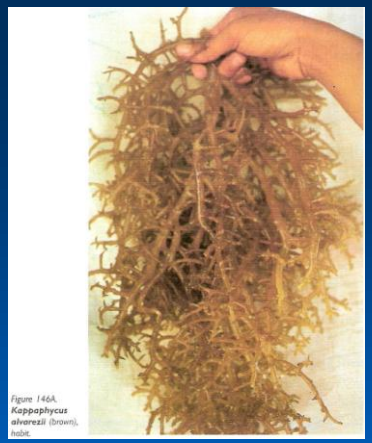
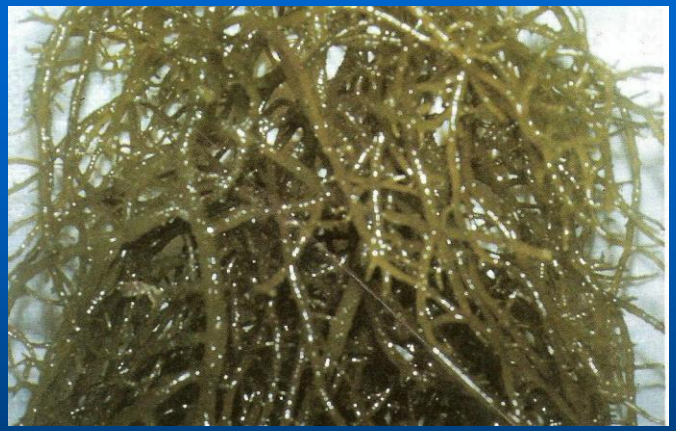
Republic of the Philippines
Department of Agriculture
BUREAU OF AGRICULTURAL STATITICS



Survey of Costs and Returns in Seaweed Production

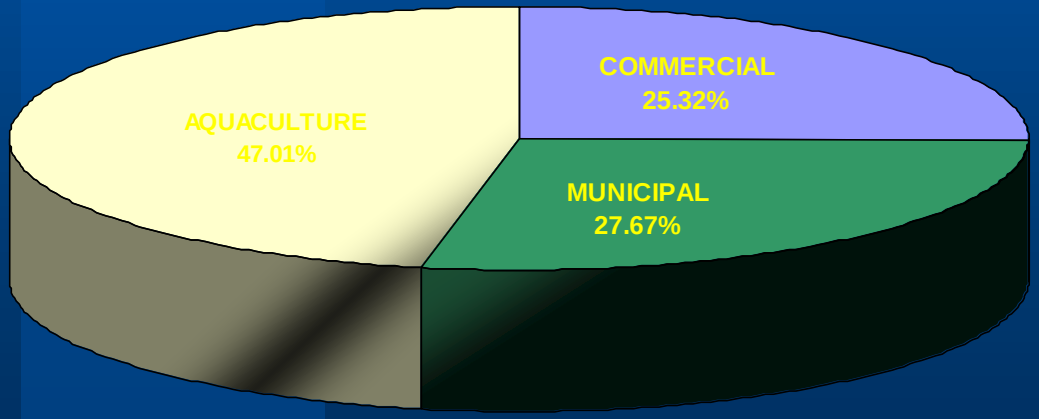


FISHERIES STATISTICS DIVISION

MARCH 2008

Rationale

- **In 2007, seaweed constitutes 68% of total aquaculture**



- **Aquaculture comprises 47% of total fisheries**

Rationale

- **Seaweed as food products**

- **Seaweed as fertilizer, animal feed, cosmetics additives**

Rationale

- CRS of seaweed shall address concern of planners and policy makers in setting up goals and program areas
- Agribusiness concern on profitability of seaweed production

Objectives

- To generate production costs and returns structure for seaweed

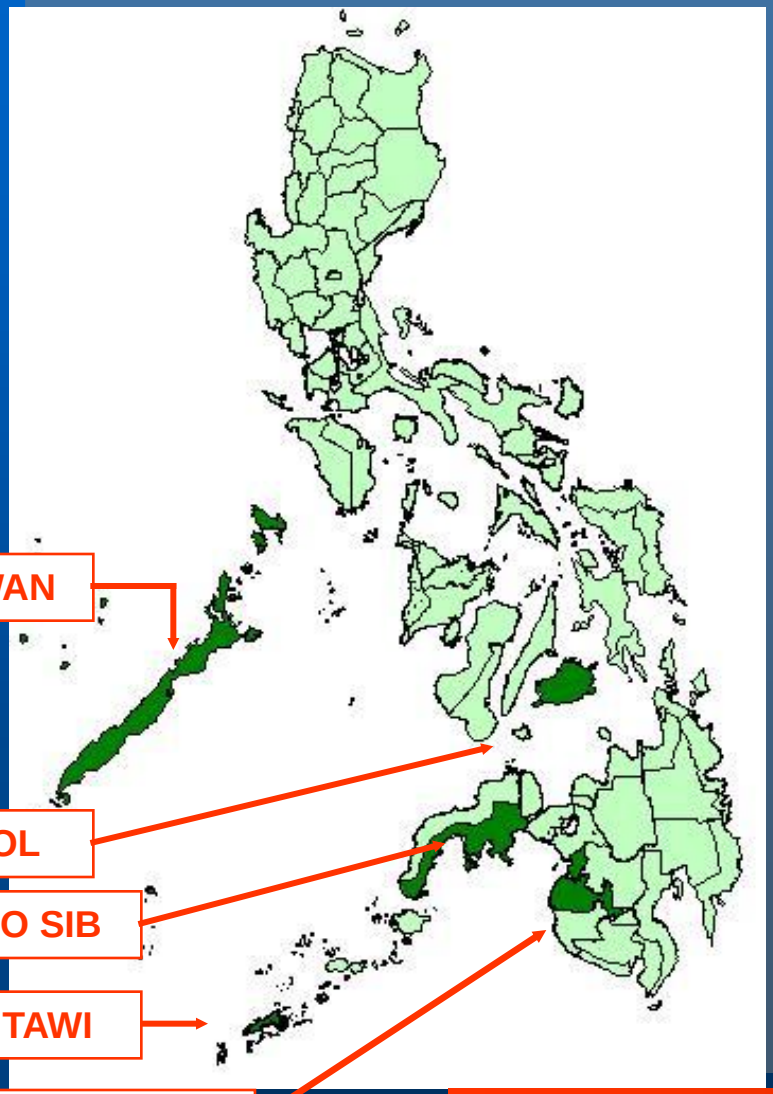
Specifically, study shall generate seaweed data on the following

