

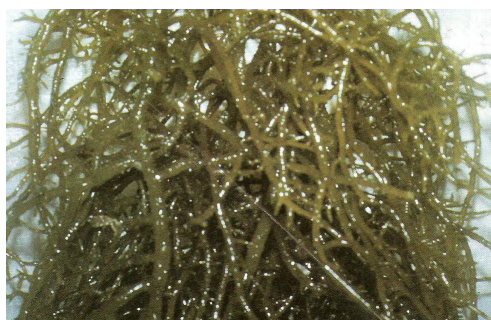


REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL STATISTICS

# MANUAL OF OPERATIONS



## Survey of Costs and Returns in Seaweed Production



FISHERIES STATISTICS DIVISION  
MARCH 2008

## **I. INTRODUCTION**

### **1.1 Rationale**

Seaweeds are marine plants or alga. They are microscopic and multi-cellular, in contrast with most other algae. There are many different varieties of seaweeds in the Philippines. Major varieties are Eucheuma, Kappaphycus, Glacilaria, Caulerpa, Codium, Gelidiella acerosa, Halymenia, Porphyra and Sargassum spp.

Seaweed nowadays is one of the promising industries that attract investors because of its wide industrial and commercial uses. Aside from human food, animal feeds and fertilizers, seaweed is a good source of carageenan, agar and alginate. Carageenans are widely used in food and other industries as thickening and stabilizing agents. Agar is gelatinous substance chiefly used as a solid substrate to contain culture medium for microbial work. It is also used as laxative, vegetarian gelatin substitute, thickener for soups, in jellies, ice cream and clarifying agent in brewing. Alginates on the other hand, are made of soft non-woven fibers which are usually in the form of pads, ropes or ribbons that are used mainly in biomedicine for wound dressing and dental wounds. Alginates are also used in the production of paper coatings, adhesives, dyes, gel, explosives, paper sizing, textile painting, hydro mulching and drilling.

Production of seaweeds in the Philippines showed a remarkable performance. Production went up to 1,505 thousand metric tons in 2007 from 785.8 thousand metric tons in 2001. It posted an average growth of 11.4 percent annually. In 2007, seaweed shared 68 percent to total aquaculture production.

Seaweed is one of the major contributors to fishery sector in terms of foreign currency earnings. In 2006, seaweed exports, valued at 3,648 million pesos, accounted for 16 percent of the total fishery exports.

In terms of employment, seaweed culture requires less farm investments but more labor inputs. It offers employment opportunities especially for those idle labor forces in the coastal areas.

However, profitability of seaweed farming is one of the primary concerns of agribusiness players and investors who are interested to venture into the business. Further, it is also one of the priorities of our planner and policy makers in setting-up goals and targets to boost the growth in the fishery sector. Hence, Costs and Returns Survey of Seaweed Production is proposed to generate the needed information.

### **1.2 Objectives**

The main objective of this study is to generate production costs and returns structure of seaweeds.

Specifically, this study aims to generate seaweed data on the following:

- Cost of production
- Levels of material and labor input use
- Measures of production profitability
- Other socio-economic data

### **1.3 Reference Period**

The reference period for Costs and Returns Survey of Seaweed Production is the last production cycle completed in 2007.

## **II. METHODOLOGY**

### **2.1 Coverage**

The survey shall be conducted in five (5) provinces, namely; Palawan, Bohol, Zamboanga Sibugay, Maguindanao and Tawi-tawi. Each province was chosen to represent the top seaweed producing regions. The domain of the study is the province. Seaweed farm operators from the said provinces who harvested seaweed during the reference period shall be the target sample for the survey. The sample operator should also be knowledgeable on the details of seaweed culture and be able to provide the needed information.

### **2.2 Sampling Frame**

The sampling frame shall be the list of seaweed producing barangays listed through Aquaculture Farms Inventory conducted prior to this activity.

### **2.3 Sampling Design, Sample Size and Sample Selection Procedure**

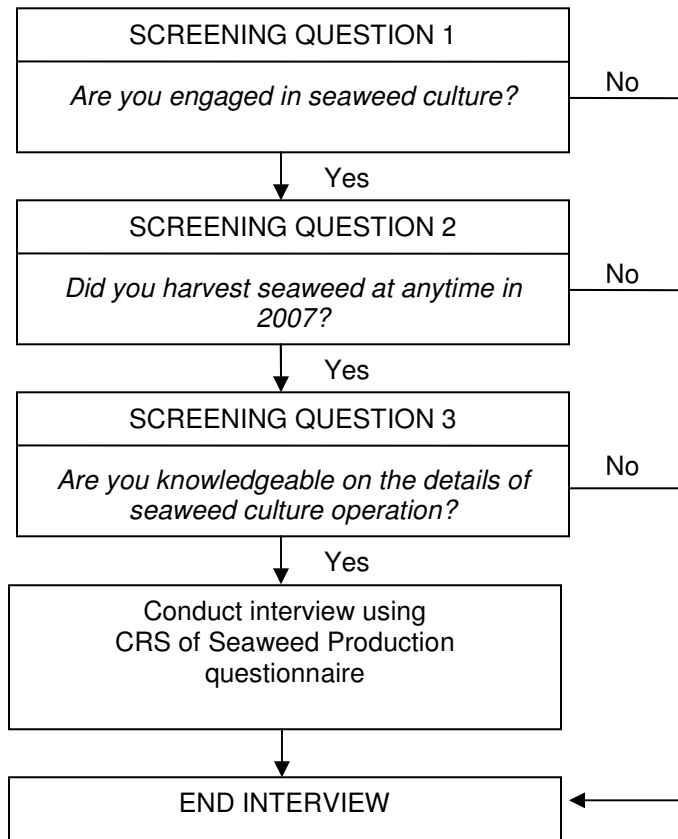
A two-stage sampling design shall be employed with the barangay as the primary sampling unit and seaweed farm operator as the secondary sampling unit.

The sample barangays shall be drawn using simple random sampling from the list of barangays with at least 90 percent cumulative share of seaweed harvested area and with more than five seaweed operators. Ten (10) barangays shall be taken as sample from each province except for Maguindanao, which has less than ten seaweed producing barangays. In this case, all barangays shall be taken as sample.

The number of sample seaweed operators shall be allocated proportional to the number of operators in the sample barangay. This implies that more sample operators shall be taken from sample barangays with more operators involved in seaweed culture.

In each sample barangay, sample seaweed operator shall be located using snowball sampling. Names and addresses of seaweed operators living in the barangay shall be obtained from the barangay council or from seaweed farmers association. From this list, the enumerator can select any seaweed operator as potential sample. A set of screening questions shall then be asked to the operator to determine if he/she merits the criteria set for the survey. Whether the operator is qualified or not, he/she will be asked to recommend others who they think meet the survey criteria. From the available names, the enumerator can again select any seaweed operator as the second potential sample for the survey. The process continues until the required number of samples is attained.

