for commercial production on lease or similar arrangements for a certain limited time period in the case of each participant in the training activities.

Extension of technical expertise and support services in the form of diagnostic information and recommendations will be provided through the establishment of laboratories and consultancy services for the technologies housed in the Technology Demonstration Park.

The Bicol Small-Scale Technology Demonstration Park will be located in Cadlan, Pili, province of Camarines Sur. Its activities will cover the whole Bicol Region: the province of Camarines Sur, Camarines Norte, Catanduanes, Sorsogon, Albay and part of the Quezon Province.

The estimated duration for the implementation of the project is 2.5 years.

#### 4 Outputs

- a) A comprehensive assessment of existing mechanisms, methodologies and instruments employed to conduct formal training and learning-by-doing activities for the two groups of identified potential entrepreneurs (evaluation of successes and failures).
- b) Recommendations to solve problem areas and gaps identified in a above.
- c) Design and practical implementation of training activities catering the needs of the two groups of identified potential entrepreneurs.
- d) Plans and design of a long-range programme to develop a comprehensive and integrated institutional support system to back up entrepreneurship development.
- e) Recommendations and viable projects to be developed.

5. Funding Requirements

1) Entrepreneurship Development Programme

- (i) International project personnel to include: \$100,000  
2 missions of a consultancy firm to provide inputs to the entrepreneurship development programme (EDP)

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Component Total (1) \$100,000  
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2) Technology Demonstration Center

- (i) Machines and equipment for the 12 technologies (Annex II) \$410,000

- (ii) Miscellaneous/contingency - (Annex II) 110,000

- (iii) Technology Demonstration Training Module 165,000

- first 4 months after which the training activities will be operationally self-sustaining

- includes demonstration materials, start-up raw materials, overhead costs, training programme

- cost estimated at 100% month of the initial funding requirements for each technology to be introduced

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Component Total (2) \$685,000  
(excluding building/facilities)  
-----

3) Common Service Facilities

- (i) Laboratories for quality control \$80,000

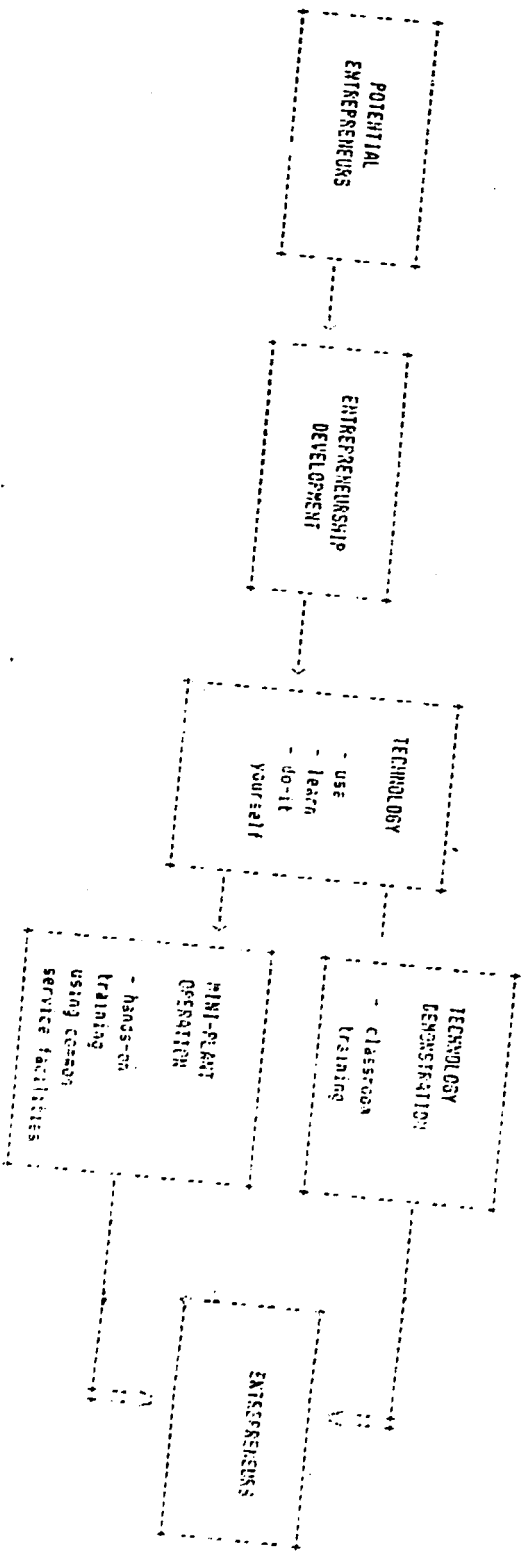
- including equipment and consultancy services

- cost estimated at 10% of the initial funding requirements for each technology

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Component Total (3) \$80,000  
-----

4) Administrative Support		
(i) Project Staff of four for 30 m/m to coordinate the project. One secretary for 30 m/m to provide secretarial and research assistance, one driver for 30 m/m		\$25,000
	Component Total (4)	\$25,000
5. Equipment		
(i) A service vehicle for the use of the project staff		\$15,000
(ii) A computer unit		5,000
	Component Total (5)	\$20,000
6. Miscellaneous		
(i) Reports		\$5,000
(ii) Study Tours		15,000
(iii) Packaging of Experiences, approaches and techniques gathered during the EDP		10,000
(iv) An Impact Study will be prepared to determine the parameters observed during the EDP. Simultaneously, plan and design for a long-range EDP programme with a comprehensive support system will be made		15,000
(v) Sundry		5,000
	Component Total (6)	\$50,000
	TOTAL (Excluding building/facilities)	\$980,000
		=====
		(P20,180,000.00)

CONCEPTUAL FRAMEWORK



ANNEX 1

6

C

**RURAL SMALL-SCALE TECHNOLOGY DEMONSTRATION PARK**  
(Concept Paper)

1. OBJECTIVES:

A. Development Objective

The development objective of this project is to promote small-scale off-farm rural-based entrepreneurship development through the establishment of a Small-Scale Technology Demonstration Park.

Specific Objectives

1. To promote and develop entrepreneurship through the implementation/establishment of a formal mechanism designed to assist potential small-scale industrial entrepreneurs by giving easy access to various support systems which provide:
  - 1.1 Information and guidance in developing viable ideas into small-scale industrial projects; training modules for the development of entrepreneurial traits and skills;
  - 1.2 Technical assistance required during the initial period of productive operations as well as for sustained steady growth required to keep new industry competitive;
  - 1.3 A network of institutional support required for the planning, monitoring and evaluation of an industrial venture.
2. To promote rural industrial development through the establishment of a Technology Demonstration Center for appropriate technology development and dissemination including consultation and advisory services on the choice and application of appropriate technology for the processing of indigenous raw materials.
  - 2.1 To showcase models or schemes of innovative working technologies both in modular forms as well as integrated systems given the raw materials available in the Rural Region;
  - 2.2 To create an environment to stimulate or elicit innovation and transfer of suitable technologies appropriate for training.



3. To provide common service facilities to encourage the growth of key technologies and viable small integrated industries among rural residents.

## II. BARD REGION JUSTIFICATION

In the Medium-Term Bicol Region Development Plan (1987-1992) (Regional Development Council, Bicol Region - Region V - Dec. 1986, Republic of the Philippines), the goal of the industry sector is to steer the direction towards gradual transformation of the Region's predominantly agriculture dependent economy to a more appropriate agri-business-com-industrial mix economy.

Consistent to this goal, the Region shall strive to enhance capacity utilization and manufacturing industries.

Specifically, the sector addresses itself to the attainment of the following objectives:

- a) To normalize and expand capacity utilization of existing establishment and industries by adopting sound policies conducive to such expansion and by stream-lining the organizational mechanisms of government support systems.
- b) To promote and support the development of micro-scale and cottage industries in rural and poverty-oriented communities.
- c) To accelerate the development of new labor-intensive industries as its long-run plan, particularly those which utilize indigenous resources.

The strategy that the Region shall henceforth adopt is to strengthen the horizontal and vertical support to employment-based agricultural development. The government support and assistance shall be geared towards generation of information, elimination of bottlenecks which hamper industrial growth and provision of financial support particularly to rural-based agri-business enterprises. The information that will be generated will be on the areas of pre-investment and related studies, investment promotions, market research and information, policy studies and science-and-technology research studies. Information that will be generated should dovetail with the needs of the private sector. Equal attention shall similarly be given in terms of consultancy services, entrepreneurial development and other management services to upgrade management skills and capabilities of the private sector, particularly the micro-enterprises.

Camrines Sur is located about 450 kilometers from Manila in the Bicol Peninsula with forms the northeastern part of the island of Luzon. It is the largest province and is geographically located in the heart of the Bicol Region, with a

total land area of 526,662 hectares and a population of 1.3 million people.

It has vast agricultural tracts and is endowed with natural resources, offering great potentials for development.

Presently, the people of the province rely heavily on agriculture, fishery and livestock production as a main source of livelihood. However, the province is beset with problems and struggles in its effort to attain economic stability and growth. Eighty-five (85%) percent of the total households are in the poverty threshold with a very low per capita income at P1,007 (1985). There is lack of employment opportunities, resulting to high rates of unemployment (10%), underemployment (20%) and outmigration (1.4%) mostly to highly urbanized centers and countries. Of the gainfully employed, 63.5% are in the agriculture, fishery and forestry sector, 28.5% in the service sector and 8% in the industrial sector.

Due to the poor economic conditions of the Province, insurgency had been on the rise with an average annual increase of 7% in insurgency influenced areas.

The Provincial Government is peering its efforts towards neutralizing the negative effects of the foregoing problems and arresting further deterioration of its socio-economic conditions.

Under the Provincial Government's 5-year Comprehensive Development Plan, an evident strategy that can be employed is the pilot of agriculture-related, rural-based and people-centered businesses utilizing appropriate technologies through a demonstration park, thus enhancing livelihood opportunities of farmers, fishermen and entrepreneurs. Technologies deemed suitable are those that utilizes indigenous raw materials readily available in the province. Likewise, entrepreneurship development will be given emphasis to encourage small business and eventually catalyze industrialization.

Currently, PH/BA/116, Development of Entrepreneurs for Cottage, Small and Medium-Scale Industries is ongoing. Under this pilot project, technologies on screw-poking and essential oil extraction will be disseminated to provide alternative viable income for the people. Entrepreneurial behaviour trainings complement technical trainings with the former being given emphasis. Participants are expected to engage in business after the training.

The Pilot Small-Scale Technology Demonstration Park will expand on this concept adopting from PH/BA/116 with provisions and support for continuous introduction of tested new technologies with applications in the Rural Region.

### III. A BRIEF SUMMARY OF THE PROJECT

#### A. Name of the Project

The proposed project is entitled Small Small-Scale Technology Demonstration Park which will serve as:

- an Entrepreneurship Development Training Center
- a Technology Demonstration Center
- a common service facility with fabrication capability to replicate technologies being demonstrated.

First, an entrepreneurship development programme will be implemented to be complimented by technology demonstration and training and finally, the actual hands-on experience will be incorporated using the common service facilities available (see Annex I - Conceptual Framework).

#### 1. Entrepreneurship Development Training Center

The entrepreneurship development programme will involve the following phases:

##### 1.1 Preparatory Phase

- identification and assessment of the target development areas and groups; recommendation on the organizational and expected requirements of the set-up
- planning and designing of the entrepreneurship development programme for specific levels and groups
- conducting a trainer's workshop for provincial extension officers/trainers on identification and selection of entrepreneurs
- consultants will assess the personal entrepreneurial characteristics in the region and recommend measures to enhance entrepreneurial development.
- entrepreneurial training modules will be developed for use of the provincial extension officers and a number of selected entrepreneurs will undergo EDP programmes from time to time

##### 1.2 The Formative Phase

This phase will be centered upon a group of approximately 30 potential entrepreneurs with equal, but very entrepreneurial characteristics. They will be divided into two groups; for the first, experimental group, a complete entrepreneurship

development programme (EDP) will be conducted, whereas the second, control group, is expected to directly undergo the technical training and manufacturing activities without an EDP. Both groups will be monitored and a comprehensive assessment will be made to evaluate the successes and failures in their businesses for further recommendations on conducting an EDP for entrepreneurs with promising entrepreneurial profile.

**Pre-Induction Phase :** Identification and selection of candidates by screening methods following a promotion campaign and dividing them into the control group and the experimental group.