- Cost of production
- Levels of material and labor inputs use
- Measure of production profitability
- Other socio-economic data

Reference period

- **Last production cycle completed in 2007**

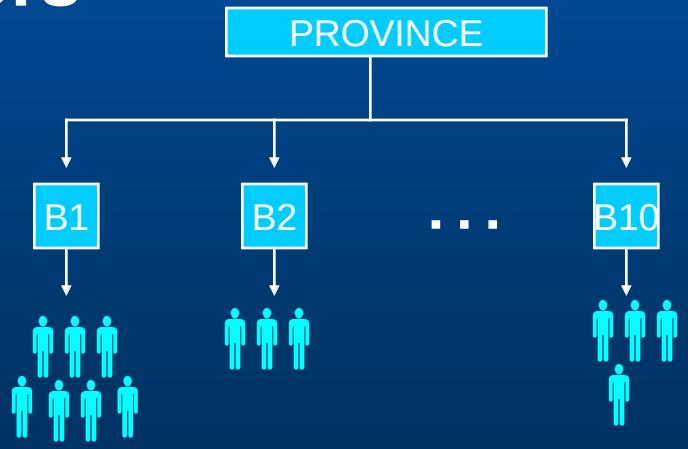
Methodology - Coverage



- **Survey shall be conducted in Palawan, Bohol, Zamboanga Sibugay, Maguindanao and Tawi-tawi.**
- **Domain of the study is province**

Methodology – Sampling Design

- Sampling frame shall be list of seaweed operators from Aquaculture Farms Inventory conducted prior to this activity
- 2 stage sampling design. Simple random sampling of 10 barangays with 90% cumulative share of harvested area then, snowball approach selection of seaweed operators
- Sample size of 50 operators in Zam Sib, Maguindanao and Tawi Tawi; 75 in Palawan and Bohol, allocated proportional to the no. of operators in brgy