Snowball sampling is especially useful when you are trying to reach populations that are inaccessible or hard to find. It is a special non probability method used when the desired sample characteristic is rare. It may be extremely difficult or cost prohibitive to locate respondents in these situations. For purposes of this survey, the criteria for selection of seaweed operators make it difficult to find qualified respondents, although they tend to cluster in certain areas. Snowball sampling relies on referrals from initial subjects to generate additional subjects. While this technique can dramatically lower search costs, it comes at the expense of introducing bias because the technique itself reduces the likelihood that the sample will represent a good cross section from the population.



The sample size is 50 per province. However, in the case of Palawan and Bohol, sample size is 75 operators in order to capture the information between varieties of seaweed culture within the province.

### **III. ACCOMPLISHMENT OF THE QUESTIONNAIRE**

#### **3.1 Major components of the questionnaire**

The Costs and Returns Survey of Seaweed Production questionnaire consists of eight (8) pages. It has 13 blocks namely:

- A. Geographic Information
- B. Sample Identification
- C. Farm Characteristics
- D. Farm Investments
- E. Material Inputs
- F. Labor Inputs
- G. Other Production Costs
- H. Production and Disposition
- I. Buyer Information
- J. Problems Encountered
- K. Access to Credit
- L. Other Information
- M. Interview/Survey Particulars

#### **3.2 General Instructions**

1. Fill up the survey forms properly and neatly. Use soft lead pencil in recording and checking boxes. Write legibly in big letters or numbers.
2. Write the entry in the appropriate answer space. Wrong entries shall be erased neatly and not crossed out.
3. For quantitative answers, observe strictly the instructions for recording numerical entries such as those in number, weight and/or percentage. Enter required number of decimal places on the space provided.
4. Do not leave an answer space blank. A blank answer space may mean that the question was not asked. If the answer to a question is "not applicable", enter a dash (-) in the corresponding answer space.
5. Before ending the interview, go over the entire questionnaire to make sure that not a single item has been missed.
6. Finally, make an initial editing before submitting the accomplished questionnaire to the supervisor.

### 3.3 Specific Instructions

#### BLOCK A – GEOGRAPHIC INFORMATION

This block aims to gather information on the exact location of the sample seaweed farm.

**1 – 5 Name of the Region, Province, City/Municipality, Barangay and Sitio/Purok.** Copy these information from the list of samples provided before the survey starts. Write legibly on the space provided where the sample farmer resides. Fill up the boxes with the corresponding codes from the masterlist.

#### BLOCK B – SAMPLE IDENTIFICATION

This block aims to gather the demographic characteristics of the sample operator.

- 1 Name of owner/operator** – write the complete name of the owner/operator in capital letters; (LAST NAME then FIRST NAME)

***Owner/Operator** – refers to the person who owns and/or operates the seaweed farm and takes the technical and administrative responsibility of managing the day-to-day operation of the farm.*

- 2 Home address of owner/operator** – enter the exact address of the owner/operator. It may not necessarily be the same as the location of the seaweed farm.

- 3 Age** – ask and record the age of the owner/operator as of his/her last birthday

- 4 Sex** – encircle the sex code of the owner/operator

***1** – Male*

***2** – Female*

- 5 Highest educational attainment** – ask about the highest grade or educational level completed by the owner/operator

- 6 Main occupation** – ask for the main occupation of the owner/operator. This refers to the activity which is the main source of his/her income.

- 7 Number of years engaged in seaweed production** – ask the number of years the owner/operator has been engaged in the production of seaweed as owner/operator.

- 8 Name of respondent** refers to the person being interviewed. This is usually the sample owner/operator. In case the respondent is not the sample farmer, write the complete name of the interviewee which should be knowledgeable of the sample farm's operation

- 9 Contact number** – inquire from the respondent landline/cellular telephone numbers, if available

- 10 **Relationship of respondent to owner/operator** - encircle the code of the respondent's relationship to the owner/operator

1 – Owner/Operator  
2 – Spouse

3 – Son/Daughter  
4 – Others (Specify)

### BLOCK C. FARM CHARACTERISTICS

- 1 **Total area of all seaweed farms (hectare)** - ask the physical area of all the seaweed farms in hectares. Record the area in four (4) decimal places

**Seaweed farm** For purposes of this study, seaweed farm refers to contiguous area allocate/devoted for culturing of seaweed.

- 2 **Number of seaweed farms** – record the number of seaweed farms managed/operated by the operator. For each of the seaweed farms fill up the following table:

**Col (1) Farm Number** – indicate under this column the farm(s) being managed/operated by the operator

**Col (2) What is the physical area of the farm (ha.)?** – ask the area of each seaweed farm in hectares. Record the area in four (4) decimal places.

**Col (3) What is the variety planted?** Indicate the appropriate code for the variety planted. Variety refers to the type of seaweed cultured.

1 – *Cottonii*  
2 – *Alvarezii*  
3 – *Glacilaria*

4 – *Caulerpa*  
5 – *Spinosium*  
6 – Others (Specify)

**Col (4) What is the culture method?** Culture method refers to production practices applied. Indicate the appropriate code for the culture method

1 – Floating monoline  
2 – Bottom monoline

4 – Triangular  
5 – Others (Specify)

**Floating monoline method** – culture method used to either seaweeds or shellfish. Seaweed seedlings are tied in longline and attached to bouys.

**Bottom Monoline Method** - monolines are constructed by the use of mangrove post or wooden stakes anchored/staked deep into the substrate at 10 meters apart and 32-cm. interval in rows. The seaweed planting materials (seed) or cuttings are tied to the nylon monolines at 20-25 cm intervals using soft plastic materials. The monolines are stretched and tied to the stakes at 0.3-0.5 meter away from the bottom during low tide.

**Triangular method** of seaweed farming was derived from the innovative form of the traditional practice known as mono/multiple floating longline method, designed in deeper waters and is flexible enough to withstand strong winds and big waves. The new productive and environment-friendly aquaculture system uses polyethylene rope #12 as cultivation line fixed five meters from the bottom through a wooden stake embedded firmly to the seabed. A rope of smaller size (#7) is used to construct a triangle. A float using float ball or empty plastic container is provided at the triangle's tips to add more buoyancy. The seedlings are planted at the side of the triangles at 30 centimeters apart.

**Col (5) Where is the farm located?** Indicate the appropriate location code of seaweed farm

- 1 – Inside the barangay, Inside the municipality
- 2 – Outside the barangay, Inside the municipality
- 3 – Outside the municipality, Inside the province

**3 Seaweed focus farm number** – record the number of focus farm as indicated in the table in previous item.

**Focus farm** is the seaweed farm where the last cropping is completed and where all relevant information for this study will be collected.

**Focus area** refers to the area where the last cropping is completed. If the focus farm is planted and harvested all at the same time, focus farm is also the focus area. However, if operation in the farm is staggered, focus area becomes the particular part of the focus farm where last cropping is completed and where all relevant information for this study will be collected.

**If there is focus area, what is the size? (hectare)** Enter the size of the focus area in four (4) decimal places, in hectare unit. It refers to the actual area of cultivation. In the case of floating monoline culture method, it is the product of the number of lines, distance between lines and length of the line.