**Incubation Phase :** conduct of a complete entrepreneurship development workshop for the experimental group whereby entrepreneurial traits and skills are enhanced through motivation techniques, problem-solving exercises, organization-building, communication skills and exposure to the whole business of marketing a product. candidates identify product or product lines, and formulate plans for their industrial projects.

**Post-Induction Phase :** candidates subject their ideas and plans through vigorous pre-investment activities such as feasibility studies, market surveys, trial runs, pilot operations, exploration of capital resources, application for licenses and organization of plant installations

### 1.3 Follow-up and Reinforcement Phase

Both groups will be showcased the different technologies available in the technology Demonstration Park. After the technical training modules, they may use the common service facilities and equipment available for a certain time period for the initial start up phase of the business of their choice.

Covering a period of start-up of manufacturing operations to a break-even in the business, both groups will be monitored and provided with counselling.

Evaluation of the EDP programme for the planning, designing and implementation of long-range programs to develop and coordinate a network of support systems will be initiated.

## Institutional Requirements/Integrated Approach

Aside from setting up the organizational machinery for overseeing and implementing the EIP, an essential concern and activity is that of establishing an institutional network of support systems, extension services, financial support in the form of funding/lending programs for small businesses, technology demonstration, and common service facilities, the two last ones being the integrated components in the physical set-up of the Bicol Small-Scale Technology Demonstration Park.

### 1. Technology Demonstration Center

The technology demonstration center will serve as a venue for various commercially agriculture-related businesses and rural-based industries through the introduction and dissemination of appropriate technologies to enhance livelihood opportunities, at the same time serving as on-site training laboratory for would-be entrepreneurs.

The primordial concern of the demonstration center is to showcase locally fabricated small-scale technologies and their machinery requirements using indigenous raw materials.

The technologies to be demonstrated are the following:

#### Integrated coconut processing technologies

- charcoal
- vinegar
- carbonated softdrink
- nata de coco
- activated carbon
- soap-making
- coconut oil mill/refinery (wet process)

#### Essential oil extraction

#### Post-harvest facilities

- mill for agricultural crops with dryers using biomass

#### Others

- rice paper making
- wallboard making
- feeds

Criteria for the selection of these technologies are:

- 1) Availability of raw materials in the province
- 2) Simplicity of processing technology
- 3) Cheap labour inputs
- 4) Tried, tested small-scale technologies which have been applied in other localities  
(“Inventory of Machinery and Equipment on Coconut-Based Food Processing”, research studies conducted in March 1986 by Small Enterprises Research and Development Foundation (SERDF), Diliman, Quezon City, Metro Manila).

Training modules on these technologies will be developed and conducted in the technology demonstration center to showcase them and to disseminate information of their conceivable uses.

Training modules will also be conducted for target groups/areas such as:

- Training on simple easy-to-learn technologies for future livelihood opportunities will be offered for special groups like out-of-school youths and women.
- Training for home business development will be conducted for households with a certain amount of capital as the initial investment.

### 3. Common Service Facilities

Aside from being a show-window of the technologies, the Rural Small-Scale Technology Demonstration Park will be used as a common service facility. The rural residents may avail of the fabrication capability of the processing facilities and replicate the technologies they have been demonstrated in the start-up phase of their enterprises, thus lowering the funding requirements of their individual entrepreneurial activities.

Processing facilities will be available for commercial production on lease or similar arrangements for a certain limited time period in the case of each participant in the training activities.

Extension of technical expertise and support services in the form of diagnostic information and recommendations will be provided through the establishment of laboratories and consultants services for the technologies as used in the Technology Demonstration Park.

The Rural Small-Scale Technology Demonstration Park will be located in Diliman, Parañaque, Province of Marikina City. Its activities will cover the whole Rural Region: the

provinces of Camarines Sur, Camarines Norte, Catanduanes, Sorsogon, Albay and part of the Quezon Province.

The estimated duration for the implementation of the project is 2.5 years.

#### 4. Outputs

- a) A comprehensive assessment of existing mechanisms, methodologies and instruments employed to conduct formal training and learning-by-doing activities for the two groups of identified potential entrepreneurs (evaluation of successes and failures).
- b) Recommendations to solve problem areas and gaps identified in a/ above.
- c) Design and practical implementation of training activities catering the needs of the two groups of identified potential entrepreneurs.
- d) Plans and design of a long-range programme to develop a comprehensive and integrated institutional support system to back up entrepreneurship development.
- e) Recommendations and viable projects to be developed.

#### 5. Institutional Framework

The Provincial Government of Camarines Sur will be the implementing agency. It will draw support from other private and government institutions in the implementation of the project.

The involvement of the Department of Trade and Industry (DTI) as the primary agency tasked with national industrial development will be given emphasis. A network of organizations will be eventually formed among the relevant local public and private agencies supporting entrepreneurship development programmes and small-scale rural industrialization.

The Technology and Livelihood Resource Center (TLRC) will be the lead agency to source and introduce the technologies in the Technology Demonstration Center. It will disseminate information on the commercial applications of the technologies made available by the Department of Science and Technology (DOST) in the form of training modules, material and consultancy inputs.

## 6. Funding Requirements

### 1) Entrepreneurship Development Programme

- |   |           |
|---|-----------|
| (i) International project personnel to include:<br>2 missions of a consultancy firm to provide inputs to the entrepreneurship development programme (EDP) | \$100,000 |
|---|-----------|

Component Total (1)	\$100,000
---------------------	-----------

### 2) Technology Demonstration Center

- |   |           |
|---|-----------|
| (i) Machines and equipment for the 12 technologies (Annex II) | \$410,000 |
|---|-----------|

- |   |         |
|---|---------|
| (ii) Miscellaneous/contingency - (Annex II) | 110,000 |
|---|---------|

- |   |         |
|---|---------|
| (iii) Technology Demonstration Training Modules | 165,000 |
|---|---------|

- first 4 months after which the training activities will be operationally self-sustaining

- includes demonstration materials, start-up raw materials, overhead costs, training programmes

- cost estimated at 10%/month of the initial funding requirements for each technology to be introduced

Component Total (2) (excluding building/facilities)	\$685,000
--	-----------

### 3) Common Service Facilities

- |                                      |           |
|--------------------------------------|-----------|
| (i) Laboratories for quality control | \$ 80,000 |
|--------------------------------------|-----------|

- Including equipment and consultancy services

- cost estimated at 20% of the initial funding requirements for each technology

Component Total (3)	\$ 80,000
---------------------	-----------



4. Administrative Support

(i) Project Staff of four for 30 w/m to coordinate the project. One secretary for 30 w/m to provide secretarial and research assistance, one driver for 30 w/m

\$ 25,000

Component Total (4) \$ 25,000

5. Equipment

(i) A service vehicle for the use of the project staff

\$ 15,000

(ii) A computer unit

5,000

Component Total (5) \$ 20,000

6. Miscellaneous

(i) Reports

\$ 5,000

(ii) Study Tours

15,000

(iii) Packaging of Experiences, approaches and techniques gathered during the EDP

10,000

(iv) An Impact Study will be prepared to determine the parameters observed during the EDP. Simultaneously, plan and design for a long-range EDP programme with a comprehensive support system will be made

15,000

(v) Sundry

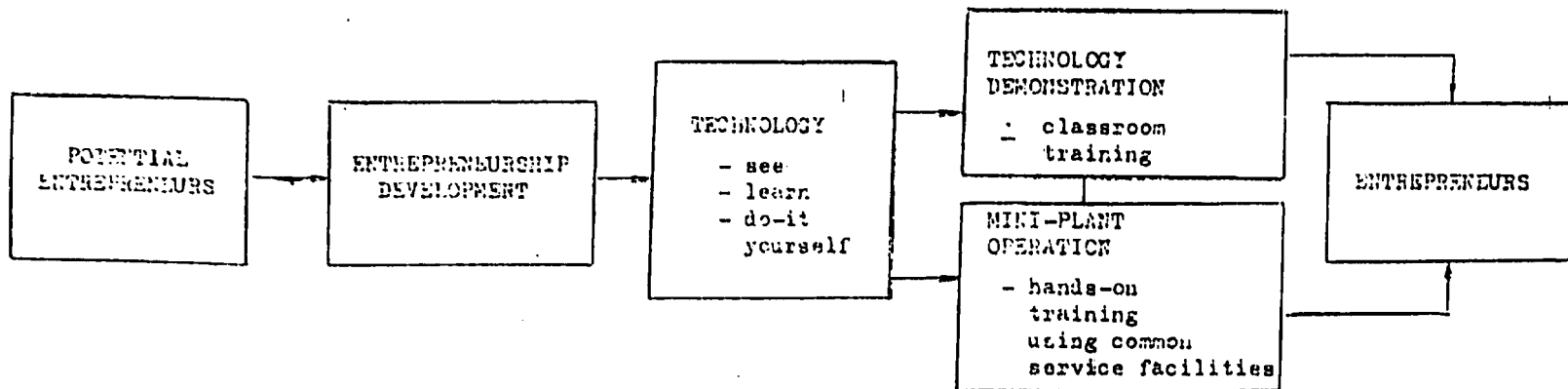
5,000

Component Total (6) \$ 50,000

TOTAL (Excluding building/facilities) \$950,000

\*\*\*\*\*

CONCEPTUAL FRAMEWORK



TECHNOLOGY	MACHINE/EQUIPMENT	AMOUNT	INPLEMENTS	AMOUNT	GRAND TOTAL
A. a. Charcoal (cap: 1.5-2.5 tons/ds.)	Furnace	P 18,000.00	Shovels, chimneys, wheelbarrow, elev. instalations, iron frames, etc.	P 50,000.00	
	Warehouse facilities	320,000.00			
	Debunker	10,000.00			
	Sheller	15,000.00			
	Scooping machine	50,000.00			
	Hammer Mill	90,000.00			P 553,000.0
b. Vinegar (cap: 2,000-2,500 li/wk)	Germinatin Tank	24,000.00	Laboratory facilities/ equipments, pallets, weighing scale, plastic bottles, jars, pumps	30,000.00	153,000.0
	Basa Juana Tanks	32,000.00			
	Stainless Steel Tanks	43,000.00			
	Outdoor fermentation Tanks	24,000.00			
c. Carbonated Softdrink (cap: 500-1000 li/ds.)	Carbonizer	25,000.00	plastic containers, bottles, labels, working tables, rubber tubes	30,000.00	148,000.0
	Pressurized Tanks	16,000.00			
	Piping Systems	16,000.00			
	Bottling machine	41,000.00			
	Storage Tank	20,000.00			
d. Nata de Coco (cap: 1 - 1 1/2 tons/wk.)	Barrels	8,000.00	Lab. apparatus, etc. -thermometer -beakers -iron stands -weighing scale	30,000.00	67,000.0
	Germinating Tanks	16,000.00			
	Mixers/Tank	25,000.00			
	Heating stove	8,000.00			
e. Activated Carbon (cap: 500-1,500 kg./ds)	Air Compressor	16,000.00	agri implements/tools working table	30,000.00	615,000.0
	Vibrating Sieve	25,000.00			
	Reactor Tank	32,000.00			
	Proiler	150,000.00			
	Dust Collector	50,000.00			
	Conveyors	80,000.00			
	Grinder/Fuiverizer (ball mill)	80,000.00			
	Cyclone Conveyor	140,000.00			
	Sagger and bag sealer	12,000.00			
f. Soap Making (cap: 1500-2500 bars/ds)	Mixer	P 25,000.00	Lab. facilities working tables Packaging	P 25,000.00	P 112,000.0
	Soap Mold	40,000.00			
	Wooden Molds/frames	7,000.00			
	Containers	3,000.00			
	Cutters	15,000.00			
g. Coconut Oil Mill/Refinery (wet process) (10-15 1/2 tons)	Dryer	82,000.00	Lab. facilities weighing scale working tables carts, safety facilities, etc.	107,000.00	1,929,000.0
	Debunker	25,000.00			
	Scooping machine	25,000.00			
	Reactors	240,000.00			
	Evaporation tank	410,000.00			
	water tanks	82,000.00			
	Conveyor system	41,000.00			
	Transporting pump	50,000.00			
	Continuous Steaming device	82,000.00			
	Filtration tank	57,000.00			
	Steam boiler	410,000.00			
	Grating machine	41,000.00			
	Expeller	147,000.00			
	Settling tanks	184,000.00			
h. Essential Ex (cap: 50-75 li/wk)	Distilling tank	15,000.00	Containers - bottles, etc. lab. facilities farm implement working table	25,000.00	
	Condenser	15,000.00			
	Recycling pump	2,000.00			
	Furnace	8,000.00			
	Settling tank	13,000.00			
	Cooling tower	8,000.00			
	Dryer	8,000.00			