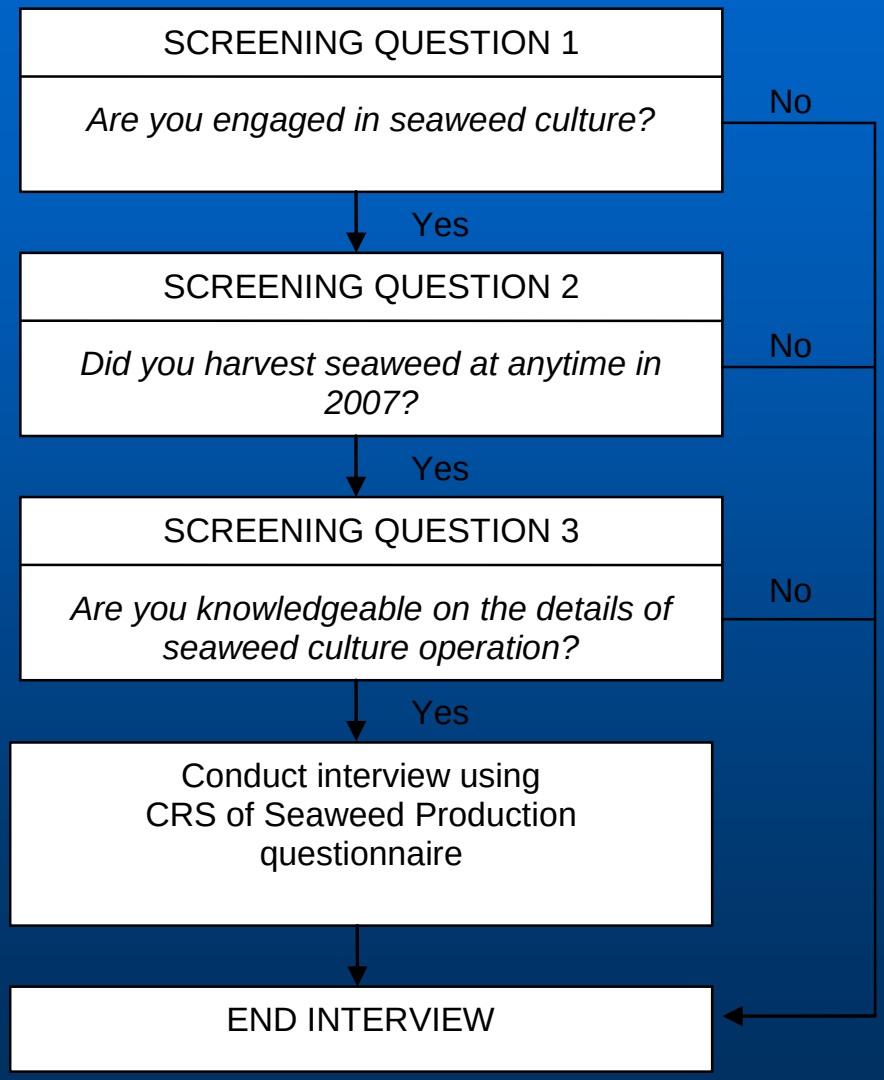
Methodology – Sampling Procedure

- **Selection of sample barangays and allocation of sample operators were done at SMRD**
- **The selected 10 sample barangays were cleared with the PASO**
- **The number of operators to be selected by barangay is also provided in the list.**

Methodology – Snowball Sampling

- Sample seaweed operator shall be located using snowball sampling
- Names and addresses of seaweed operators 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

Methodology – Snowball Sampling



Methodology – Snowball Sampling

- **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**

Republic of the Philippines
Department of Agriculture
BUREAU OF AGRICULTURAL STATISTICS
Quezon City

CONFIDENTIALITY

(Information contained herein shall be kept strictly confidential)

SURVEY OF COSTS AND RETURNS IN SEAWEED PRODUCTION

(LAST COMPLETED PRODUCTION CYCLE IN 2007)

A. GEOGRAPHIC INFORMATION (Location of Seaweed Farm)

1. Region: _____
2. Province: _____
3. City / Municipality: _____
4. Barangay: _____
5. Sitio / Purok: _____

B. SAMPLE IDENTIFICATION

1. Name of owner / operator: _____
2. Home Address of owner / operator: _____
3. Age (as of last birthday): _____ years old
4. Sex (Encircle code): 1 - Male 2 - Female
5. Highest educational attainment: _____
6. Main occupation: _____
   (Work that farmer/operator devoted most of his/her time)
7. Number of years engaged in seaweed production: _____ years
8. Name of respondent: _____
9. Contact number: _____
10. Relationship of respondent to owner / operator (Encircle code):
    1 - Owner / Operator 3 - Son / Daughter
    2 - Spouse 4 - Others (specify):_____

C. FARM CHARACTERISTICS

1. Total area of all seaweed farms: _____ . _ _ _ _ hectare
2. Number of seaweed farms: _____

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	____ . _ _ _ _			

3. Seaweed focus farm number[1/]: _____
   if there is focus area, what is the size? _____ . _ _ _ _ hectare
   What is the ratio of focus area to focus farm? ____. _ _ %
   3.1 Month planted: _____ 3.3 Number of croppings in 2007: _____
   3.2 Month harvested: _____ 3.4 Number of harvests/cropping: _____

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

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								
					ACQUISITION				DISPOSAL				
						How much was spent for							
	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)	How many units?	new acquisition / construction / assembly? (Pesos)	major repair / improvement? (Pesos)	How many years will it be useful or serviceable?	How many units were disposed?	How much? (Pesos)	How many units were lost / destroyed / damaged?	How much? (Pesos)	How many percent was it used in the focus farm / area?
(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								
					ACQUISITION				DISPOSAL				
						How much was spent for							
	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)	How many units?	new acquisition / construction / assembly? (Pesos)	major repair / improvement? (Pesos)	How many years will it be useful or serviceable?	How many units were disposed?	How much? (Pesos)	How many units were lost / destroyed / damaged?	How much? (Pesos)	How many percent was it used in the focus farm / area?
(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? (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) Col (3 x 5)	(8) 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, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	Total Payment (Pesos): How much was paid in cash?	Total Payment (Pesos): 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																			

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, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	Total Payment (Pesos): How much was paid in cash?	Total Payment (Pesos): 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): _____	1- M																			
	2 - F																			
_____	1- M																			
	2 - F																			
_____	1- M																			
	2 - F																			
_____	1- M																			
	2 - F																			
_____	1- M																			
	2 - F																			

G. OTHER PRODUCTION COSTS (in focus farm/area)

Item	How much was spent in cash? (Pesos)	Imputed Cost (Pesos)	Non-cash costs: 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)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Salaries of employees *(monthly)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
2. Wage/share of caretaker *(monthly)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
3. Cooperative fees *(annual)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
4. Rentals / rent free *(per cropping)*									
4.1 Dryer	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
4.2 Engine	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
4.3 Boat	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
4.4 Tools and equipment		. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
4.5 Others (specify)									
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
5. Fuel and oil *(per cropping)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
6. Transport cost of inputs *(per cropping)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
7. License / permits *(annual)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
8. Interest payment on loan *(annual)*	. _ _			. _ _		. _ _	. _ _	. _ _	. _ _
9. Others (specify)									
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _
_____	. _ _	. _ _		. _ _		. _ _	. _ _	. _ _	. _ _