**What is the ratio of focus area to focus farm?** Enter the percentage of focus area in the focus farm in two decimal places. If the focus farm is also the focus area, entry should be 100.00.

**3.1 Month planted** - ask about the month when seaweed was planted which was harvested during the last completed production cycle in 2007 and write the month in the space provided.

**3.2 Month harvested** - ask about the month when seaweed was harvested during the last completed production cycle and write the month in the space provided.



- 3.3 Number of croppings in 2007** - inquire and record the number of times seaweed is planted and harvested in 2007. Cropping period refers to the culture/production cycle from planting number of completed culture/production cycles from planting activities and ends at harvesting of the crop.
- 3.4 Number of harvests** – inquire and record about the total number of harvest. Number of total harvest refers to the number of times seaweed was harvested during the last production cycle.

#### **BLOCK D. FARM INVESTMENTS**

This block aims to gather information on all possible investment items being used in the seaweed culture. Fill-up only the items owned and used by the owner/operator in seaweed culture in focus pond during the reference period.

**Col (1)** Enumerate under this column the items of investments such as **farm structures, farm machines, tools and equipment**. Inquire from the respondent which of the investment items were used/utilized in seaweed culture during the reference period one by one. To facilitate the interview, accomplish this block in horizontal manner.

Columns (2) to (5) refer to beginning inventory of investment items as of January 1, 2007.

**Col (2) How many units?** - indicate the number of investment items owned and was utilized in seaweed culture during the reference period.

**Col (3) What year was it acquired/constructed?** - refers to the year when the investment item was purchased/acquired. If there are more than one unit of any single item purchased on different occasion, ask for the year when each item was purchased/acquired and separate answers by a slash (/). Year acquired is a four (4) digit item.

**Col (4) How much was the acquisition/construction? (Pesos)** - refers to the value of the investment item at the time it was purchased/acquired. If there are more than one unit of any single item purchased on different occasions, get the acquisition cost of each item and separate answers by a slash (/).

**Col (5) How many years will it be useful or serviceable? (from the date of interview)** - ask the estimated number of years that each investment item is found useful/serviceable starting from the time of the interview. If there are more than one unit of any single item, get the estimated life of each item and separate answers by a slash (/). Entries on estimated life must be in whole numbers.

Columns (6) to (13) refer to acquisition and disposal of investment items in 2007.

**Col (6) How many units?** - indicate the number of investment items purchased/acquired in 2007.

**Col (7) How much was spent for new acquisition/construction/assembly? (Pesos)** – refers to the value of investment items acquired/constructed/assembled in 2007.

- Col (8) How much was spent for major repair/improvement? (Pesos)** – determine and record the total costs incurred for major repairs/improvements of investment items in 2007.
- Col (9) How many years will it be useful or serviceable? (from the date of interview)** - ask the estimated number of years that each investment item purchased/acquired in 2007 is found useful/serviceable starting from the time of the interview.
- Col (10) How many units were disposed?** - ask the number of investment items disposed in 2007.
- Col (11) How much? (Pesos)** – determine the amount received in the disposal of investment items referred to in Col (10)
- Col (12) How many units were lost/destroyed/damaged?** - ask the number of investment items lost/destroyed/damaged in 2007
- Col (13) How much? (Pesos)** – ask the value of investment item/s that were lost/destroyed/damaged in 2007.
- Col (14) How many percent was it used in the focus farm/area?** - an investment item may be used for many purposes. In order to reflect a closer estimate of depreciation, there is a need to get some estimation as to the extent of use of each investment item for the crop/commodity which is the subject of the survey. Explain to the respondent what it means and what is the intention of the question item. Indicate the usage of the reported investment item to focus area during the reference period in percent (%). If there are more than one unit of any single item, get the percent of use of each item and separate answers by a slash (/).

## **BLOCK E. MATERIAL INPUTS AND SUPPLIES**

This block aims to collect information on usage and cost of material inputs in seaweed culture in focus pond during the last production cycle.

- Col (1) Item** - under this column are list of material inputs. Inquire from the respondent if the material inputs was used and fill-up the required information in succeeding columns one item after the other.

Columns (2) to (8) are to be accomplished according to the type of material inputs listed in Column 1. All entries should refer to latest seaweed harvest in focus farm/area during the reference period.

- Col (2) What was the mode of acquisition?** – indicate the code/s corresponding to the mode of acquisition of material inputs. Valid codes are:

|                        |                                 |
|------------------------|---------------------------------|
| <i>1 – Purchased</i>   | <i>3 – Received from others</i> |
| <i>2 – Own produce</i> | <i>4 – Others (Specify)</i>     |

- Col (3) How many units were used?** - account for the number of unit of material inputs used in focus farm/area during the reference period.

- Col (4) What is the local unit used?** - write down the unit of measure of the material inputs used (e.g. piece, pack, sack, box, kilogram, bottle, liter, etc).
- Col (5) What is the weight per local unit in kilogram?/length in meter?** - enter the equivalent weight in kilogram per unit of the type of material inputs used or applied, in two (2) decimal places (e.g. unit reported in sack which is equivalent to 50 kilograms; the entry should be 50.00).
- Col (6) How much per local unit? (Pesos)** - record the purchase price of the inputs used per unit of measure reported in Col (4).
- Col (7) What is the total quantity? (Kilograms/Meters)** - for each reported material input, i.e., seedlings and other inputs in solid form, determine the Total Quantity by multiplying the quantity used (Col 3) by the weight per unit (Col 5) and record the product in two (2) decimal places.
- Col (8) How much is the total value? (Pesos)** - for the same items included in Col (7), determine the total value by multiplying the quantity used (Col 3) by the price per unit (Col 6).

## **BLOCK F. LABOR INPUTS**

This block seeks to gather information that pertains to labor utilization in seaweed culture during the reference period. It has integrated gender concerns, thus, the need to determine whether labor inputs were provided by male or female farm workers. The sources of labor are operator, family, exchange labor (bayanihan) and hired labor. The latter may include permanent workers, contract labor or “pakyaw” system wherein the performance of multiple farming activities is contracted for a certain amount.

Since data items vary depending on the farm activity, the enumerator should get the required details one activity (or one row) at a time.

**Col (1) Activity** - contains the different activities involve in seaweed culture.

**Col (2) Sex** - this column pertains to the sex of the person performing the farm activities.

### **Columns (3) to (5) Operator Labor**

*Operator labor pertains to the production activities performed by the farmer-operator.*

**Col (3) How many days were spent?** - indicate the total number of days of work per activity.

**Col (4) How many hours per day were spent?** - ask for the average number of hours of work rendered by the operator per day and record with one (1) decimal place.

**Col (5) Total Mandays** - conceptually, one manday is equivalent to eight (8) hours of work. Number of mandays (Col 5) is derived as follows:

$$\text{Mandays (Col 5)} = \frac{(\text{Number of days, Col 3}) \times (\text{Number of hours per day, Col 4})}{8 \text{ hours}}$$

### Columns (6) to (9) Family Labor

***Family labor** pertains to the production activities performed by the family members of the farmer-operator.*

**Col (6) How many persons worked in the farm?** - ask for the total number of family members who performed the particular farm operation.