TECHNOLOGY	MACHINE/EQUIPMENT	AMOUNT	IMPLEMENTS	AMOUNT	GRAND TOTAL
B. Post Harvest (cap: 2 - 2-1/2 tons/da)	Facilities		farm implements		
	Rubber-conc mill		lab. facilities		
	Dryer		working tables, etc.		
	Conveyors				
	Furnace				
	Thresher				
	Bagger/bag sealer				
	Paddy husker/separator				
	bran collecting cyclone				
	rice grader				
	overflow tank				
	rice whitening machine				
	rice refining machine				
motor, bran-collecting cyclone					3,690,000.00
C. Rice Paper (cap: 1 - 1-1/2 tons/da)	Cutting machine	P 16,000.00	lab. facilities		
	Shredder	25,000.00	drying table	P 41,000.00	
	Batch tank/mixer	50,000.00			
	Settling tank	25,000.00			
	Paper moulding machine	123,000.00			
Paper press/roller	62,000.00				370,000.00
Wall Board Maker (cap: 1-2 tons/da)	Mixing tank	62,000.00	weighing machine		
	settling tank	25,000.00	lab. facilities		
	mixer	16,000.00	working tables		
	Wall board press	123,000.00	carts, etc.	25,000.00	
	molds	62,000.00			
	boiler	146,000.00			
cutter	25,000.00				526,000.00
Feeds (cap: 1.5 - 2 tons)	Mixing tank	P 50,000.00	weighing scales		
	hammer mill	32,000.00	pallets		
	Conveyor	50,000.00	hand cart, etc.	P 50,000.00	
	Sieve	25,000.00			
	bagger/bag sealer	11,000.00			
	dust collector facility	8,000.00			
	dryers	32,000.00			
			Sub-total:	P 8,422,000.00	
	Provision for building/facilities: P 230,000/project (11 projects) -----				2,530,000.00
					P 11,018,000.00
	Miscellaneous / Contingency (20%) -----				2,203,600.00
			GRAND TOTAL		P 13,221,600.00

COURSE TITLE: "PERFUMES AND OTHER FRAGRANCE PRODUCTS"

COURSE DATE: 15 - 16 May 1989

VENUE: Department of Agriculture, Regional Office in Pili, Camarines Sur training facilities & laboratory

LECTURER: Ms. Emerita V. Beltran, Consultant, TLRC

COURSE OBJECTIVE: To discuss the technology involved in the manufacture of perfumes and other fragrance products

---

## COURSE OUTLINE:

## 15 MAY/ SESSION I / 3 HOURS / LECTURE

1. Essential oil industry
  - a) Growers/Processors
  - b) Manufacturers of flavors & fragrances
  - c) Manufacturers of finished products (perfume & various fragrance products)
  - d) <sup>Isolation/</sup> Synthesis of essential oils
  
2. Production requirements for small scale/ big scale production
  - a) Equipment
  - b) Manufacturing procedure
  - c) Materials
  - d) Packaging
  - e) Standard operating procedure (Plant)
  - f) FDA requirements

## 15 MAY / SESSION II. / 3 HOURS / LECTURE

1. Fragrance products: raw materials (alcohol-fragrance-fixative-water-colorant)
  - a) Perfumes
    - perfume
    - cologne
    - toilet water
  - b) Other fragrance products
  - c) Other industrial applications

## 16 MAY / SESSION III / 3 HOURS / LECTURE

1. Formulations/ manufacturing procedure
  - a) Perfumes
  - b) Other fragrance products

## 16 MAY / SESSION IV / 3 HOURS / WORKSHOP

1. Workshop (Hands-on)
  - actual demonstration in the preparation/ compounding of perfume & cream perfume

## DEVELOPMENT OF ENTREPRENEURS FOR COTTAGE, SMALL AND MEDIUM SCALE INDUSTRIES

TRAINING ON 15-16 MAY 1989

"PERFUMES AND OTHER FRAGRANCE PRODUCTS"

PARTICIPANTSREMARKS

1. Maricion Martinez	
2. Ruben Martinez	
3. Ricardo P. Blancada	
4. Romeo C. Perez	
5. Clarencio Escobar	16 May only
6. Arnel Estrella	16 May only
7. Jose G. Lijon	
8. Belinda Bacsain	
9. Villaruel Adote	
10. Bienvenido Reyta	new CASABA member
11. Armando S. Ruedas	- do -
12. Sabiniano H. Alamaag	- do -

PHI/86/018

SUPPORT SERVICES

MAY 1989

INFORMATION GATHERED FOR THE PILOT GROUP ON ESSENTIAL OILS MARKETS

- 1) List of foreign publications informing the actual price level of a specific type of oil
- 2) List of publications on essential oils available at the DTI Library, Bureau for Export Trade Promotion, Sen. Gil J. Puyat Ave., Makati
- 3) "Investment Profile: Essential Oils" - feasibility Study prepared at SERDEF/UP/ISSI
- 4) selected studies & materials on citronella oil, obtained from DTI/BSMBD
- 5) "Essential Oils and Oleoresins - A Study of Selected Producers and Major Markets" - ITC/UNCTAD/GATT Publication, Geneva 1986, 208 pages
  - this publication contains the ff. data:
    - monographs on selected ess. oils (45)
    - a review of selected producing countries/areas
    - a review of major markets
    - trade structures & procedures(packaging, institutional & legislative structures/aspects)
    - average annual prices on selected ess. oils 1976-85
    - tariffs applicable to ess. oils in selected markets
    - freight rates
    - selected list of firms in the trade of ess. oils
    - list of standards issued by the ISO on ess.oils
- 6) Other related materials

A folder containing the above-mentioned data was handed over to the pilot group on 14 May 1989.

This information was gathered from ff. sources on 2-12 May 1989:

- 1) DTI - Bureau of Small and Medium Business Development (BSMBD)
- 2) DTI - Bureau for Export Trade Promotion
- 3) United Nations Information Centre (UNIC) Library
- 4) UP/ISSI Research Department

( SANOFI Phils. was also contacted for eventual information on essential oil market prices)



Republic of the Philippines  
PROVINCE OF CAMARINES SUR

—00—

OFFICE OF THE PROVINCIAL DEVELOPMENT PLANNING & EVALUATION  
3rd Flr., Prov'l. Capitol Complex, Cebuán, Pili, Camarines Sur

1st Endorsement  
April 21, 1989

Respectfully forwarded to the Technology and Livelihood Resource Center the herein attached Feasibility Study on Essential Oil Extraction specifically the Lemongrass of the Camarines Sur Agribusiness Association (CASABA) for consideration and appropriate action.

*Imperial*  
GRACE T. IMPERIAL  
Supvg. Dev't. Project Analyst



Republic of the Philippines  
Province of Camarines Sur  
PROVINCIAL DEVELOPMENT PLANNING AND  
EVALUATION OFFICE  
Cadlan, Pili, Can. Sur

April 21, 1989

Dra. Padernal  
*Director*  
Technology and Livelihood  
Resource Center  
Sen. Gil Puyat Avenue,  
Makati, Metro Manila

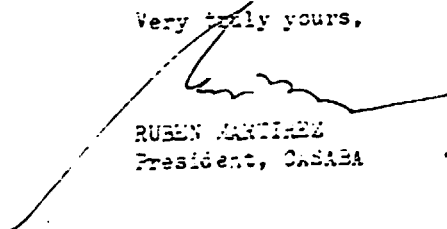
Madam:

Herewith enclosed is our Project Feasibility Study  
(PFS) on Lemongrass as previously agreed with the Technology  
and Livelihood Resource Center, for use on possible grants  
and aids availed to Small and Medium Scale Entrepreneur  
group.

We are particularly submitting this for your perusal.

Hoping you find this in order.

Very truly yours,

  
RUBEN MARTINEZ  
President, CASABA

## INTRODUCTION

With the emergence of different manufacturing industries locally or internationally, engaged in the production of soaps, perfumes, cosmetics, confectioneries and other related products utilizing essential oils for flavorings and scenting, the demand for essential oils like lemongrass is expected to escalate.

Forecasted demand on essential oil by the presence of manufacturing industries may be alleviated through the production of local oils which is of export quality. Target bulk of produce shall be exported to France, Rome, Germany and other European countries where the center of perfumeries are situated.

Because of its citral content (75-85%), the oil of lemongrass possesses a strong lemon odor, making it one of the most important essential oils. Its extract is used for different purposes such as:

- a. Provide a pleasant scent to soaps, cosmetics and perfumes.
- b. Enhance the taste of confectionery
- c. Remove the unpleasant odor of food and medicine; in industrial products such as artificial leather, rubber and paints.

MANAGEMENT ASPECT

## FUNCTION AND RESPONSIBILITIES

The organizational structure shown in figure 1 is a typical set-up of business enterprise to be run by Camarines Sur Agribusiness Association (CASABA). From among the members, the association will select one project leader who will eventually be responsible for the project operation. Other members of the association will have coordinate function in planning, organizing, directing and controlling all relevant aspects of management.

The project leader/manager shall also be in-charge of marketing of finished products as well as market identification.

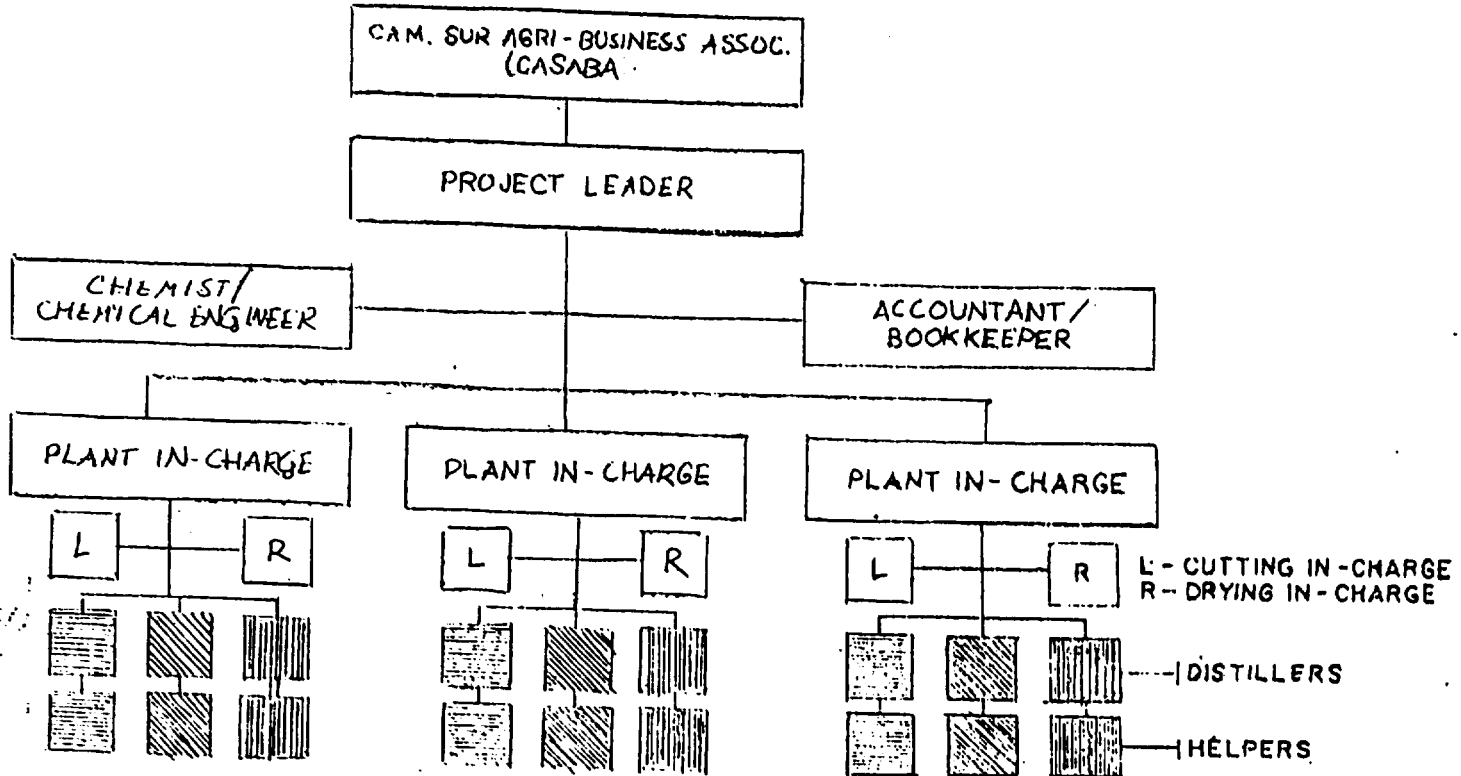
Chemist/chemical engineer shall be in-charge of the overall check-up of the extracted essential oil coming from the three (3) plant site. Quantitative and qualitative analyses shall be done in his laboratory with the inclusion of quality control and supervision to maintain the oil's purity.