H. PRODUCTION AND DISPOSITION (in focus farm/area)

Item	Quantity in kilogram: Fresh	Dry
(1)	(2)	(3)
1. Area harvested: ___. _ _ _ _ ha.		
2. Production	. _ _	. _ _
On the average, 1 kilogram of dried seaweed is equivalent to:	. _ _	
3. Disposition		
3.1 Sold	. _ _	. _ _
Price/kg		
Fresh: P_____ . _ _		
Dry: P_____ . _ _		
3.2 Harvesters' share	. _ _	. _ _
3.3 Caretaker's share	. _ _	. _ _
3.4 Other laborers' share	. _ _	. _ _
3.5 For home consumption	. _ _	. _ _
3.6 For seedlings	. _ _	. _ _
3.7 Given away	. _ _	. _ _
3.8 Harvested for seedling	. _ _	. _ _
Price/kg: P___ . _ _		
3.9 Wastage	. _ _	. _ _
3.10 Others (specify):		
_____	. _ _	. _ _
_____	. _ _	. _ _

I. BUYER INFORMATION

1. Who is your major buyer of produce? (Encircle code and indicate percent of production)
   - 1 - Agent - _____ %
   - 2 - Wholesaler - _____ %
   - 3 - Wholesaler-retailer - _____ %
   - 4 - Exporter - _____ %
   - 5 - Assembler - _____ %
   - 6 - Cooperative - _____ %
   - 7 - Processor - _____ %
   - 8 - Others (specify):
     - _____ - _____ %
     - _____ - _____ %

J. PROBLEMS ENCOUNTERED

1. What are your problems encountered in the production of seaweed? (Encircle code/s)
   - 1 - Presence of sea obstacles, e.g. sea urchins, starfishes, rocks, dead corals, etc.
   - 2 - High cost of inputs and supplies
   - 3 - High cost of fuel and oil
   - 4 - Bad weather / natural calamities / strong waves
   - 5 - Lack of capital
   - 6 - Pollutants / siltation
   - 7 - Unavailability of good seedlings
   - 8 - Diseases like ice-ice, epiphytes, etc.
   - 9 - Others (specify): _____
2. What are your marketing related problems? (Encircle code/s)
   - 1 - Unstable prices
   - 2 - Rough roads / high transport cost
   - 3 - Low price of produce
   - 4 - No buyer / market outlet
   - 5 - Lack of marketing information
   - 6 - Others (specify): _____

K. ACCESS TO CREDIT

1. Have you availed of any loan for seaweed production for 2007? (Encircle code)
   1 - Yes 2 - No, go to Block L
2. How much loan did you avail of? P_____ . __ __
3. How much was the interest rate per annum? _____ . __ __%
4. Who / What was your source of loan? (Encircle code/s)
   - 1 - Cooperative
   - 2 - Bank
   - 3 - Private individual
   - 4 - Other lending institution (specify): _____

L. OTHER INFORMATION

1. Are you a member of seaweed related association? (Encircle code) 1 - Yes 2 - No, go to Item 2
   - 1.1 What is the name of the association? _____
   - 1.2 What are the benefits derived? _____
2. Have you consulted / used advice of: (Encircle code/s)
   - 2.1 Government extension agents? 1 - Yes 2 - No if yes, specify service availed: _____
   - 2.2 Private agents? 1 - Yes 2 - No if yes, specify service 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 seaweed industry?

_____

_____

M. INTERVIEW / SURVEY PARTICULARS

	Interviewer	Field Supervisor/Editor	PASO
Name:	_____	_____	_____
Signature:	_____	_____	_____
Date Accomplished:	_____	_____	_____

A. GEOGRAPHIC INFORMATION

A. GEOGRAPHIC INFORMATION (Location of Seaweed Farm)

1. Region:	MIMAROPA		0	4
2. Province:	PALAWAN		5	3
3. City / Municipality:	AGUTAYA		0	2
4. Barangay:	ALGECIRAS	0	0	2
5. Sitio / Purok:				

Copy Region, Province, Municipality, Barangay and Sitio/Purok from the list of sample barangays and fill-up boxes with corresponding codes

B. SAMPLE IDENTIFICATION

B. SAMPLE IDENTIFICATION

1. Name of owner / operator: LOPEZ, ALFREDO
2. Home Address of owner / operator: Algeciras, Agutaya
3. Age (as of last birthday): 5 2 years old
4. Sex (Encircle code): (1) - Male 2 - Female
5. Highest educational attainment: 2nd year high school
6. Main occupation: Seaweed culture

   (Work that farmer/operator devoted most of his/her time)
7. Number of years engaged in seaweed production: 1 2 years
8. Name of respondent: LOPEZ, ALFREDO
9. Contact number: -
10. Relationship of respondent to owner / operator (Encircle code):

    (1) - Owner / Operator 3 - Son / Daughter

Refers to the person being interviewed. Write the complete name of the owner/operator in capital letters; contact number and encircle relationship to the owner/operator

C. FARM CHARACTERISTICS

C. FARM CHARACTERISTICS

1. Total area of all seaweed farms: 0 . 5 0 0 0 hectare
2. Number of seaweed farms: 2

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	0 . 2500	2	1	1
2	0 . 2500	2	1	2
3	.			
4	.			
5	.			