**Col (7) On the average, how many days did they work?** - indicate the average number of days worked per person in whole number on the space provided. This can be derived by adding the number of days worked/rendered by each family member and divide the sum by the number of observations.

**Col (8) On the average, how many hours per day were spent?** - indicate the average number of hours worked per day. To determine the average, add the total number of hours worked per person and divide the sum by the number of working days. Record in one (1) decimal place on the space provided.

**Col (9) Total Mandays** - compute for the total mandays of family labor by multiplying Col (6), Col (7) and Col (8), and divide the result by eight (8). Record in two (2) decimal places on the space provided.

$$\text{Mandays (Col 9)} = \frac{[(\text{No. of persons, Col 6}) \times (\text{Average number of days per person, Col 7}) \times (\text{Average number of hours, Col 8})]}{8 \text{ hours}}$$

### Columns (10) to (13) Exchange Labor (Bayanihan)

***Exchange labor (Bayanihan)** pertains to a custom of farm households to help each other in peak periods by working on each other's farm without any pay. Refer to filling up instructions on corresponding items in family labor.*

Refer to filling up instructions on corresponding items in family labor.

### Columns (14) to (19) Hired Labor

***Hired Labor** are production activities performed by hired laborers including the payment for the services rendered*

For Col (14) to (17) , refer to filling up instructions on corresponding items in family labor.

In case a particular activity was performed by:

- a. **Permanent farm workers** - ask and record the total number of permanent employee(s), the average number of days and average number of hours worked per day for each farm activity performed. Apportion the salary of the worker(s) based on the number of mandays rendered in seaweed culture and enter in Col 18. In case of multiple farm activities, apportion the total amount based on the number of mandays per activity.
- b. **Contract labor** - this is commonly called “pakyaw” system. Record in Cols 14, 15 and 16 the number of persons, average number of days worked and average number of hours worked per day, respectively, for each activity performed. Apportion the total amount paid to contract laborers based on the number of mandays worked per activity and enter them under Col 18 if payment made is in cash. Otherwise, enter them under Col 19.

**Col (18) How much was paid in cash? (Pesos)** - if laborers were paid in cash, ask for the total amount paid to laborers per activity performed. Cash payment refers to the actual amount of cash paid according to the agreed basis of payment. Record in two (2) decimal places on the space provided.

**Col (19) How much was paid in kind? (Pesos)** - non-cash payment maybe in the form of seaweed (S) or other commodities (OC). Payment in kind refers to the peso equivalent of the quantity of production paid for a work done. Convert the payment into peso equivalent by following this procedure:

$$\text{Peso equivalent of in-kind} = (\text{Total number of local unit of in-kind payment}) \\ \times (\text{Price per local unit during the time of payment})$$

**Col (20) How much was the total food cost incurred? (Pesos)** - when applicable, ask for the total cost incurred in the provision of food (meals/snacks/refreshments) to exchange and hired farm laborers during work on particular farm operation.

**Col (21) How much was the prevailing wage rate per day in the locality? (Pesos)** - ask for the prevailing wage rate per day in the locality for (each of the items in Col 1) the activities performed by unpaid workers. This information will be needed in the computation of imputed value of operator, family and exchange labor.

## **BLOCK G. OTHER PRODUCTION COSTS**

This block seeks to collect other items of production cost **incurred in focus farm/area during the reference period**. Payments may be in cash (Col 2), imputed cost (Col 3) or non-cash (Cols 4-10). Cost is imputed if not owned farm machines, tools and equipments are used for free. In case of non-cash payments or payment in kind, determine the commodity paid, quantity(ies), the unit of measure, weight per unit and compute for the total quantities in kilograms and the corresponding values during the last production cycle. Cash and imputed costs should be recorded in the specified basis of payment. Payment made in other unit should be explicitly specified.

- 1 **Salaries of employees (*monthly*)** - refers to fixed payment in cash or in kind of the permanent farm employee(s) the reference period.
- 2 **Wage/share of caretaker (*monthly*)** - refers to fixed payment in cash to the caretaker which is either in the form of wage and/or a percent share in the total value of produce.
- 3 **Cooperative fees (*annual*)** - refers to fixed payment in cash or in kind to the cooperative where the operator is a member
- 4 **Rentals (machine, and tools and equipment) (*per cropping*)** - refers to payments in cash or in kind for the use/rental of machine, and tools and equipment.
- 5 **Fuel and oil (*per cropping*)** - refers to payment in cash or in kind for diesel, gasoline, oil, grease and kerosene consumed in the production process.
- 6 **Transport cost of inputs (*per cropping*)** - refers to the cost incurred in the procurement of inputs such as seedlings, fertilizers, chemicals, and other farm inputs.
- 7 **License/permits (*annual*)** - refers to the cost incurred in the registration processes of getting licenses/permits for the seaweed farm to operate legally.
- 8 **Interest payment on loan (*annual*)** - refers to payment in cash or in kind for the interest on borrowed capital used in seaweed farm operation.
- 9 **Others (*specify*)** - refer to other cost items not listed. Enumerate, if any, and get the required information on costs on per cropping basis.

## BLOCK H. PRODUCTION AND DISPOSITION

This block aims to gather information on the **volume of harvest in the focus pond during the reference period** as well as the breakdown by which this harvested volume was disposed.

For Columns 2 and 3, indicate production and disposition in fresh and dried form in two (2) decimal places, kilogram unit. Fresh form may be converted to dried using the conversion rate in item 2 and vice versa.

- 1 **Area harvested** - inquire and indicate the total area harvested (productive area) for seaweed in four (4) decimal places. The total area harvested should be equal or less than focus farm/area in Block C - Farm Characteristics.
- 2 **Production** - enter the gross production in local unit in two (2) decimal places.  
  
**On the average, 1 kilogram of dried seaweed is equivalent to:** - ask the quantity in kilogram of fresh form and write in the space provided, in two (2) decimal places.
- 3 **Disposition**
  - 3.1 **Sold** - refers to the quantity sold/marketed out of the total production and ask for the following whichever is applicable:

**Price/kg (P)**

**Fresh** – ask the price per kilogram of fresh seaweed and write in the space provided in two (2) decimal places

**Dry** – ask the price per kilogram of dried seaweed and write in the space provided in two (2) decimal places

- 3.2 Harvesters' share** – ask for the quantity given to harvesters as payment for the services rendered.
- 3.3 Caretaker's share** - quantity given to caretaker as payment for the services rendered.
- 3.4 Other laborers' share** - quantity given to other farm laborers as payment for the services rendered.
- 3.5 For home consumption** - quantity consumed by the farm household.
- 3.6 For seedlings** - quantity set aside for seedlings for the next cropping
- 3.7 Given away** - quantity given to other persons, relatives and other households.
- 3.8 Harvested for seedlings** – quantity pruned from the seaweed farm during the cropping period to be used as seedlings
- Price/kg** – ask the price per kilogram of harvested seaweed for seedlings in fresh form and record in the space provided in two (2) decimal places.
- 3.9 Wastage** – quantity lost/damaged from harvesting until disposed
- 3.10 Others (specify)** - the quantity used for other purposes which do not belong to the above categories.