The accountant/bookkeeper will be responsible in all matters that concern with recording daily transactions of the project, preparation of financial statement or report (monthly, quarterly, semi-annually or annually) as may be required for purposes of determining the net result of the project operation.

Under the project leader are the three (3) plant in-charge who shall supervise each plant's activity.

# ORGANIZATIONAL SET-UP

## FIGURE 01



**LEGEND:**

FULL TIME — □

1st SHIFT — ▨

2nd SHIFT — ▩

3rd SHIFT — ▪

L - CUTTING IN-CHARGE  
R - DRYING IN-CHARGE

— DISTILLERS

— HELPERS

TECHNICAL ASPECT



## TECHNICAL ASPECT

### Literature of Lemongrass

Lemongrass (*Cymbopogon Citratus*), commonly known in Tagalog as "tanglad", belongs to family Gramineae. It can grow as high as 6 feet with leaves as wide as 3/4 of an inch and as long as 3 feet. Its extract is one of the most important oils that gives off a strong lemon odor due to its citral content and is widely used for the scenting of soaps, detergents and all kinds of technical products regulating fragrance. The culk of this oil extract is used in manufacturing food flavorings, cosmetics and perfumes or is converted into ionones, a group of very important synthetic aromatics possessing a strong and lasting violet odor.

Oil of lemongrass is also of medicinal value to treat some ailments such as arthritis, rheumatism, insect bites, asthma, heart ailments and others.

### Soil, Climate and altitude

Lemongrass requires a warm, tropical climate and plenty of sunshine because a consistently warm surrounding is conducive to the development of oil in the plant. Also it does not thrive in compact soils which may retain pools of stagnant water but grows best on well-drained sandy loam; it thrives also on sandy soils which is sufficiently fertile. Lemongrass planted on such sandy soil yield relatively more oil with citral content than those grown in very fertile soil.

On the higher slopes where lemongrass receive a great deal of water, the grass yields less oil than grass grown on the lower slopes which are less exposed to the showers.

### Cultivation

Prior to planting, the soil must be loosened by thorough plowing. Plants are reproduced by root division (segment) and not by seeds since lemongrass very rarely develops flowers that produce seeds.

Planting distance will be 1m x 1m with a seeding of 3 shoots to a hill or about 30,000 shoots to a hectare. Gestation period is 8 months and the schedule of first harvest will be on the 9th month after planting.

Replanting from shoots is made after harvesting two ratoon crops once every 4 months. Throughout its life span, a plantation should be weeded out to prevent unnecessary overgrowth of weeds in the plantation.



## Harvesting and Transporting

Harvesting of lemongrass is done by cutting the leaves manually with sickles like in palay harvesting. Harvested leaves are bundled and delivered to the nearby field stills.

## PRODUCTION PROCESS

Essential oil extraction have at least 5 processing methods such as: by volatile solvent (chemical), expression, enfleurage, maceration and distillation (heating and condensing).

The most effective method in terms of recovery and product quality which is to be adopted in this project is water distillation. In this kind of distillation, the raw material (lemongrass leaves) is in direct contact with water, where water is boiled by direct fire, closed steam coil or open steam method. The detailed procedures are as follows:

### a. Drying

Harvested lemongrass leaves are washed, cleaned of dead leaves, cut 1-2 cm. long and dried under shade for 2-3 days. Drying is done to reduce the moisture content in the leaves. After drying, dried leaves are packed and stored in plastic bags.

### b. Distillation

Dried lemongrass is withdrawn from storage, weighed and introduced to the distillation tank. The still is fired and the condensing unit is started before steam starts to generate. The distillation passes through a separator where the crude oil floats over the water distillate to a container while the water distillate is regulated to the still. Distillation is stopped (6-7) hours after no crude oil is seen trickling out of the separator.

The crude oil is analyzed, properly tagged, sealed and stored for redistillation.

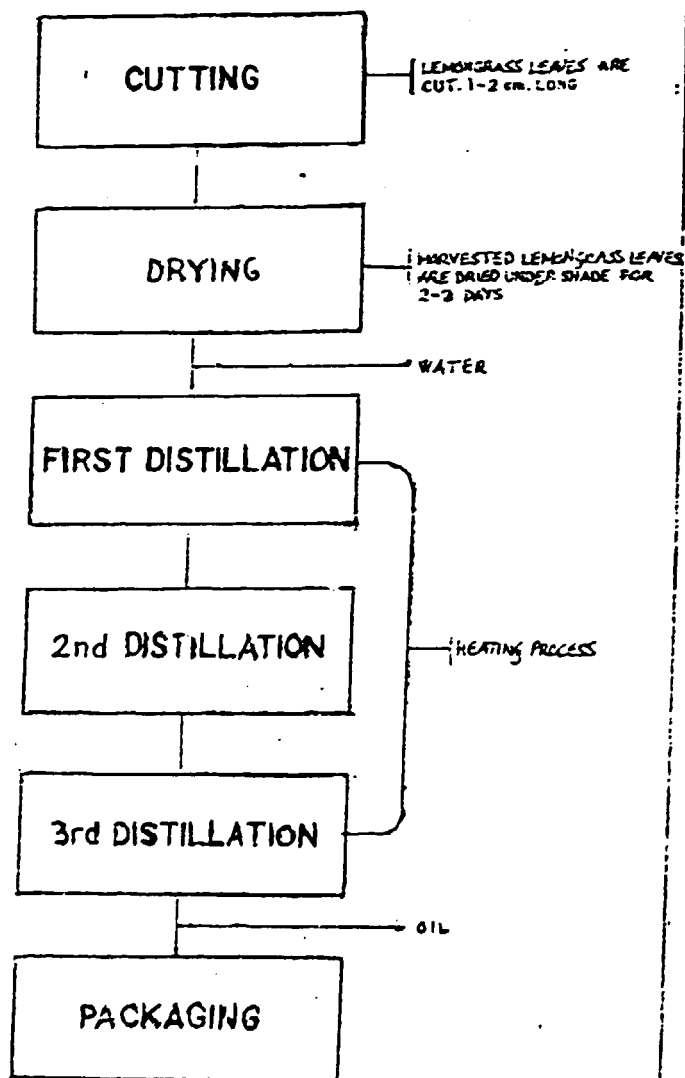
Redistillation is carried on the crude oil in a smaller container using distilled water.

A third distillation is done to further separate whatever water particles remain, thus enhancing oil quality.

### c. Packaging

Oil is packed in dextrose bottles and stored in a cool dry place ready for delivery and shipping.

# ESSENTIAL OIL EXTRACTION (LEMONGRASS) (PRODUCTION PROCESS FLOW CHART)



## PROJECTED PRODUCTION

A 40-hectare lemongrass plantation is required to meet the demand on essential oil extracted from the plant. At a 2.25 kgs. yield per <sup>hectare</sup> hectare, expected bulk of produce will be 900,000 kgs. per year or 900 tons.

Establishment of 3 plants will be made for the extraction process of lemongrass, each plant having a 400 kg. capacity per 8-hour operation. For one day operation, a total of 3,600 kg. will be processed into essential oil. At an assumed recovery rate of 0.4784% by weight, essential oil production is projected at 10.331kg. per day of 2.563 tons per year of 250 working days.

## PRODUCTION REQUIREMENTS

Essential oil extraction of lemongrass will require tools and equipment, raw materials and other production expenses as well as other facilities and equipment which are enumerated as follows:

### a. Tools and equipment

Investment requirement for tools and equipment for the extraction of lemongrass oil is amounting to ₱132,600.00 (See Table 01-A). These will be used for the installation of an extractor unit with accessories such as: condenser with fittings, collector/separator with stand, furnace, tank and wire basket. The extractor will have input capacity of 400 kg. capacity per 8 hour operation. Other tools and equipments are a weighing scale (Platform type) and cutting tools like bolos.

### b. Raw Materials

To supply the raw material requirements, a total of 40 hectare lemongrass plantation will be cultivated.

Three (3) plants will be established with 400 kg. capacity per 8 hour operation. Daily processing will require a total of 3,600 kgs. of dried leaves or a total of 900,000 kgs. per year (250 working days). Yearly, raw material requirement is amounting to ₱1,350,000.00 at an assumed cost of ₱1.50/kg.

### c. Direct Labor

For the three (3) proposed plants, it will be manned and operated by 27 personnel. (See Schedule B) with their specific tasks to be performed. Three (3) will be hired as plant-in-charge, Nine (9) as distillers, Three (3) as cutting-in-charge and 9 and 3 as helpers and drying in-charge, respectively. Direct labor cost is estimated at ₱307,500 per year.

d. Utilities

For the distillation process, fuel and water will be needed. Fuel consumption is estimated at 13,640 sacks/year or 74.56 sacks per day. At an assumed rate of ₱45.00 per sack, yearly consumption is estimated to cost ₱838,800.00. On the other hand, water consumption is estimated at 11,760 cu.m. at ₱1.80 per cu.m. Therefore, water consumption is estimated to ₱21,168.00 for one year operation of the project. Power consumption is also estimated at ₱300.00 per month resulting to ₱10,800 per year.

e. Supplies

Packaging of lemongrass oil will be in dextrose bottles (11 cm.x22 cm.) of 1,000 ml. at an assumed cost of ₱10.00/bottle. At a projected production of essential oil which is 2,503 kg./yr., the project will require a total of 2,503 bottles at a total cost of ₱25,030.00 per year.

A total of 318 boxes is required for packaging and shipment at 24 bottle per box content.

f. Other production expenses

Other production expenses will include depreciation and repairs and maintenance of tools and equipment. Repairs and maintenance is estimated at 5% of cost, while depreciation is based on the estimated useful life of the assets. (Depreciation Schedule)

g. Other facilities and equipment requirement

Building and office furniture and equipment will be incorporated on this aspect.

The building will be installed to house the processing plant with a laboratory and storage space. A receiving area will also be provided for the delivery of raw materials and the finished product. Proposed plant site is 1,350 m<sup>2</sup> at ₱35.00 per square meter or a total of ₱47,250 for three (3) proposed plants.

Office furniture and equipment will consist of tables and chairs, typewriter, filing cabinet, calculator, etc. Estimated cost is ₱15,000.00 with a useful life of 10 years and with 10% of cost for repairs and maintenance. (See table 01-b).

FINANCIAL ASPECT

## FINANCIAL ANALYSES

The analysis of the project yielded the following results:

### a) Profitability

Gross Profit Margin	-	32%
Net Profit Margin	-	20%

### b) Liquidity

The current asset to current liability ratio comparing year 1 to 4 operation (average method) is 2.80 : 1.00. It shows that the project can generate enough assets in the form of cash which are sufficient enough to satisfy the payment of loan amortization covering both principal and interest.

c) Return on Investment	-	44.60%
d) Return on Assets	-	23.73%
e) Return on Equity	-	41.40%

### f) Cash Payback Period

Based on the projected income statement the project is expected to recover the total investment of ₦ 1,042,170.00 in just 2 years 2 months and 1 week only.