- VARIETY CODE
- CULTURE METHOD
- LOCATION CODE

Indicate the location code of the seaweed farm

VARIETY OF SEAWEED

1 - COTTONII

2 - ALVAREZII

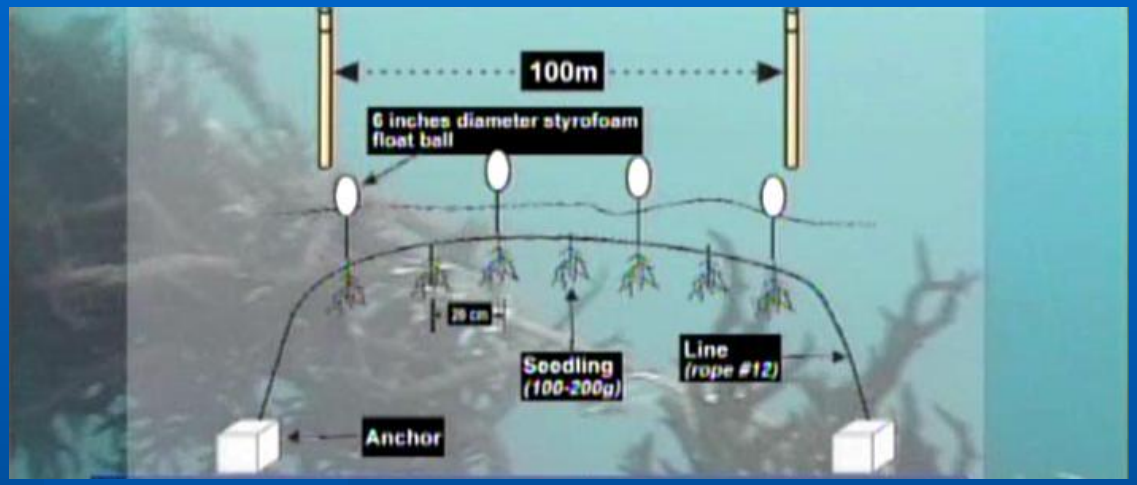
3 - GRACILARIA

4 - CAULERPA

5 - SPINOSUM

6 – OTHERS *(Specify)*

CULTURE METHOD

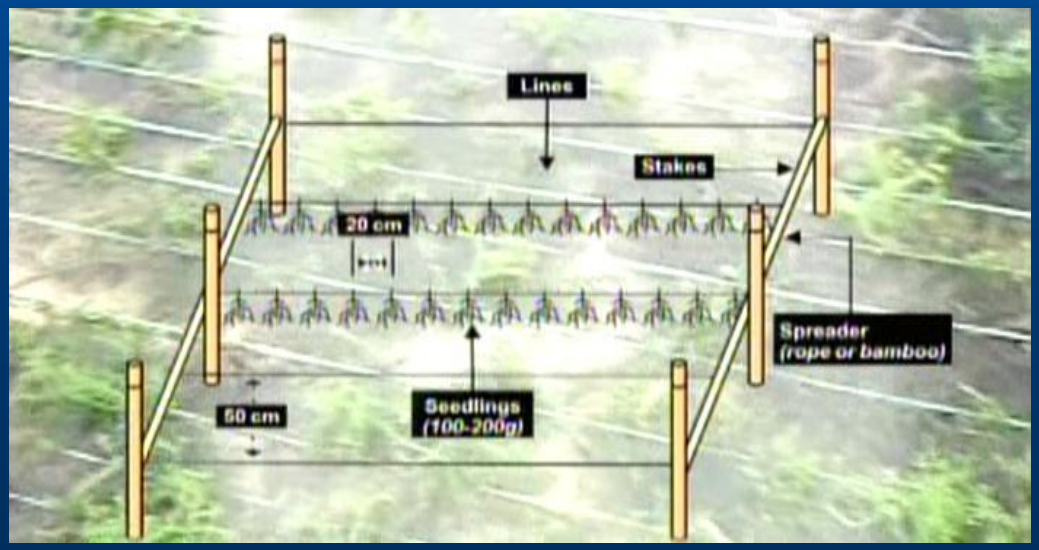


1 – FLOATING MONOLINE

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

2 – BOTTOM MONOLINE

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 monolines are stretched and tied to the stakes at 0.3-0.5 meter away from the bottom during low tide.



CULTURE METHOD

3 – 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.

4 – OTHERS (Specify)

LOCATION OF SEAWEED FARM

1 – Inside the barangay, inside the municipality

2 – Outside the barangay, inside the municipality

3 – Outside the municipality, inside the province

C. FARM CHARACTERISTICS

C. FARM CHARACTERISTICS

1. Total area of all seaweed farms: 0 . 5000 hectare
2. Number of seaweed farms: 2

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	0 . 2500	2	1	1
2	0 . 2500	[illegible]		
3	.			
4	.			
5	.			

record the number of focus farm as indicated in the table in previous item

3. Seaweed focus farm number[1/]: 1

   if there is focus area, what is the size? 0 . 0125 hectare

   What is the ratio of focus area to focus farm? 5 . 00 %

   3.1 Month planted: _____

   3.2 Month harvested: _____

   3.3 Number of croppings in 2007: _____

   3.4 Number of harvests/cropping: _____

FARM 1

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

FARM 2

FARM 1

FOCUS FARM

PLANTED & HARVESTED AT THE SAME TIME?
SAME VARIETY?
SAME CULTURE METHOD?

***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*

FARM 1

FOCUS FARM

Planted and harvested at the same time?
Same variety?
Same culture method?

YES

FARM 1

FOCUS FARM

=

FOCUS AREA

NO

FARM 1

FOCUS FARM

FOCUS AREA

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*

CONSIDER ONLY THE FOCUS FARM/AREA IN COLLECTING THE REST OF THE INFORMATION REQUIRED FOR THIS QUESTIONNAIRE

C. FARM CHARACTERISTICS

C. FARM CHARACTERISTICS

1. Total area of all seaweed farms: 0 . 5 0 0 0 hectare
2. Number of seaweed farms: 2

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	0 . 2500	2	1	1
2	0 . 2500	2	1	2
3	.			
4	.			
5	.			