**NOTE:** Check if the value of harvesters' share and other laborers' share were reflected in Section F (Labor Inputs), Column 19.

**BLOCK I. BUYER INFORMATION**

This block seeks to obtain the major buyer of produce during the reference period.

Ask the respondent on the major buyer of his produce. Encircle code and determine the percentage of seaweed that was sold to major buyer out of the total volume marketed.

**BLOCK J. PROBLEMS ENCOUNTERED**

This block aims to gather information on the problems affecting production and marketing of seaweed. Inquire from the respondent the specific production and marketing related problems encountered by encircling the appropriate code(s) provided. For responses which are not in the list, state them under "others (specify)".

## BLOCK K. ACCESS TO CREDIT

This block aims to gather information regarding loans availed by the farmer/operator, amount of loans, its sources and interest rate per annum.

**1 Have you availed of any loan for seaweed production for 2007?** - encircle code

**1** – Yes

**2** – No

if no, go to Block L.

**2 How much loan did you avail of?** – ask the amount of loan and write on the space provided in two (2) decimal places.

**3 How much was the interest rate per annum?** – ask the interest rate per annum and write on the space provided in percent and in two (2) decimal places.

**4 Who/What was your source of loan?** - encircle code corresponding to the answer.

**1** – Cooperative

**3** - Private individual

**2** – Bank

**4** - Other lending institution (specify): \_\_\_\_\_

## BLOCK L. OTHER INFORMATION

This block seeks to collect information on the civic participation and affiliation of the sample farmer. It also covers the sources of technical know-how and other farm management information of the sample owner/operator.

**1 Are you a member of seaweed related association?** - encircle code

**1** – Yes

**2** – No

If yes, identify the said organization and ask for the benefits derived from being a member of such organization.

**1.1 What is the name of the association?** \_\_\_\_\_

**1.2 What are the benefits derived? (Specify)** \_\_\_\_\_

**2 Have you consulted/used advice of:** - encircle code

**2.1 Government extension agents?**

**1** - Yes

**2** - No

**2.2 Private agents?**

**1** - Yes

**2** - No

If yes, specify services availed \_\_\_\_\_



**3      What are your future plans regarding seaweed farm operation?** (Encircle code)

*1 - Maintain current operation*

*2 - Expand*

*3 - Others (specify)*

**4      What will you suggest to the government for the improvement of milkfish industry?** - ask the respondent to enumerate his/her recommendations to the government to further improve seaweed farming, marketing and the industry. Write the answers in the space provided.

#### **BLOCK M. INTERVIEW / SURVEY PARTICULARS**

After the thorough verification of the completeness and consistency of the responses, the interviewer should affix his/her name and signature and the date of accomplishing the questionnaire. Same is through with the Field Supervisor/Editor and the PASO.

## WORKPLAN: Costs and Returns Survey of Seaweed Production

| ACTIVITY                                | 2007 |  |  | 2008 |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
|---|------|--|--|------|--|--|-----|--|--|-----|--|--|--|-----|--|--|--|-----|--|--|--|------|--|--|--|--|--|--|
|   |      |  |  | JAN  |  |  | FEB |  |  | MAR |  |  |  | APR |  |  |  | MAY |  |  |  | JUNE |  |  |  |  |  |  |
| 1 Planning/Conceptualization            |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 2 Preparation of dummy tables           |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 3 Preparation of survey instruments     |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 4 Pre-test of survey questionnaire      |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 5 Reproduction of survey instruments    |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 6 Development of data processing system |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 7 Trainors' training                    |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 8 Field training                        |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 9 Data collection                       |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 10 Field editing                        |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 11 Submission of returns to CO          |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 12 Editing/coding/encoding of returns   |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 13 Data review and analysis             |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 14 Presentation of results              |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 15 Preparation of reports               |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |
| 16 Submission of reports                |      |  |  |      |  |  |     |  |  |     |  |  |  |     |  |  |  |     |  |  |  |      |  |  |  |  |  |  |



## SURVEY OF COSTS AND RETURNS IN SEAWEED PRODUCTION

(LAST COMPLETED PRODUCTION CYCLE IN 2007)

| A. GEOGRAPHIC INFORMATION (Location of Seaweed Farm)  | C. FARM CHARACTERISTICS  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
|---|--|--|---|--|---|--|-----|-----|-----|-----|-----|---|---------------|--|--|--|---|---------------|--|--|--|---|---------------|--|--|--|---|---------------|--|--|--|---|---------------|--|--|--|
| <p>1. Region: _____</p> <p>2. Province: _____</p> <p>3. City / Municipality: _____</p> <p>4. Barangay: _____</p> <p>5. Sitio / Purok: _____</p>   | <p>1. Total area of all seaweed farms: _____ . _____ hectare</p> <p>2. Number of seaweed farms: _____</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"><thead><tr><th style="width: 15%;">Farm Number</th><th style="width: 20%;">What is the physical area of the farm (hectare)</th><th style="width: 15%;">What is the variety planted? (Indicate code)</th><th style="width: 15%;">What is the culture method? (Indicate code)</th><th style="width: 35%;">Where is the farm located? (indicate code)</th></tr><tr><th>(1)</th><th>(2)</th><th>(3)</th><th>(4)</th><th>(5)</th></tr></thead><tbody><tr><td>1</td><td>_____ . _____</td><td></td><td></td><td></td></tr><tr><td>2</td><td>_____ . _____</td><td></td><td></td><td></td></tr><tr><td>3</td><td>_____ . _____</td><td></td><td></td><td></td></tr><tr><td>4</td><td>_____ . _____</td><td></td><td></td><td></td></tr><tr><td>5</td><td>_____ . _____</td><td></td><td></td><td></td></tr></tbody></table> <p>3. Seaweed focus farm number<sup>1/</sup>: _____</p> <p>if there is focus area, what is the size? _____ . _____ hectare</p> <p>What is the ratio of focus area to focus farm? ____ . ____ %</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"><div>3.1 Month planted: _____</div><div>3.3 Number of croppings in 2007: _____</div></div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"><div>3.2 Month harvested: _____</div><div>3.4 Number of harvests/cropping: _____</div></div> <p style="margin-top: 20px;"><small><sup>1/</sup> Focus farm is the seaweed farm where the last cropping is completed and where all relevant information for this study will be collected</small></p> | Farm Number                                  | What is the physical area of the farm (hectare) | What is the variety planted? (Indicate code) | What is the culture method? (Indicate code) | Where is the farm located? (indicate code) | (1) | (2) | (3) | (4) | (5) | 1 | _____ . _____ |  |  |  | 2 | _____ . _____ |  |  |  | 3 | _____ . _____ |  |  |  | 4 | _____ . _____ |  |  |  | 5 | _____ . _____ |  |  |  |
| Farm Number   | What is the physical area of the farm (hectare)  | What is the variety planted? (Indicate code) | What is the culture method? (Indicate code)     | Where is the farm located? (indicate code)   |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| (1)   | (2)  | (3)  | (4)   | (5)  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| 1   | _____ . _____  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| 2   | _____ . _____  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| 3   | _____ . _____  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| 4   | _____ . _____  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| 5   | _____ . _____  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| <b>B. SAMPLE IDENTIFICATION</b>   |  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |
| <p>1. Name of owner / operator: _____</p> <p>2. Home Address of owner / operator: _____</p> <p>3. Age (as of last birthday): _____ years old</p> <p>4. Sex (Encircle code):      1 - Male      2 - Female</p> <p>5. Highest educational attainment: _____</p> <p>6. Main occupation: _____</p> <p style="margin-left: 20px;"><i>(Work that farmer/operator devoted most of his/her time)</i></p> <p>7. Number of years engaged in seaweed production: _____ years</p> <p>8. Name of respondent: _____</p> <p>9. Contact number: _____</p> <p>10. Relationship of respondent to owner / operator (Encircle code):</p> <div style="display: flex; justify-content: space-between; margin-left: 20px;"><div>1 - Owner / Operator</div><div>3 - Son / Daughter</div></div> <div style="display: flex; justify-content: space-between; margin-left: 20px;"><div>2 - Spouse</div><div>4 - Others (specify): _____</div></div> |  |  |   |  |   |  |     |     |     |     |     |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |   |               |  |  |  |