### g) Break Even Point

BEP Sales (₦)	-	2,615,391.30
BEP Units (ml)	-	1,568,137.00

PROJECT COST

Fixed Assets

Land (Plant Site)	P 47,250.00
Building	810,000.00
Plant Machinery & Equipment	108,000.00
Tools & Laboratory Equipment	24,600.00
Office Furnitures & Equipment	<u>15,000.00</u>

SUB-TOTAL P1,004,850.00

\* Seed Money (Cash) P 586,800.00

Working Capital

Material	P 112,500.00
Labor	25,625.00
Overhead	85,610.00
Selling & Administrative Expenses	<u>26,785.00</u>

SUB-TOTAL P 250,520.00

TOTAL PROJECT COST P1,842,170.00

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\* Seed money will be lent to farmers who wishes to engage in lemongrass production. Farmers shall amortize back the proportionate amount at 15% interest payable within 5 years. These shall be treated as long-term receivable of the CASABA as reflected in the foregoing financial statement of the project.

Camarines Sur Agri-Business Association  
 Project: Essential Oil Extraction  
 INCOME STATEMENT  
 For the Year Ended December 31, 19 \_\_

	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>	<u>YEAR 4</u>	<u>YEAR 5</u>
Sales (2,835,345 ml. @ 1.40)	P 3,969,483.00	3,969,483.00	3,969,483.00	3,969,483.00	3,969,483.00
Less: Cost of Sales					
Material	1,350,000.00	1,350,000.00	1,350,000.00	1,350,000.00	1,350,000.00
Labor	307,500.00	307,500.00	307,500.00	307,500.00	307,500.00
Overhead	<u>1,027,308.00</u>	<u>1,027,308.00</u>	<u>1,027,308.00</u>	<u>1,027,308.00</u>	<u>1,027,308.00</u>
Total Cost of Sales	P 2,684,808.00	2,684,808.00	2,684,808.00	2,684,808.00	2,684,808.00
Gross Profit	P 1,284,675.00	1,284,675.00	1,284,675.00	1,284,675.00	1,284,675.00
Less: Selling & Administrative Expenses	P <u>321,400.00</u>	<u>321,400.00</u>	<u>321,400.00</u>	<u>321,400.00</u>	<u>321,400.00</u>
Operating Income from Sales	P 963,275.00	963,275.00	963,275.00	963,275.00	963,275.00
Less: Interest Expense	<u>176,848.00</u>	<u>149,010.00</u>	<u>117,837.00</u>	<u>82,913.00</u>	<u>43,803.00</u>
Operating Income	786,427.00	814,265.00	845,443.00	880,362.00	919,472.00
Add: Interest Income from Long-Term Receivable	<u>88,020.00</u>	<u>74,965.00</u>	<u>59,952.00</u>	<u>42,687.00</u>	<u>22,833.00</u>
Net Income before Tax	P 874,447.00	889,230.00	905,395.00	923,049.00	942,305.00
Less: Income Taxes (10% of Operating Income)	<u>78,642.00</u>	<u>81,426.00</u>	<u>84,544.00</u>	<u>88,036.00</u>	<u>91,947.00</u>
Net Income	P <u><u>795,805.00</u></u>	<u><u>807,804.00</u></u>	<u><u>820,851.00</u></u>	<u><u>835,013.00</u></u>	<u><u>850,358.00</u></u>



CASH FLOW

	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>	<u>YEAR 4</u>	<u>YEAR 5</u>
Receipts:					
Equity	\$ 368,434.00				
Loan Proceeds	1,473,736.00				
Proceeds from Long Term Receivable	175,051.00	175,051.00	175,051.00	175,051.00	175,051.00
Cash Sales	3,969,483.00	3,969,483.00	3,969,483.00	3,969,483.00	3,969,483.00
Cash Balance, beginning	-	948,536.00	1,643,768.00	2,335,882.00	3,024,504.00
Total Receipts	\$5,986,704.00	5,093,070.00	5,788,302.00	6,480,416.00	7,169,038.00
Less: Disbursement					
Fixed Cost	1,004,850.00				
Loans to Farmers	586,800.00				
Material	1,350,000.00	1,350,000.00	1,350,000.00	1,350,000.00	1,350,000.00
Labor	307,500.00	307,500.00	307,500.00	307,500.00	307,500.00
Overhead	981,648.00	981,648.00	981,648.00	981,648.00	981,648.00
Selling & Administrative Expense	319,900.00	319,900.00	319,900.00	319,900.00	319,900.00
Debt Servicing	408,828.00	408,828.00	408,828.00	408,828.00	408,828.00
Income Tax Payment	78,642.00	81,426.00	84,544.00	88,036.00	91,947.00
Total Disbursement	\$5,038,168.00	\$3,449,302.00	\$3,452,420.00	\$3,455,912.00	\$3,459,823.00
Net Cash Inflow (Outflow)	\$ 948,536.00	\$1,643,768.00	\$2,335,882.00	\$3,024,504.00	\$3,709,215.00
	=====	=====	=====	=====	=====

Comarines Sur Agri-Business Association  
 Project: Essential Oil Extraction  
 BALANCE SHEET  
 As of December 31, 19\_\_

	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>	<u>YEAR 4</u>	<u>YEAR 5</u>
<b>Current Assets</b>					
Cash	P 948,536.00	P1,643,768.00	P2,335,882.00	P3,024,504.00	P3,709,215.00
Long Term Receivable	<u>499,768.00</u>	<u>599,682.00</u>	<u>284,583.00</u>	<u>152,218.00</u>	<u>-</u>
	P1,448,304.00	P2,043,450.00	P2,620,465.00	P3,176,722.00	P3,709,215.00
<b>Fixed Assets</b>					
Land	P 47,250.00	P 47,250.00	P 47,250.00	P 47,250.00	P 47,250.00
Building	810,000.00				
Plant Machinery & Equipment	108,000.00				
Tools & Laboratory Equipment	24,600.00				
Office Furniture & Equipment	<u>15,000.00</u>				
	P 957,600.00	P 957,600.00	P 957,600.00	P 957,600.00	P 957,600.00
Less: Accumulated Depreciation	<u>47,160.00</u>	<u>94,320.00</u>	<u>141,480.00</u>	<u>188,640.00</u>	<u>235,800.00</u>
Net Book Value	P 910,440.00	P 863,280.00	P 816,120.00	P 768,960.00	P 721,800.00
<b>Total Assets</b>	P2,405,994.00	P2,953,980.00	P3,483,835.00	P3,992,932.00	P4,478,265.00
<b>Current Liability</b>	=====	=====	=====	=====	=====
Loan Payable	P1,241,755.00	P 981,937.00	P 690,941.00	P 365,025.00	-
<b>Networth</b>					
Equity	368,434.00	1,164,239.00	1,972,043.00	2,792,894.00	3,627,907.00
Retained Earnings	<u>795,805.00</u>	<u>807,204.00</u>	<u>820,851.00</u>	<u>835,013.00</u>	<u>850,358.00</u>
	P1,164,239.00	P1,972,043.00	P2,792,894.00	P3,627,907.00	P4,478,265.00
<b>Total Liability/Networth</b>	P2,405,994.00	P2,953,980.00	P3,483,835.00	P3,992,932.00	P4,478,265.00
	=====	=====	=====	=====	=====

SCHEDULES

A. Direct Materials

Lemon Grass (900,00 kg. @ ₱1.50) ₱ 1,350,000.00

B. Direct Labor

	No.	Rate/Day	x	Working Days		
Plant In-Charge	3	₱60.00	x	250		45,000.00
Cutting In-Charge	3	40.00	x	250		30,000.00
Drying In-Charge	3	40.00	x	250		30,000.00
Distillers (1 person/shift x 3)	9	50.00	x	250		112,500.00
helpers (1 person/ shift x 3)	9		x	250		90,000.00
						<u>₱ 307,500.00</u>

C. Production Overhead

Indirect Materials (See C. 1)	₱ 63,750.00
Fuel Consumption (18,640 sacks @ ₱45.00)	838,800.00
Water Consumption (11,760 cu.m. @ ₱1.80)	21,168.00
Power Consumption (₱300.00/mo. x 3 plant)	10,800.00
repair & Maintenance (5% of Fixed Cost)	47,130.00
Depreciation-Fixed Assets (See Dep'n Sched)	45,660.00
	<u>₱ 1,027,308.00</u>

C.1 Indirect Material

Bottles (2,835 bottles @ ₱10.00)	₱ 28,350.00
Boxes (118 boxes @ ₱300.00 each)	35,400.00
	<u>₱ 63,750.00</u>

D. Selling & Administrative Expenses

Salaries & Wages (See Sched. D.1)	₱ 108,000.00
Office Supplies & materials	7,200.00
Traveling Expenses	6,000.00
Repair & Maintenance	750.00
Depreciation-Office F/E	1,500.00
shipping Cost	197,950.00
	<u>₱ 321,400.00</u>

D.1 Salaries & Wages (Indirect Labor)

1 - Project Manager	(₱3,500.00/mo.)	₱	42,000.00
1 - Chemist/Chemical Engineer	(₱3,000.00/mo.)		36,000.00
1 - Accountant/Bookkeeper	(₱2,500.00/mo.)		<u>30,000.00</u>
		₱	<u><u>108,000.00</u></u>

E. Depreciation

Depreciable Assets	Acquisition Cost	Estimated Life	Depreciation Per Annum
<b>Production:</b>			
Building	₱ 810,000.00	25 yrs.	₱ 32,400.00
Plant Machinery & Equipment,	108,000.00	10 yrs.	10,800.00
Tools and Laboratory Equipment			
weighing Scale	6,000.00	10 yrs.	600.00
Cutting Tools	3,600.00	10 yrs.	360.00
Laboratory Equipment	<u>15,000.00</u>	10 yrs.	<u>1,500.00</u>
	₱ 962,600.00		₱ 45,660.00

Administrative

<b>Office Furnitures &amp; Equipment</b>			
Table (3 units @ ₱600.00)	₱ 1,800.00		
Chairs (9 units @ ₱100.00)	900.00		
Typewriter (3 units @ ₱2,500.00)	7,800.00		
Calculator (3 units @ ₱300.00)	900.00		
Filing Cabinet (3 units @ ₱1,200.00)	<u>3,600.00</u>		
	₱ 15,000.00	10 yrs.	₱ <u>1,500.00</u>
			₱ <u><u>47,160.00</u></u>

PRODUCTION COST

Material	(Sched. A)	₹ 1,350,000.00
Labor	(Sched. B)	307,500.00
Overhead	(Sched. C)	<u>1,027,308.00</u>

TOTAL PRODUCTION COST	₹ 2,084,808.00
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PROJECTED PRODUCTION (ml)	<u>2,835,345.00</u>
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COST PER ML (in ₹)	<u>.95</u>
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COST PER ML (in ¢)	<u>.05</u>
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LIST OF TOOLS AND EQUIPMENT  
TABLE 01

PARTICULAR	COST
<b>A. PRODUCTION:</b>	
Plant Machinery and Equipment - 3 units	P 108,000.00
Tools and Laboratory Equipment	
Weighing Scale - 3 units	6,000.00
Cutting Tools - 3 units	3,600.00
Laboratory Equipment - 3 units	<u>15,000.00</u>
Sub-Total	P 132,600.00
 <b>B. ADMINISTRATIVE:</b>	
Office Furnitures & Equipment	
Tables 3 units	P 1,800.00
Chairs 9 units	900.00
Typewriter 3 units	7,800.00
Calculator 3 units	900.00
Filing Cabinet 3 units	<u>3,600.00</u>
Sub-Total	P 15,000.00
TOTAL .....	<u><u>P 147,600.00</u></u>

SOURCES OF FINANCING

	AMOUNT	PERCENTAGE
Loan	P 1,473,736.00	80%
Equity	<u>368,434.00</u>	<u>20%</u>
Total	P 1,842,170.00	100%

Amortization Schedule

Amount of Loan : P 1,473,736.00  
 Terms of Payment : Five (5) Years  
 Interest Rate : 12% per annum

YEAR	AMORTIZATION	INTEREST	PRINCIPAL	BALANCE
				P 1,473,736.00
1	P 408,828.71	P 176,848.32	P 231,980.39	1,241,755.61
2	408,828.71	149,010.67	259,818.04	981,937.57
3	408,828.71	117,832.51	290,996.20	690,941.37
4	408,828.71	82,912.96	325,915.75	365,025.62
5	408,810.71	43,803.08	365,025.62	-0-

67

LEMON GRASS FARMERS/PLANTERS  
(40 Hectares)

Amortization Schedule

Amount of Loan : ₱ 586,800.00  
Terms of Payment : Five (5) Years  
Interest Rate : 15% per annum  
Amortization : ₱ 175,051.57