3. Seaweed focus farm number[1/]: 1

   if there is focus area, what is the size? 0 . 0 1 2 5 hectare

   What is the ratio of focus area to focus farm? 5 . 0 0 %

   3.1 Month planted: Aug

   3.2 Month harvested: Oct

   3.3 Number of croppings in 2007: 3

   3.4 Number of harvests/cropping: 1

Ratio of focus area to focus farm is size of focus area divided by the physical area of the farm

D. FARM INVESTMENT

D. FARM INVESTMENT (in focus farm/area)

Item	BEGINNING INVENTORY AS OF JANUARY 1, 2007				JANUARY 2 - DECEMBER 31, 2007								
					ACQUISITION				DISPOSAL				
						How much was spent for							
	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)	How many units?	new acquisition / construction / assembly? (Pesos)	major repair / improvement? (Pesos)	How many years will it be useful or serviceable?	How many units were disposed?	How much? (Pesos)	How many units were lost / destroyed / damaged?	How much? (Pesos)	How many percent was it used in the focus farm / area?
(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			. – –							. – –		. – –	

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**

Include only inputs with **lifespan is more than 1 year**

D. FARM INVESTMENT

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):_____
	_____

Caretaker's house

Drying pad

D. FARM INVESTMENT

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 Goggles/Snorkeling mask

Banca

Goggles

D. FARM INVESTMENT

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)

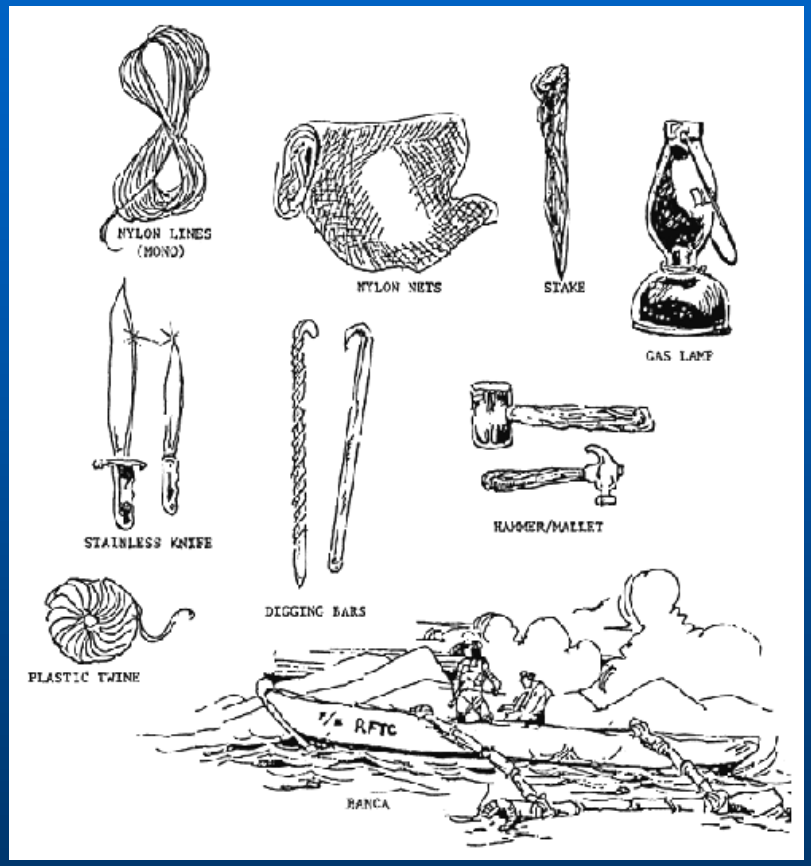
Monofilament #110 test lbs

Polyethylene rope # 6-7

Floater (styrofoam)

D. FARM INVESTMENT

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): _____
_____
_____



Tools and equipment

D. FARM INVESTMENT

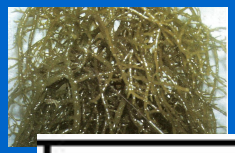
beginning inventory of investment items as of January 1, 2007

indicate the number of

ask the estimated number of years that each investment item is found useful/serviceable starting from the time of the interview

D. FARM INVESTMENT . . . continued

Item	BEGINNING INVENTORY AS OF JANUARY 1, 2007			
	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)
(1)	(2)	(3)	(4)	(5)
20 Cultivation frame				
20.1 Sinker/Anchor	12	2005	1200 . 00	2
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 (# ____)			. _ _	



D. FARM INVESTMENT

acquisition and disposal of investment items in 2007

JANUARY 2 - DECEMBER 31, 2007							
ACQUISITION				DISPOSAL			
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)	How m. units wer lost / destroyed / damaged?	How much? (Pesos)
	new acquisition / construction / assembly? (Pesos)	major repair / improvement? (Pesos)					
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2	300.0 0	-	5	-	-		

ask the number of items and estimated total value of investment lost/destroyed/damaged in 2007

D. FARM INVESTMENT

Farm machines, tools and equipment	How many percent was it used in the focus farm / area?
	(14)
8 Generator	
9 Engine	
10 Boat (banca)	50

...