**CODES:**

|                          |  |   |                |   |                      |                      |
|--------------------------|--|---|----------------|---|----------------------|----------------------|
| Col. 3 - Variety         | 1 - Cottonii                                     | 2 - Alvarezii                                     | 3 - Gracilaria | 4 - Caulerpa                                      | 5 - Spinosum         | 6 - Others (specify) |
| Col.4 - Culture Method   | 1 - Monoline Floating                            | 2 - Monoline Bottom                               |                | 3 - Triangular                                    | 4 - Others (specify) |                      |
| Col.5 - Location of Farm | 1 - Inside the barangay, Inside the municipality | 2 - Outside the barangay, Inside the municipality |                | 3 - Outside the municipality, Inside the province |                      |                      |

| D. FARM INVESTMENT (in focus farm/area)           |   |  |  |   |                               |                        |         |  |                               |   |                   |                   |  |
|---|---|--|--|---|-------------------------------|------------------------|---------|--|-------------------------------|---|-------------------|-------------------|--|
| Item  | BEGINNING INVENTORY AS OF JANUARY 1, 2007 |  |  |   | JANUARY 2 - DECEMBER 31, 2007 |                        |         |  |                               |   |                   |                   | How many percent was it used in the focus farm / area? |
|   | How many units?                           | What year was it acquired / constructed? | How much was the acquisition / construction? (Pesos) | How many years will it be useful or serviceable? (from the date of interview) | ACQUISITION                   |                        |         | DISPOSAL   |                               | How many units were lost / destroyed / damaged? | How much? (Pesos) |                   |  |
|   |   |  |  |   | How many units?               | How much was spent for |         | How many years will it be useful or serviceable? | How many units were disposed? |   |                   | How much? (Pesos) |  |
| (1)   | (2)                                       | (3)                                      | (4)  | (5)   | (6)                           | (7)                    | (8)     | (9)  | (10)                          | (11)  | (12)              | (13)              | (14)   |
| Farm structures                                   |   |  |  |   |                               |                        |         |  |                               |   |                   |                   |  |
| 1 Farm office                                     |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 2 Farm house                                      |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 3 Storage of supplies and dried seaweeds (bodega) |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 4 Farm laboratory                                 |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 5 Caretaker's house                               |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 6 Drying platform                                 |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 7 Others (specify): _____                         |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| _____   |   |  |  |   |                               |                        |         |  |                               |   |                   |                   |  |
| Farm machines, tools and equipment                |   |  |  |   |                               |                        |         |  |                               |   |                   |                   |  |
| 8 Generator                                       |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 9 Engine  |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 10 Boat (banca)                                   |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 11 Tricycle                                       |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 12 Pick-up  |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 13 Van  |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 14 Truck  |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 15 Raft (bamboo)                                  |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 16 Raft (styrofoam)                               |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 17 Paddle   |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 18 Mesh net                                       |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |
| 19 Googles/Snorkeling mask                        |   |  | • _ _ _  |   |                               | • _ _ _                | • _ _ _ |  |                               | • _ _ _   |                   | • _ _ _           |  |

D. FARM INVESTMENT . . . continued

| Item   | BEGINNING INVENTORY AS OF JANUARY 1, 2007 |  |  |   | JANUARY 2 - DECEMBER 31, 2007 |  |                                     |  |                               |                   |   |                   |      | How many percent was it used in the focus farm / area? |
|--|---|--|--|---|-------------------------------|--|-------------------------------------|--|-------------------------------|-------------------|---|-------------------|------|--|
|  | How many units?                           | What year was it acquired / constructed? | How much was the acquisition / construction? (Pesos) | How many years will it be useful or serviceable? (from the date of interview) | ACQUISITION                   |  |                                     |  | DISPOSAL                      |                   | How many units were lost / destroyed / damaged? | How much? (Pesos) |      |  |
|  |   |  |  |   | How many units?               | How much was spent for                             |                                     | How many years will it be useful or serviceable? | How many units were disposed? | How much? (Pesos) |   |                   |      |  |
|  |   |  |  |   |                               | new acquisition / construction / assembly? (Pesos) | major repair / improvement? (Pesos) |  |                               |                   |   |                   |      |  |
| (1)  | (2)                                       | (3)                                      | (4)  | (5)   | (6)                           | (7)  | (8)                                 | (9)  | (10)                          | (11)              | (12)  | (13)              | (14) |  |
| 20 Cultivation frame                           |   |  |  |   |                               |  |                                     |  |                               |                   |   |                   |      |  |
| 20.1 Sinker/Anchor                             |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.2 Floater (styrofoam)                       |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.3 Floater (plastic bottle)                  |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.4 Floater (PVC pipe)                        |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.5 Pole (Concrete)                           |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.6 Pole (bamboo/mangrove)                    |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.7 Polyethylene rope (# 6-7)                 |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.8 Polyethylene rope (# ____)                |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.9 Polyethylene rope (# ____)                |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.10 Polyethylene rope (# ____)               |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 20.11 Monofilament # 110 test lbs (nylon cord) |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 21 Bolo/Knife                                  |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 22 Digging bar                                 |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 23 Hammer/Mallet                               |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 24 Gas lamp                                    |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 25 Basket                                      |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 26 Crate                                       |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 27 Weighing Scale                              |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 28 Gloves                                      |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 29 Plastic cover                               |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| 30 Others (specify): _____                     |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| _____  |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |
| _____  |   |  | • __   |   |                               | • __   | • __                                |  |                               | • __              |   | • __              |      |  |

| E. MATERIAL INPUTS AND SUPPLIES (used in focus farm/area) |  |                           |                              |   |                                  |  |                                      |
|---|--|---------------------------|------------------------------|---|----------------------------------|--|--------------------------------------|
| Item  | What was the mode of acquisition?<br>(Indicate code/s) | How many units were used? | What is the local unit used? | What is the weight per local unit in kilogram? / length in meter? | How much per local unit? (Pesos) | What is the total quantity? (kilograms / meters) | How much is the total value? (Pesos) |
| (1)   | (2)  | (3)                       | (4)                          | (5)   | (6)                              | (7)<br>Col (3 x 5)                               | (8)<br>Col (3 x 6)                   |
| 1 Seedling  |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| 2 Plastic / straw twine                                   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| 3 Coconut palm  |  |                           |                              |   | . ____                           |  | . ____                               |
| 4 Sacks   |  |                           |                              |   | . ____                           |  | . ____                               |
| 5 Others (specify)  |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |
| _____   |  |                           |                              | . ____  | . ____                           | . ____   | . ____                               |