YEAR	INTEREST	PRINCIPAL	BALANCE
			₱ 586,800.00
1	₱ 88,020.00	₱ 87,031.57	499,768.43
2	74,965.26	100,086.31	399,682.12
3	59,952.32	115,099.25	284,582.87
4	42,687.43	132,364.14	152,218.73
5	22,832.04	152,218.73	-0-



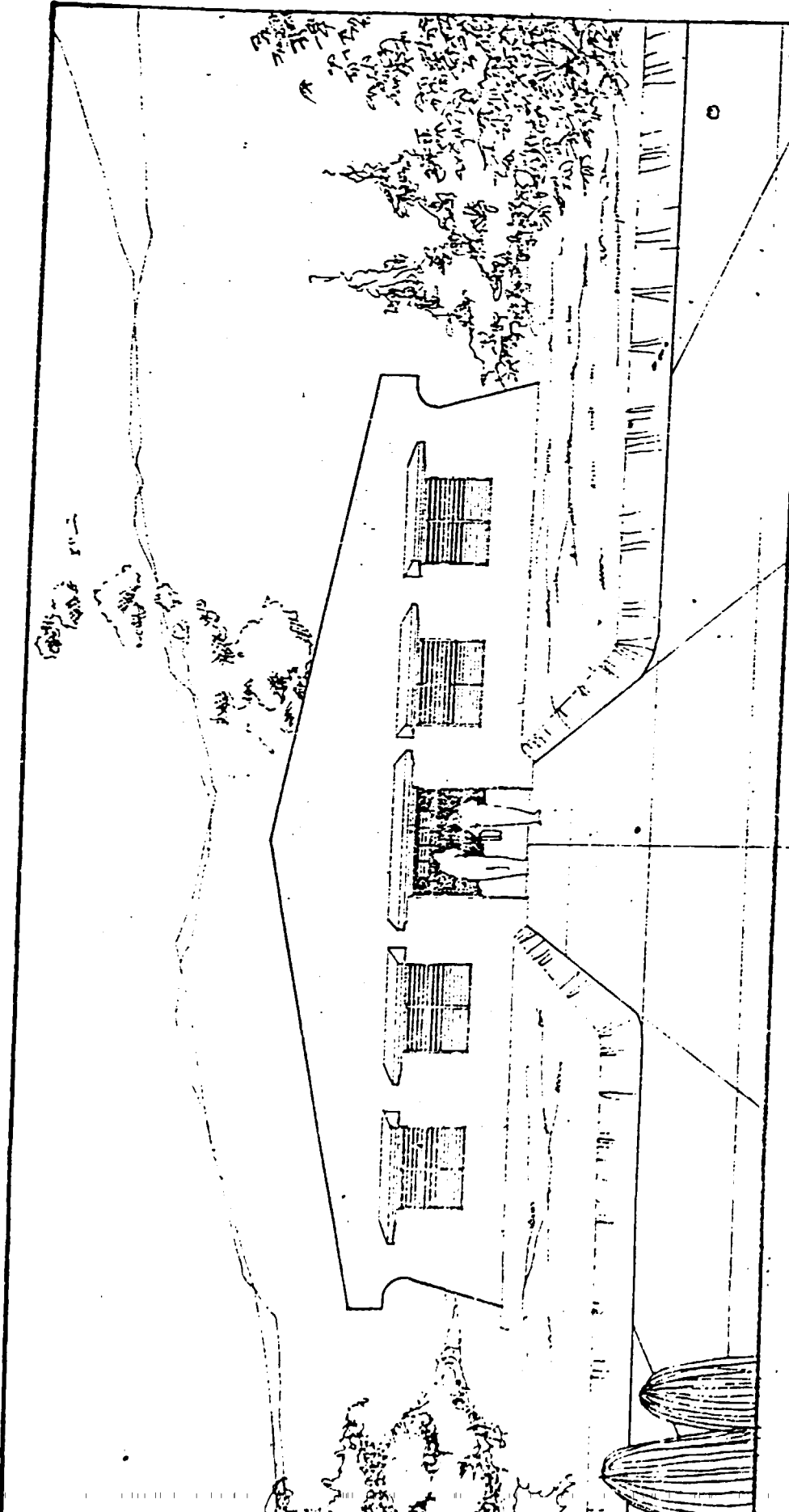
SOCIO-ECONOMIC ASPECT

## SOCIAL DESIRABILITY OF THE PROJECT

Essential oils are important elements in the production of soaps, perfumes, cosmetics, confectioners and other industrial products such as rubbers, artificial leather and paints.

The lemongrass oil extraction project will ultimately encourage small farmers to raise essential oil plants, as supplementary source of income - specifically, lemongrass which grows abundantly in the province because of the ready availability of market outlet for their produced.

Furthermore, plant establishment/operation will generate productive employment among members of the local labor force thereby augmenting their source of income, finally helping the province to gain additional revenue and integrating with the national economy in its effort to become a dollar earning exporter in the international market.



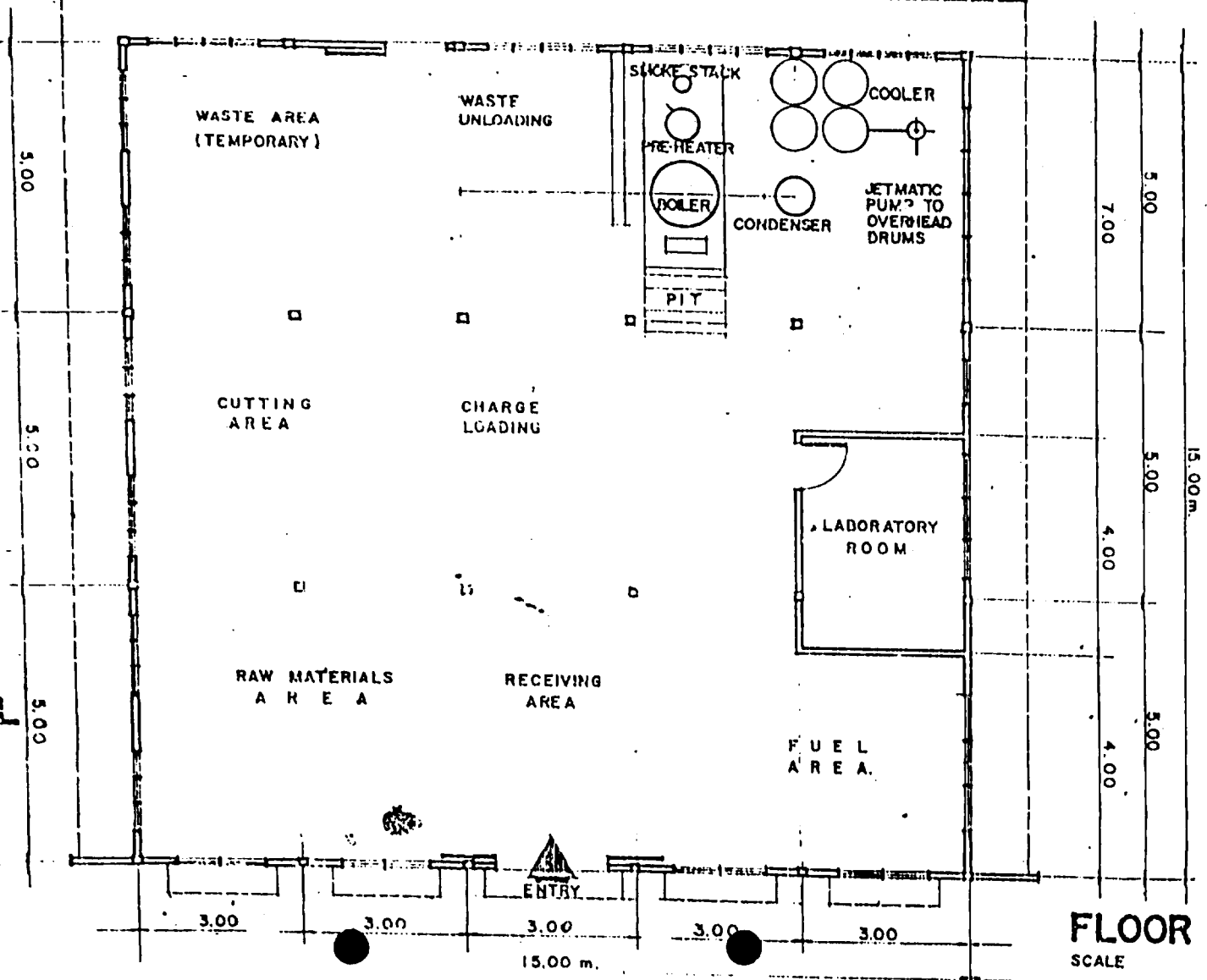
100-100-100

PERSPECTIVE

PROPOSED PROJECT:

ESSENTIAL OIL PROCESSING PLANT

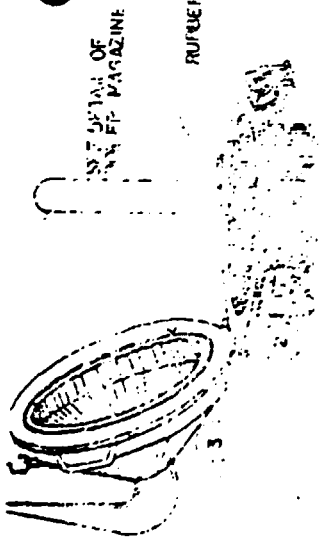
ROOF LINE



USED PROJECT:  
**ESSENTIAL OIL  
 PROCESSING  
 PLANT**

AREA = 225 00 SQ M.  
 COST = P 270,000.00

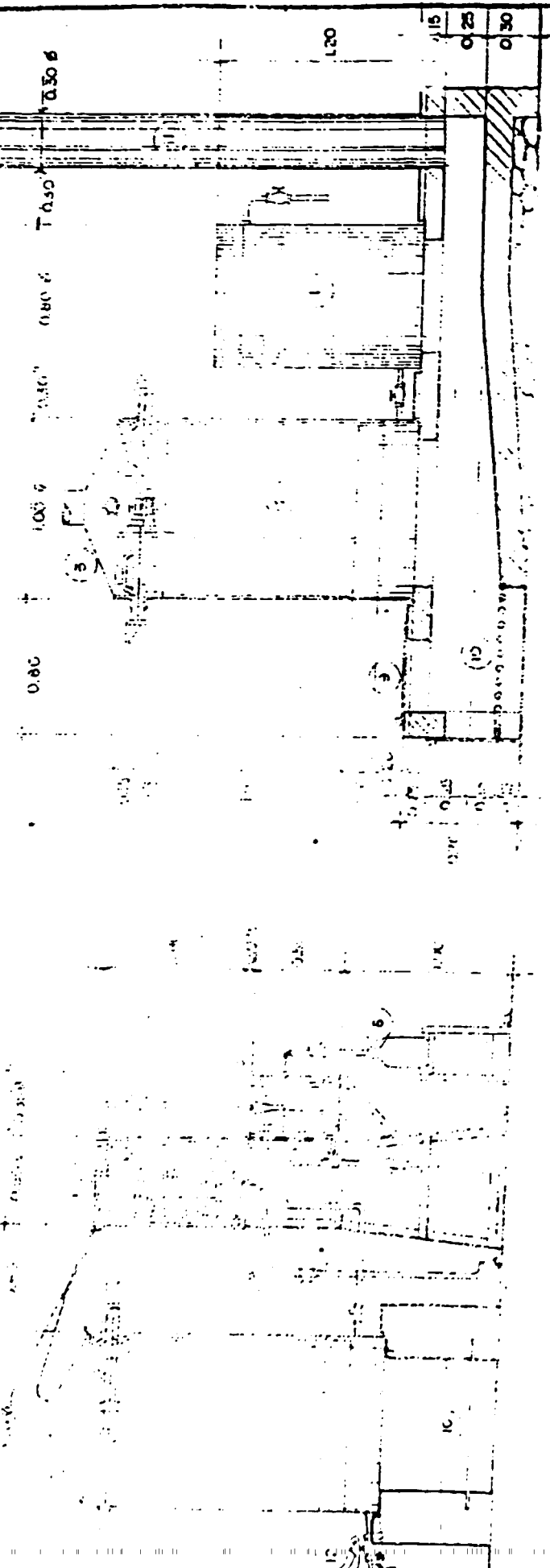
**FLOOR PLAN**  
 SCALE 1:100 m.