Get some estimation as to the extent of use of each investment item for seaweed culture. Investment item may be used in other seaweed farm or other activities like farming and fishing

E. MATERIAL INPUTS AND SUPPLIES

E. MATERIAL INPUTS AND SUPPLIES (used in focus farm/area)

Item	What was the mode of acquisition? (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) Col (3 x 5)	(8) Col (3 x 6)
1 Seedling				. — —	. — —	. — —	. — —
2 Plastic / straw twine				. — —	. — —	. — —	. — —
3 Coconut palm					. — —		. — —
4 Sacks					. — —		. — —
5 Others (specify)				. — —	. — —	. — —	. — —
_____				. — —	. — —	. — —	. — —

This block aims to collect information on usage and cost of material inputs in seaweed culture. Include items that are used and good for the last production cycle only

E. MATERIAL INPUTS AND SUPPLIES

E. MATERIAL INPUTS AND SUPPLIES (used in focus farm/area)

Item	What was the mode of acquisition? (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) Col (3 x 5)	(8) Col (3 x 6)
1 Seedling	1	300	kg	1.00	24.00	300.00	2,400.00
2 Plastic / straw twine				.	.	.	.
3 Coconut palm					.		.
4 Sacks					.		.
5 Others (specify)				.	.	.	.

Total Value = Quantity used (Col 3) by the weight per unit (Col 5) and record the product in two (2) decimal places

F. LABOR INPUTS

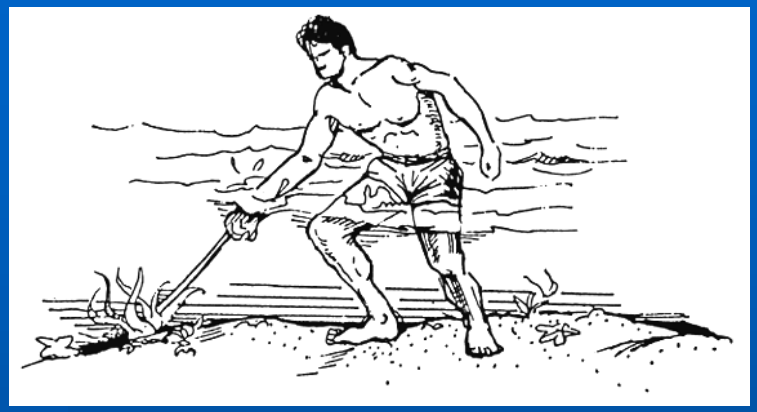
F. LABOR INPUTS (in focus farm/area)

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, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays	Total Payment (Pesos): How much was paid in cash?	Total Payment (Pesos): 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																			

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

F. LABOR INPUTS

F. LABOR INPUTS (in fo	
Activity	
(1)	
1.	Farm site preparation
1.1.	Installation of cultivation frames
1.2.	Cutting of grasses, removal of rocks, sea urchins & other predators
2.	Seedling selection & preparation
3.	Hauling of seedlings
4.	Planting
5.	Care of crops
6.	Harvesting



Farm site preparation

Seed selection and preparation

Care of crops

Harvesting

F. LABOR INPUTS

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

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

F. LABOR INPUTS (...us farm/area) ...continued

		Operator Labor			Family Labor			
	...x	How many days were spent?	How many hours per day were spent?	Total Mandays	How many persons worked in the farm?	On the average, how many days did they work?	On the average, how many hours per day were spent?	Total Mandays
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. Hauling of produced	1- M							
	2 - F							
8. Drying	1- M	3	2 0	0 75	2	3	2 0	1 50
	2 - F							

Manday = 8 hours of work, can be derived by [Col(6)XCol(7) X Col(8)]/8

F. LABOR INPUTS

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

	Exchange Labor				Hired Labor							
	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 much was the total food cost incurred? (Pesos)	How much was the prevailing wage rate per day in the locality? (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?		
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)

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

G. OTHER PRODUCTION COSTS

G. OTHER PRODUCTION COSTS (in focus farm/area)									
Item	How much was spent in cash? (Pesos)	Imputed Cost (Pesos)	Non-cash costs						
			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)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Salaries of employees *(monthly)*									
2. Wage/share of caretaker *(monthly)*									
3. Cooperative fees *(annual)*									
4. Rentals / rent free *(per cropping)*									
4.1 Dryer									
4.2 Engine									
4.3 Boat									

Record other production costs incurred during the reference period. The cost may be paid in cash (Col2), imputed (Col3) if use of items free of change and non-cash (Col4-10) if payment made was in kind. Amount for each item should be in the payment basis specified, i e, monthly, per cropping, etc. For payment basis other than specified, indicate the basis of payment used

H. PRODUCTION AND DISPOSITION (in focus farm/area)

Item	Quantity in kilogram	
	Fresh	Dry
(1)	(2)	(3)
1. Area harvested: 0.0125 ha.		
2. Production	650 00	. _ _
On the average, 1 kilogram of dried seaweed is equivalent to:	7 00	
3. Disposition		
3.1 Sold	600 00	. _ _
Price/kg		
Fresh: P 4 85		
Dry: P 34 00		
3.2 Harvesters' share	. _ _	. _ _
3.3 Caretaker's share	. _ _	. _ _
3.4 Other laborers' share	. _ _	. _ _
3.5 For home consumption	. _ _	. _ _
3.6 For seedlings	50 00	. _ _
3.7 Given away	. _ _	. _ _
3.8 Harvested for seedling	. _ _	. _ _
Price/kg: P___ . _ _		
3.9 Wastage	. _ _	. _ _
3.10 Others (specify):		
_____		

ask the price per kilogram of fresh and dried

Total disposition should be equal to the total production in Item 2

use the conversion rate in item(2) to obtain price of fresh seaweed

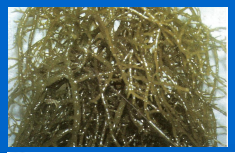
I. OTHER PRODUCTION COSTS

I. BUYER INFORMATION

1. Who is your major buyer of produce? (Encircle code and indicate percent of production)

1	Agent	-	_____ %
2	Wholesaler	-	_____ %
3	Wholesaler-retailer	-	_____ %
4	Exporter	-	_____ %
5	Assembler	-	_____ %
6	Cooperative	-	100 %
7	Processor	-	_____ %
8	Others (specify):		
	_____	-	_____ %
	_____	-	_____ %