CODES:

Col. 2 - Mode of acquisition

1 - Purchased

2 - Own produce

3 - Received from others

4 - Others (specify)

F. LABOR INPUTS (in focus farm/area)

| Activity   | Sex   | Operator Labor            |                                    |               | Family Labor                         |                              |                                    |               | Exchange Labor                       |                              |                                    |               | Hired Labor                          |                              |                                    |               |                            |                            |        | How much was the total food cost incurred? (Pesos) | How much was the prevailing wage rate per day in the locality? (Pesos) |
|--|-------|---------------------------|------------------------------------|---------------|--------------------------------------|------------------------------|------------------------------------|---------------|--------------------------------------|------------------------------|------------------------------------|---------------|--------------------------------------|------------------------------|------------------------------------|---------------|----------------------------|----------------------------|--------|--|--|
|  |       | How many days were spent? | How many hours per day were spent? | Total Mandays | How many persons worked in the farm? | On the average,              |                                    | Total Mandays | How many persons worked in the farm? | On the average,              |                                    | Total Mandays | How many persons worked in the farm? | On the average,              |                                    | Total Mandays | Total Payment (Pesos)      |                            |        |  |  |
|  |       |                           |                                    |               |                                      | how many days did they work? | how many hours per day were spent? |               |                                      | how many days did they work? | how many hours per day were spent? |               |                                      | how many days did they work? | how many hours per day were spent? |               | How much was paid in cash? | How much was paid in kind? |        |  |  |
| (1)  | (2)   | (3)                       | (4)                                | (5)           | (6)                                  | (7)                          | (8)                                | (9)           | (10)                                 | (11)                         | (12)                               | (13)          | (14)                                 | (15)                         | (16)                               | (17)          | (18)                       | (19)                       | (20)   | (21)   |  |
| 1. Farm site preparation   |       |                           |                                    |               |                                      |                              |                                    |               |                                      |                              |                                    |               |                                      |                              |                                    |               |                            |                            |        |  |  |
| 1.1. Installation of cultivation frames                                  | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 1.2. Cutting of grasses, removal of rocks, sea urchins & other predators | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 2. Seedling selection & preparation                                      | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 3. Hauling of seedlings  | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 4. Planting  | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 5. Care of crops   | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
| 6. Harvesting  | 1- M  |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |
|  | 2 - F |                           | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        |                                      |                              | · ____                             | · ____        | · ____                     | · ____                     | · ____ | · ____   |  |

NOTE: Col. 20 - Ask the total cost incurred for the provision of food (meals, snacks, refreshments) to exchange and hired farm laborers.

Col. 21 - Get the prevailing wage rate per day for all the activities performed by unpaid workers.

**F. LABOR INPUTS (in focus farm/area) ...continued**

| Activity                       | Sex   | Operator Labor            |                                    |               | Family Labor                         |                              |                                    |               | Exchange Labor                       |                              |                                    |               | Hired Labor                          |                            |                            |               |                       |      |      | How much was the total food cost incurred? (Pesos) | How much was the prevailing wage rate per day in the locality? (Pesos) |
|--------------------------------|-------|---------------------------|------------------------------------|---------------|--------------------------------------|------------------------------|------------------------------------|---------------|--------------------------------------|------------------------------|------------------------------------|---------------|--------------------------------------|----------------------------|----------------------------|---------------|-----------------------|------|------|--|--|
|                                |       | How many days were spent? | How many hours per day were spent? | Total Mandays | How many persons worked in the farm? | On the average,              |                                    | Total Mandays | How many persons worked in the farm? | On the average,              |                                    | Total Mandays | How many persons worked in the farm? | On the average,            |                            | Total Mandays | Total Payment (Pesos) |      |      |  |  |
|                                |       |                           |                                    |               |                                      | how many days did they work? | how many hours per day were spent? |               |                                      | how many days did they work? | how many hours per day were spent? |               |                                      | How much was paid in cash? | How much was paid in kind? |               |                       |      |      |  |  |
| (1)                            | (2)   | (3)                       | (4)                                | (5)           | (6)                                  | (7)                          | (8)                                | (9)           | (10)                                 | (11)                         | (12)                               | (13)          | (14)                                 | (15)                       | (16)                       | (17)          | (18)                  | (19) | (20) | (21)   |  |
| 7. Hauling of produced         | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| 8. Drying                      | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| 9. Packing                     | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| 10. Others (specify):<br>_____ | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| _____                          | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| _____                          | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| _____                          | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
| _____                          | 1- M  |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |
|                                | 2 - F |                           | •                                  | •             |                                      |                              | •                                  | •             |                                      |                              | •                                  | •             |                                      |                            | •                          | •             | •                     | •    | •    | •  |  |

NOTE: Col. 20 - Ask the total cost incurred for the provision of food (meals, snacks, refreshments) to exchange and hired farm laborers.

Col. 21 - Get the prevailing wage rate per day for all the activities performed by unpaid workers.