DETAIL OF RUBBER SEAL

RUBBER SEAL

- 1 PRE-HEATER
- 2 EXTRACTOR
- 3 CONDENSER
- 4 OIL SEPARATOR
- 5 CONDENSER
- 6 RUBBER SEAL
- 7 WATER COOLER (INLET)
- 8 WATER COOLER (OUTLET)
- 9 CONDENSER
- 10 EXTRACTOR
- 11 RUBBER SEAL
- 12 DRAIN PIPE

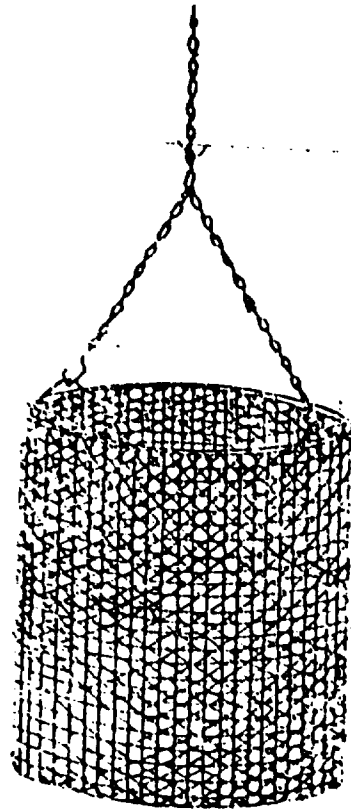


FRONT ELEVATION

SIDE ELEVATION

SCALE 1:30 m.

ESSENTIAL OF PROCESSING EQUIPMENT & BURNER LAYOUT



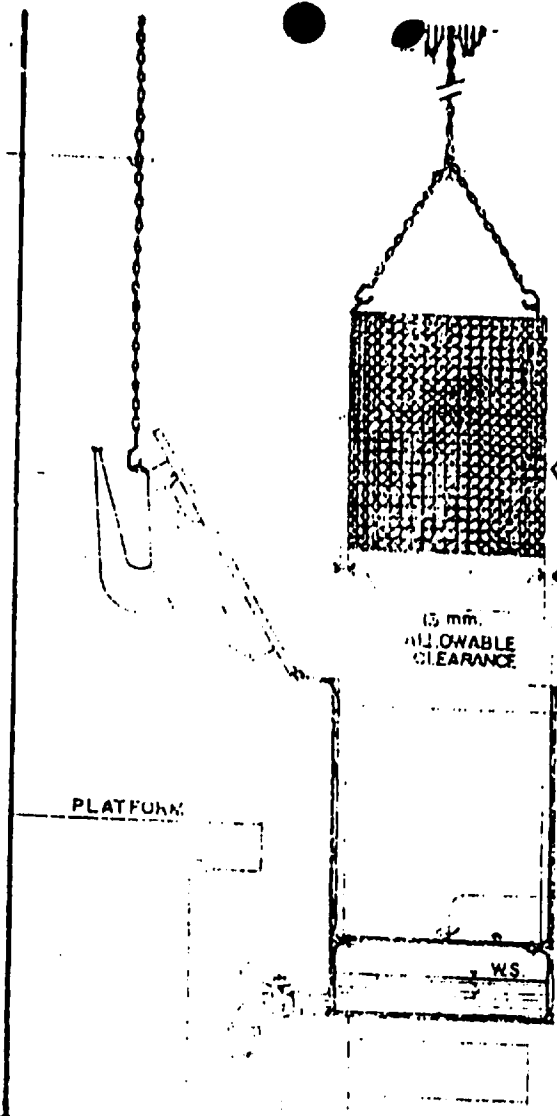
0.90 m. Ø

BOILER MAGAZINE /  
FALSE BOTTOM

HOOK CHAIN

1.10 m.

1:20 m



PLATFORM

15 mm.  
ALLOWABLE  
CLEARANCE

WS

PULLEY

0.90 m. Ø  
CYLINDRICAL  
BOILER MAGAZINE  
MADE OF 1/8" THK  
STAINLESS BARS

0.10

1.10

SUPPORTING BARS

0.15

0.20

ELEVATION

1:30 m

DETAILED SECTION OF EXTRACTOR SHOWING FALSE BOTTOM

P D P E O



## MARKETING STUDY

## A. DEMAND

The total annual demand of bath and laundry soaps in the province is 113,774,304 pieces, 75% of which comprises the total demand of laundry soaps and 25% comprises the total demand of bath soaps or an equivalent of 85,330,752 pieces. (21,332,060 bars) and 28,443,552 pieces respectively. This was based on the 1988 household population and the assumption that an average household member of six consumes 2 pieces of bath-soaps and 1½ bars of laundry soaps weekly. A 6% annual increase in the demand of the commodity, is seen, proportionate to the increase in the household population of Camarines Sur. The provinces of Camarines Norte and Albay has been eyed as potential market areas in the eventual expansion of the project.

## B. SUPPLY

It is very evident that the supply of bath and laundry soaps in the market today is over and above the existing demand. Thus for the project to be realized despite close competition among soap manufacturers, only 30% of the total demand is its target market for the 25 entrepreneurs or 4% of the targeted market is to be saturated by every entrepreneur. For its initial operation, the daily production output is 1,600 or an equivalent of 2 batches. The annual production output of 584,000 pieces, wherein 25% of which constitutes bath soap production and the remaining 75% constitutes laundry soap production; or an equivalent of 96,000 pieces and 288,000 pieces respectively. An annual increase of 10% in the supply of the commodity is realizable since household population increases yearly at 6% and the 4% annual target market from the demand.



### C. PRICES

The project intends to offer the product at a very minimal price to attract consumer thus saturating the targeted market. A comparative analysis has been done in the prevailing prices of bath and laundry soaps, resulting to an average retail price of ₱ 2.52 and ₱ 5.95 for bath and laundry soaps respectively. The total unit production cost of the project's manufactured soap is ₱ 1.66 with an aggregate cost of ₱ 1.31, ₱0.15, ₱0.20 for direct materials, direct labor and indirect materials respectively. With a 35% mark up from the total production cost or an average selling price of ₱ 2.00 per price, the project will still generate a substantial profit. Plant, pick-up price of bath soap is ₱2.50 per piece and ₱ 6.40 per bar or ₱1.75 per piece for laundry soap. Salesman's price of bath soap is ₱3.00 per piece and ₱7.00 per bar or ₱ 2.00 per piece of laundry soap. Recommended retail price is ₱ 3.50 per piece and ₱7.50 per bar or ₱ 2.25 per piece for bath and laundry soap respectively.

### D. MARKETING PRACTICES AND PROGRAMS

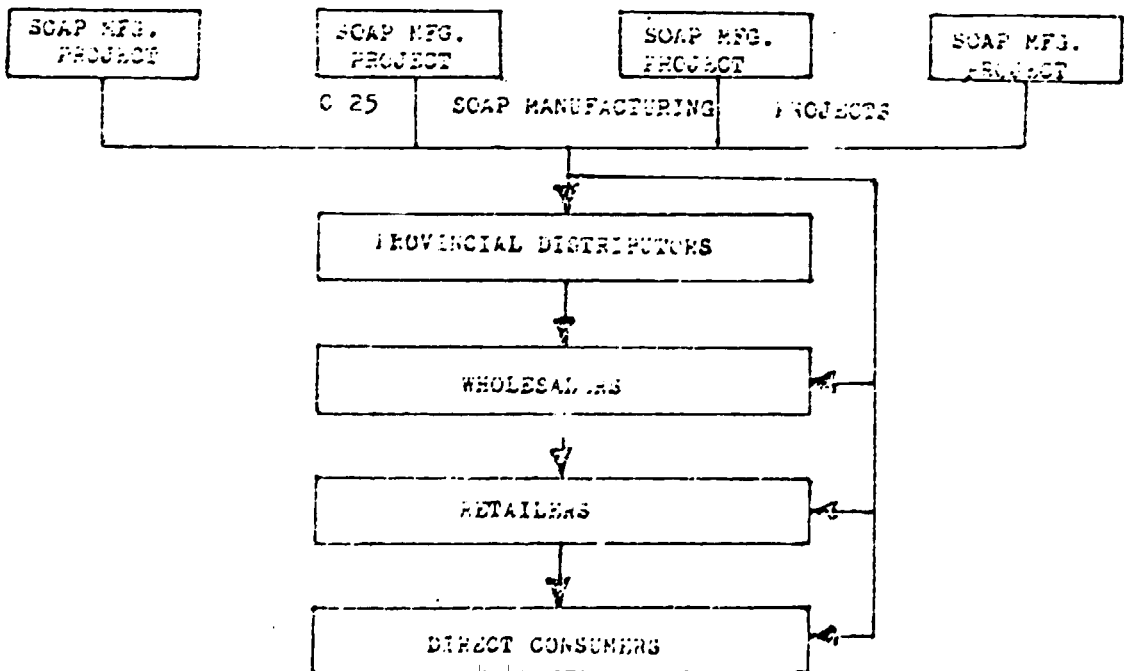
#### A. TERMS OF SALE

The product will be sold either on cash basis, account or installment. Cash on delivery will have to be demanded on purchases below ₱200.00. Exceeding such amount, the term of repayment shall be extended up to a maximum of 30 days subject for collection on two to three installments. A 50% credit out of its total sales is expected upon operation of the project.

**B. DISTRIBUTION OF CHANNELS**

Target market outlets are provincial distributors, wholesalers, retailers and direct consumers of bath and laundry soaps. A salesman shall be hired by the firm to be responsible for the distribution of the product. He shall have to follow a daily routine schedule so all probable market outlets be saturated.

**SOAP MANUFACTURING Project  
DISTRIBUTION CHANNELS**



### C. TRANSPORTATION ARRANGEMENTS

A salesman shall be responsible in the market of the products. He should see to it that all channels of distribution are saturated. A daily transportation expense has been estimated at P 50.00. Delivery of goods shall be at the expense of the purchaser unless otherwise at a large volume where the plant shall have to shoulder the transportation expense.

### D. PROMOTION

To ensure the salability of the product a massive promotion should be done. Advertisements should be aired in local TV and radio stations. Promotional posters and leaflets should likewise be distributed to all its outlet. Product sampling is necessary during the initial operation of the project. This would entail a cost of P 1,250,000 covering expenses of product samples for distribution on the first month of operation. The firm has to hire a salesman responsible on the direct sales of the product to all the distribution channels.

### E. PACKAGING

As an additional product feature to help promote sales, the product have to be in the right size and kind of packaging. The product will be packed in attractive wrappers. These wrappers are to be ordered in large volume from Metro Manila manufacturers. Indirect materials cost is P 0.20 per piece.



PREVAILING PRICES OF PRODUCT COMPETITORS AT VARIOUS LEVELS  
OF DISTRIBUTION CHANNELS

A. BATH SOAPS	DISTRIBUTORS PRICE	WHOLESALE PRICE	RETAILERS PRICE PER PIECE
Osney (50 grams)	:	:	₹ 5.25
Safeguard	:	:	5.50
Lux	:	:	5.25
Lifecare	:	:	5.25
Sial	:	:	5.25
Promise	:	:	5.00
Palmolive	:	:	5.25
Tender Care	:	:	5.25
Blodars	:	:	5.00
Shower to shower	:	:	6.50
Magico	:	:	5.25

B. LAUNDRY SOAPS	RETAILER'S PRICE PER BAR
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( 4 pcs.) Mr. Clean (400 grams)	₹ 10.00
( 4 pcs.) Ajax	9.50
( 4 pcs.) Superheel	9.50
( 5 pcs.) Persil	10.00
( 4 pcs.) Tide	9.50
( 4 pcs.) Oxi	9.50
( 4 pcs.) Surf	9.00
( 4 pcs.) Miracle	8.00
( 4 pcs.) Topr	8.00
( 4 pcs.) Champion	8.50
( 4 pcs.) ...	