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



J. PROBLEMS ENCOUNTERED

J. PROBLEMS ENCOUNTERED

1. What are your problems encountered in the production of seaweed? (Encircle code/s)

1 - Presence of sea obstacles, e.g. sea urchins, starfishes, rocks, dead corals, etc.
2 - High cost of inputs and supplies
3 - High cost of fuel and oil
4 - Bad weather / natural calamities / strong waves
5 - Lack of capital
6 - Pollutants / siltation
7 - Unavailability of good seedlings
8 - Diseases like ice-ice, epiphytes, etc.
9 - Others (specify): _____

2. What are your marketing related problems? (Encircle code/s)

1 - Unstable prices
2 - Rough roads / high transport cost
3 - Low price of produce
4 - No buyer / market outlet
5 - Lack of marketing information
6 - Others (specify): _____

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)".

K. ACCESS TO CREDIT

K. ACCESS TO CREDIT

1. Have you availed of any loan for seaweed production for 2007? (Encircle code)

   (1) - Yes 2 - No, go to Block L

2. How much loan did you avail of? P 5,000 00

3. How much was the interest rate per annum? 1 5 %

4. Who / What was your source of loan? (Encircle code/s)

   (1) - Cooperative

   2 - Bank

   3 - Private individual

   4 - Other lending institution (specify): _____

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

L. OTHER INFORMATION

L. OTHER INFORMATION

1. Are you a member of seaweed related association? (Encircle code) 1 - Yes 2 - No, go to Item 2
   - 1.1 What is the name of the association? Algeciras Seaweed Operators Association
   - 1.2 What are the benefits derived? Technical assistance
2. Have you consulted / used advice of: (Encircle code/s)
   - 2.1 Government extension agents? 1 - Yes 2 - No if yes, specify service availed: _____
   - 2.2 Private agents? 1 - Yes 2 - No if yes, specify service 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 seaweed industry?

   none

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

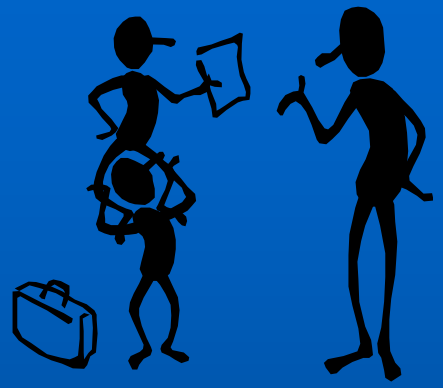
L. OTHER INFORMATION

M. INTERVIEW / SURVEY PARTICULARS

	Interviewer	Field Supervisor/Editor	PASO
Name:	_____	_____	_____
Signature:	_____	_____	_____
Date Accomplished:	_____	_____	_____

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

Survey Operation



- Field staff shall conduct the interview. RASO/PASO shall serve as supervisors

- Survey operation shall last for two (2) weeks

- Another week shall be allotted for field editing activity prior to submission of returns to CO

Data Processing and Analysis

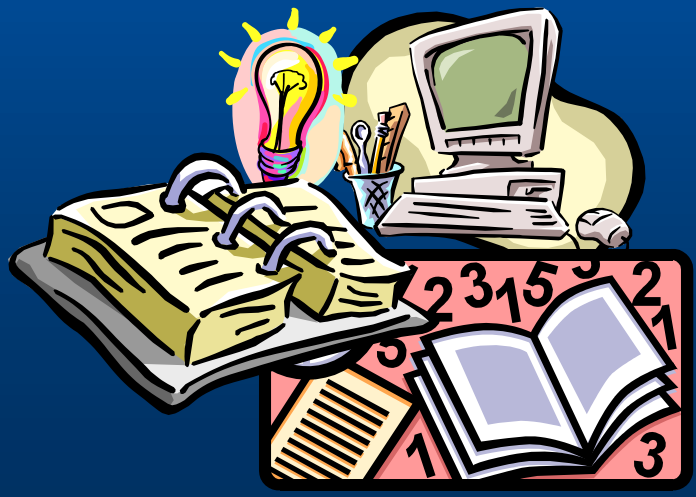
- **Data processing shall be done at CO using the Excel-based system used in previous CRS undertakings**
- **CO trainers shall be responsible in editing and encoding returns of their assigned provinces**
- **CO trainers shall also assist the Analysis Group in analysis and interpretation of results**

Presentation of Results

- **Results shall be presented to the management, member of TWG on Fisheries and representatives from concerned divisions to solicit comments and suggestions vital to the preparation of technical report**

Report Preparation

- **Final output of the project shall be a technical report prepared by the project management staff**



Timetable of Operation

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																							

THANK YOU VERY MUCH