| G. OTHER PRODUCTION COSTS (in focus farm/area) |                                     |                      |                                     |                 |                               |  |                                      |  |  | H. PRODUCTION AND DISPOSITION (in focus farm/area)            |                      |       |
|--|-------------------------------------|----------------------|-------------------------------------|-----------------|-------------------------------|--|--------------------------------------|--|--|---|----------------------|-------|
| Item   | How much was spent in cash? (Pesos) | Imputed Cost (Pesos) | Non-cash costs                      |                 |                               |  |                                      |  |  | Item  | Quantity in kilogram |       |
|  |                                     |                      | What commodity was used as payment? | How many units? | What was the unit of measure? | What is the weight per unit in kilogram? | What was the price per unit? (Pesos) | What is the total quantity in kilogram? Col ( 5 x 7) | What is the total value? (Pesos) Col (5 x 8) |   | Fresh                | Dry   |
| (1)  | (2)                                 | (3)                  | (4)                                 | (5)             | (6)                           | (7)                                      | (8)                                  | (9)  | (10)   | (1)   | (2)                  | (3)   |
| 1. Salaries of employees (monthly)             | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 1. Area harvested: _ _ _ . _ _ _ _ ha.                        |                      |       |
| 2. Wage/share of caretaker (monthly)           | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 2. Production   | · _ _                | · _ _ |
| 3. Cooperative fees (annual)                   | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | On the average, 1 kilogram of dried seaweed is equivalent to: | · _ _                |       |
| 4. Rentals / rent free (per cropping)          |                                     |                      |                                     |                 |                               |  |                                      |  |  |   |                      |       |
| 4.1 Dryer                                      | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.Disposition   |                      |       |
| 4.2 Engine                                     | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.1 Sold  | · _ _                | · _ _ |
| 4.3 Boat                                       | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | Price/kg  |                      |       |
| 4.4 Tools and equipment                        |                                     | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | Fresh: P _ _ _ _ . _ _ _ _                                    |                      |       |
| 4.5 Others (specify)<br>_____                  |                                     |                      |                                     |                 |                               |  |                                      |  |  | Dry: P _ _ _ _ . _ _ _ _                                      |                      |       |
|  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.2 Harvesters' share   | · _ _                | · _ _ |
| _____  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.3 Caretaker's share   | · _ _                | · _ _ |
| 5. Fuel and oil (per cropping)                 | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.4 Other laborers' share                                     | · _ _                | · _ _ |
| 6. Transport cost of inputs (per cropping)     | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.5 For home consumption                                      | · _ _                | · _ _ |
| 7. License / permits (annual)                  | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.6 For seedlings   | · _ _                | · _ _ |
| 8. Interest payment on loan (annual)           | · _ _ _                             |                      |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.7 Given away  | · _ _                | · _ _ |
| 9. Others (specify)<br>_____                   |                                     |                      |                                     |                 |                               |  |                                      |  |  | 3.8 Harvested for seedling                                    | · _ _                | · _ _ |
|  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | Price/kg: P _ _ _ . _ _ _ _                                   |                      |       |
| _____  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.9 Wastage   | · _ _                | · _ _ |
| _____  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | 3.10 Others (specify):  |                      |       |
| _____  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | _____   | · _ _                | · _ _ |
| _____  | · _ _ _                             | · _ _ _              |                                     | · _ _           |                               | · _ _                                    | · _ _                                | · _ _  | · _ _  | _____   | · _ _                | · _ _ |

| <b>I. BUYER INFORMATION</b>  | <b>J. PROBLEMS ENCOUNTERED</b>  |       |             |                         |      |             |       |       |                  |       |       |                          |       |       |
|--|---|-------|-------------|-------------------------|------|-------------|-------|-------|------------------|-------|-------|--------------------------|-------|-------|
| <p>1. Who is your major buyer of produce? (Encircle code and indicate percent of production)</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>1 - Agent</p> <p>2 - Wholesaler</p> <p>3 - Wholesaler-retailer</p> <p>4 - Exporter</p> <p>5 - Assembler</p> <p>6 - Cooperative</p> <p>7 - Processor</p> <p>8 - Others (specify): _____</p> <p>_____</p> </div> <div style="width: 35%;"> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> <p>- _____ %</p> </div> </div>  | <div style="display: flex;"> <div style="flex: 1;"> <p>1. What are your problems encountered in the production of seaweed? (Encircle code/s)</p> <p>1 - Presence of sea obstacles, e.g. sea urchins, starfishes, rocks, dead corals, etc.</p> <p>2 - High cost of inputs and supplies</p> <p>3 - High cost of fuel and oil</p> <p>4 - Bad weather / natural calamities / strong waves</p> <p>5 - Lack of capital</p> <p>6 - Pollutants / siltation</p> <p>7 - Unavailability of good seedlings</p> <p>8 - Diseases like ice-ice, epiphytes, etc.</p> <p>9 - Others (specify): _____</p> </div> <div style="flex: 1;"> <p>2. What are your marketing related problems? (Encircle code/s)</p> <p>1 - Unstable prices</p> <p>2 - Rough roads / high transport cost</p> <p>3 - Low price of produce</p> <p>4 - No buyer / market outlet</p> <p>5 - Lack of marketing information</p> <p>6 - Others (specify): _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div> </div> |       |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| <b>K. ACCESS TO CREDIT</b>   | <b>L. OTHER INFORMATION</b>   |       |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| <p>1. Have you availed of any loan for seaweed production for 2007? (Encircle code)</p> <p style="margin-left: 40px;">1 - Yes                      2 - No, go to Block L</p> <p>2. How much loan did you avail of? P _____ . ____</p> <p>3. How much was the interest rate per annum? _____ . ____%</p> <p>4. Who / What was your source of loan? (Encircle code/s)</p> <p>1 - Cooperative</p> <p>2 - Bank</p> <p>3 - Private individual</p> <p>4 - Other lending institution (specify): _____</p>   | <p>1. Are you a member of seaweed related association? (Encircle code)      1 - Yes    2 - No, go to Item 2</p> <p>1.1 What is the name of the association? _____</p> <p>1.2 What are the benefits derived? _____</p> <p>2. Have you consulted / used advice of: (Encircle code/s)</p> <p>2.1 Government extension agents? 1 - Yes    2 - No                      if yes, specify service availed: _____</p> <p>2.2 Private agents?                      1 - Yes    2 - No                      if yes, specify service availed: _____</p> <p>3. What are your future plans regarding seaweed farm operation? (Encircle code)</p> <p>1 - Maintain current operation                      3 - Others (specify): _____</p> <p>2 - Expand                      _____</p> <p>4. What will you suggest to the government for the improvement of seaweed industry?</p> <p>_____</p> <p>_____</p>  |       |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| <b>M. INTERVIEW / SURVEY PARTICULARS</b>   |   |       |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center; padding-bottom: 10px;">Interviewer</th> <th style="width: 33%; text-align: center; padding-bottom: 10px;">Field Supervisor/Editor</th> <th style="width: 33%; text-align: center; padding-bottom: 10px;">PASO</th> </tr> </thead> <tbody> <tr> <td style="padding-top: 10px;">Name: _____</td> <td style="padding-top: 10px;">_____</td> <td style="padding-top: 10px;">_____</td> </tr> <tr> <td style="padding-top: 10px;">Signature: _____</td> <td style="padding-top: 10px;">_____</td> <td style="padding-top: 10px;">_____</td> </tr> <tr> <td style="padding-top: 10px;">Date Accomplished: _____</td> <td style="padding-top: 10px;">_____</td> <td style="padding-top: 10px;">_____</td> </tr> </tbody> </table> |   |       | Interviewer | Field Supervisor/Editor | PASO | Name: _____ | _____ | _____ | Signature: _____ | _____ | _____ | Date Accomplished: _____ | _____ | _____ |
| Interviewer  | Field Supervisor/Editor   | PASO  |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| Name: _____  | _____   | _____ |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| Signature: _____   | _____   | _____ |             |                         |      |             |       |       |                  |       |       |                          |       |       |
| Date Accomplished: _____   | _____   | _____ |             |                         |      |             |       |       |                  |       |       |                          |       |       |



Department of Agriculture

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