TOTAL ASSETS

	<u>EQUITY</u>	<u>LOAN</u>	<u>TOTAL</u>
<u>Fixed Assets</u>			
Machinery		\$ 15,000.00	
Miner		12,000.00	\$ 27,000.00
Machinery			
Equipment		1,000.00	
Working Tools		4,000.00	
Wooden Molds		2,000.00	
Containers, Tails, etc.		1,000.00	8,000.00
Cloth			
		<u>\$ 35,000.00</u>	<u>\$ 35,000.00</u>
Cash on Hand	\$ 20,000.00		20,000.00
<u>Working Capital</u>			
Direct Labor	200.00		
Direct Materials	1,895.00		
Manufacturing Overhead			
Indirect Materials	320.00		
Others	70.00		
Selling and Adm. expenses	295.00		
<u>NET WORKING CAPITAL</u>	<u>\$ 3,011.00</u>		<u>\$ 3,011.00</u>
<u>TOTAL PROPERTY VALUE</u>	<u>\$ 24,011.00</u>	<u>\$ 35,000.00</u>	<u>\$ 59,011.00</u>

AGREEMENTS:

1. Selling Price of all finished products is projected to increase by 10% annually.
2. Direct labor rate is projected to increase by 10% per year.
3. Price of Direct and Indirect Materials are projected to increase by a min. amount of 10% yearly.
4. Indirect Labor rate increase by 10% per year.
5. Depreciation method is straight line without provision of Salvage value. Machinery and equipment are scheduled to be depreciated by 10, 5, and 5 years respectively.
6. Electric and water bill is calculated at \$500 per month and further projected to increase by 5% the year thereafter.
7. Repair and Maintenance is calculated at \$100/month was projected to increase by 5% per year.
8. Taxes and Licenses is \$1,000 per <sup>month</sup> year and was projected to increase by 10% per year.
9. Transportation expenses is \$1,000/month was projected to increase by 5% annually.
10. Advertising and Promo-expense of \$2,000.00 per month was projected to increase by 50% annually.
11. Miscellaneous expenses of \$500 per month is expected to increase by 5% annually.
12. Personal driving is 20% of net income.
13. Value Added Tax was adopted in computing income tax payment.

**INCOME STATEMENT  
SOAP MAKING PROJECT  
3 Years Projection**

	<u>YEAR</u> <u>1</u>	<u>YEAR</u> <u>2</u>	<u>YEAR</u> <u>3</u>
Sales	\$ 758,000.00	\$ 844,500.00	\$ 921,500.00
Less: Cost of Sales			
Direct Labor	57,600.00	53,350.00	59,120.00
Direct Materials	505,040.00	552,960.00	606,720.00
Manufacturing Overhead			
Indirect Materials	58,400.00	42,240.00	46,080.00
Others			
Light & Water	6,000.00	6,300.00	6,615.00
Repair & Maintenance	6,000.00	6,300.00	6,615.00
Depreciation- Machinery	2,700.00	2,700.00	2,700.00
Depreciation- Equipment	2,000.00	2,000.00	2,000.00
Total Manufacturing Overhead/Others	<u>16,700.00</u>	<u>17,300.00</u>	<u>17,930.00</u>
Total Cost of Sales	<u>\$ 1,237,740.00</u>	<u>\$ 1,375,860.00</u>	<u>\$ 1,511,550.00</u>
Gross Margin	\$ 152,260.00	\$ 168,640.00	\$ 181,750.00
Less: Selling & Adminis- trative Expenses			
Salesman's Salary	14,400.00	15,360.00	17,424.00
Transportation Expenses	12,000.00	12,600.00	13,230.00
Advertising & Promos- tion	28,000.00	28,400.00	29,040.00
Taxes & Licenses	12,000.00	13,200.00	14,520.00
Miscellaneous Expenses	6,000.00	6,300.00	6,615.00
Total Selling & Adminis- trative Expenses	<u>\$ 68,400.00</u>	<u>\$ 74,860.00</u>	<u>\$ 80,829.00</u>
Operating Income	\$ 83,860.00	\$ 93,780.00	\$ 100,921.00
Less: Interest Expenses	5,348.00	3,575.00	1,431.00
Income before Tax	<u>\$ 78,512.00</u>	<u>\$ 90,205.00</u>	<u>\$ 99,490.00</u>
Less: Income Tax (YAC)	<u>22,656.00</u>	<u>24,950.00</u>	<u>28,360.00</u>
NET INCOME	<u>\$ 55,856.00</u>	<u>\$ 65,255.00</u>	<u>\$ 71,130.00</u>



**CASH FLOW**  
**SOAP MAKING PROJECT**  
**3 Years Projection**

	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>
<b>Cash Inflow</b>			
Net Sales	P 753,000.00	P 844,800.00	P 921,600.00
Less: Accounts Receivable	32,000.00	35,200.00	39,400.00
Cash Sales	P 734,000.00	P 809,600.00	P 885,200.00
Add: Collection of Accounts Receivable		32,000.00	35,200.00
Sub-Total	P 736,000.00	P 841,600.00	P 918,400.00
From Other Sources			
Loan Proceeds	35,000.00		
Cash Equity	23,011.00		
<b>Total Cash Inflow</b>	<u>P 794,011.00</u>	<u>P 841,600.00</u>	<u>P 918,400.00</u>
<b>Cash Outflow</b>			
Purchase of Machinery	P 27,000.00		
Purchase of Equipment	8,000.00		
Direct Material Cost	503,540.00	552,960.00	606,720.00
Direct Labor Cost	57,600.00	63,360.00	69,120.00
Cash Manufacturing Overhead	50,400.00	54,840.00	59,310.00
Cash Selling & Administrative	68,400.00	74,340.00	80,820.00
Payment of Income Tax	-	22,656.00	24,960.00
Payment of Principal	9,787.00	11,550.00	13,650.00
Payment of Interest Expense	3,343.00	3,575.00	1,481.00
Withdrawal	11,171.00	13,213.00	14,512.00
<b>Total Cash Outflow</b>	<u>P 746,740.00</u>	<u>P 790,503.00</u>	<u>P 870,505.00</u>
<b>Net Cash Inflow (Outflow)</b>	<u>P 53,265.00</u>	<u>P 45,097.00</u>	<u>P 47,814.00</u>
Add: Beg. Cash Balance	-	53,265.00	98,362.00
<b>Cash Balance End</b>	<u>P 53,265.00</u>	<u>P 98,362.00</u>	<u>P 146,176.00</u>

**BALANCE SHEET**  
**SOBE MAKING PROJECT**  
**3 Years Projection**

	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>
<b>Current Assets</b>			
Cash	P 53,285.00	P 93,362.00	P 146,176.00
Accounts Receivable	32,000.00	53,220.00	53,400.00
<b>Total Current Assets</b>	<u>P 85,285.00</u>	<u>P 146,582.00</u>	<u>P 199,576.00</u>
<b>Fixed Assets</b>			
Machinery	P 27,000.00		
Equipment	8,000.00		
<b>Total Fixed Assets</b>	35,000.00	35,000.00	35,000.00
Less: Accumulated Depreciation	4,700.00	9,400.00	14,100.00
<b>Net Book Value</b>	<u>P 30,300.00</u>	<u>P 25,600.00</u>	<u>P 20,900.00</u>
<b>Total Assets</b>	<u><u>P 115,585.00</u></u>	<u><u>P 172,182.00</u></u>	<u><u>P 220,476.00</u></u>
<b>Liabilities &amp; Capital</b>			
<b>Loan Payable—Current</b>	P 11,559.00	P 13,654.00	P -
<b>Income Tax Payable</b>	22,656.00	24,960.00	26,560.00
<b>Total Current Liabilities</b>	<u>P 34,215.00</u>	<u>P 38,614.00</u>	<u>P 26,560.00</u>
<b>Long Term Liabilities</b>	13,654.00	-	-
<b>Total Liabilities</b>	<u>P 47,869.00</u>	<u>P 38,614.00</u>	<u>P 26,560.00</u>
<b>Capital</b>			
Beginning Capital	P 23,011.00	P 57,696.00	P 120,546.00
Add: Net Income	35,856.00	66,065.00	72,560.00
<b>Total</b>	<u>P 58,867.00</u>	<u>P 123,761.00</u>	<u>P 193,106.00</u>
Less: Withdrawal	11,174.00	13,213.00	14,512.00
<b>Capital, End</b>	<u>P 47,693.00</u>	<u>P 110,548.00</u>	<u>P 178,594.00</u>
<b>TOTAL LIABILITIES &amp; CAPITAL</b>	<u><u>P 115,585.00</u></u>	<u><u>P 172,182.00</u></u>	<u><u>P 220,476.00</u></u>

MATERIALS

A. Schedule of Sales	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Total Production (in pcs.)	374,000	374,000	374,000
Selling Price (12% Mark-up)	<u>2.00</u>	<u>2.50</u>	<u>2.40</u>
REVENUE	\$ <u>748,000.00</u>	\$ <u>935,000.00</u>	\$ <u>901,600.00</u>
B. Direct Labor			
Total Production (in pcs.)	374,000	374,000	374,000
Labor Rate per piece	<u>0.15</u>	<u>0.165</u>	<u>0.13</u>
DIRECT LABOR COST	\$ <u>56,100.00</u>	\$ <u>61,710.00</u>	\$ <u>48,620.00</u>
C. Direct Materials			
Total Production (in pieces)	374,000	374,000	374,000
Direct Material rate per pc.	<u>1.7</u>	<u>1.45</u>	<u>1.55</u>
DIRECT MATERIAL COST	\$ <u>635,800.00</u>	\$ <u>542,300.00</u>	\$ <u>579,700.00</u>
D. Indirect Materials			
Total Production (in pieces)	374,000	374,000.00	374,000.00
Indirect Material rate per pc.	<u>0.10</u>	<u>0.11</u>	<u>0.12</u>
INDIRECT MATERIAL COST	\$ <u>37,400.00</u>	\$ <u>41,140.00</u>	\$ <u>44,880.00</u>

	<u>PER MONTH</u>	<u>PER ANNUM</u>
<b>D. Manufacturing Overhead</b>		
Indirect Materials	P 3,200.00	P 38,400.00
Others:		
Light and Water	500.00	6,000.00
Repair and Maintenance	500.00	6,000.00
Depreciation-Equipment	167.00	2,000.00
Depreciation-Machinery	<u>225.00</u>	<u>2,700.00</u>
	<u>P 4,592.00</u>	<u>P 55,100.00</u>

	<u>PER MONTH</u>	<u>PER YEAR</u>
<b>F. Selling and Administrative Expenses</b>		
Sales Salary	P 1,200.00	P 14,400.00
Transportation exp.	1,000.00	12,000.00
Advertising and Promo	2,000.00	24,000.00
Taxes & Licenses	1,000.00	12,000.00
Miscellaneous Expenses	<u>500.00</u>	<u>6,000.00</u>
	<u>P 5,700.00</u>	<u>P 68,400.00</u>

<u>Depreciable Assets</u>	<u>Acquisition Cost</u>	<u>Estimated Life (in years)</u>	<u>Depreciation Per Annum</u>
Machinery	27,000	10	2,700.00
Equipment-basis	5,000	5	1,000.00
Equipment (containers, pile cloth, etc.)	3,000	3	<u>1,000.00</u>
			<u>P 4,700.00</u>

	<u>PER MONTH</u>
<b>H. Direct Labor-Breakdown</b>	
3 Production Workers @ 200.00/month	P 2,400.00
1 Production Supervisor @ 2,500.00	2,500.00

**AMORTISATION SCHEDULE**

TOTAL LOAN : P 35,000.00  
 INTEREST RATE : 17% per annum  
 REPAYMENT PERIOD : Three (3) years  
 MODE OF PAYMENT : Quarterly or 4 times a year  
 AMORTISATION : 3,783.62

<u>Year</u>	<u>Interest</u>	<u>Principal</u>	<u>Balance</u>
			P 35,000.00
1. a.	1,487.50	2,296.12	32,703.88
b.	1,389.92	2,393.71	30,310.17
c.	1,288.15	2,495.44	27,814.74
d.	<u>1,182.12</u>	<u>2,601.50</u>	<u>25,213.24</u>
	5,347.71	9,786.77	
2. a.	1,071.56	2,712.06	22,501.18
b.	936.23	2,827.32	19,673.86
c.	836.14	2,947.48	16,726.38
d.	<u>710.87</u>	<u>3,072.73</u>	<u>13,653.65</u>
	3,574.87	11,559.61	
3. a.	586.28	3,203.34	10,450.31
b.	444.14	3,339.48	7,110.83
c.	302.22	3,482.41	3,628.42
d.	<u>154.25</u>	<u>3,629.40</u>	
	<u>1,480.89</u>	<u>13,653.63</u>	