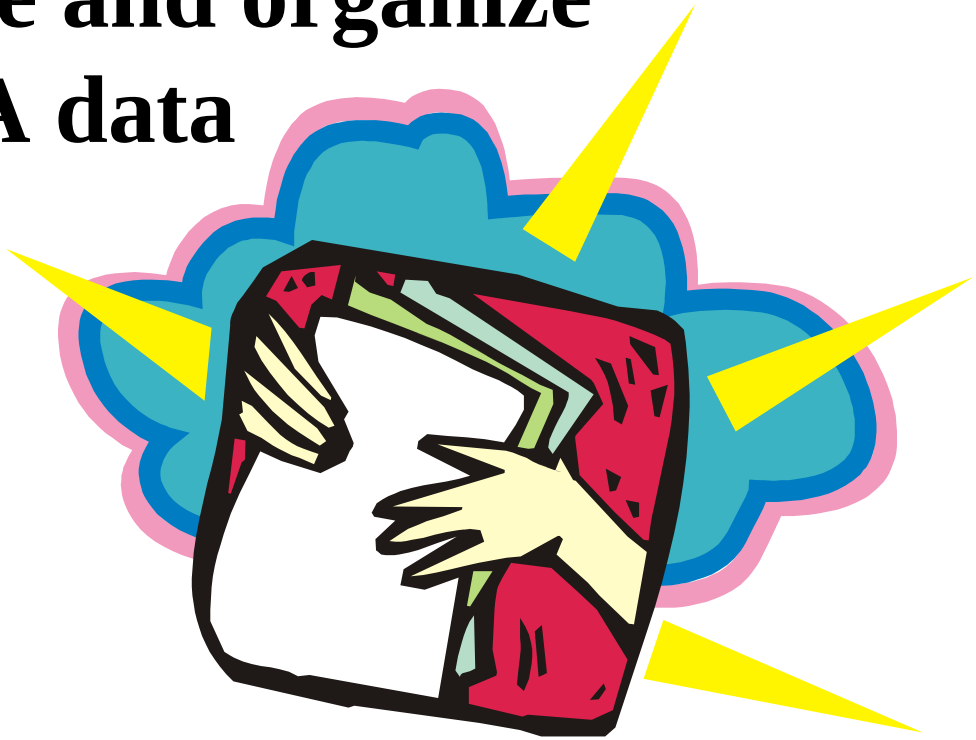
Lecture/Discussion #10:

How to analyze and organize PCRA data



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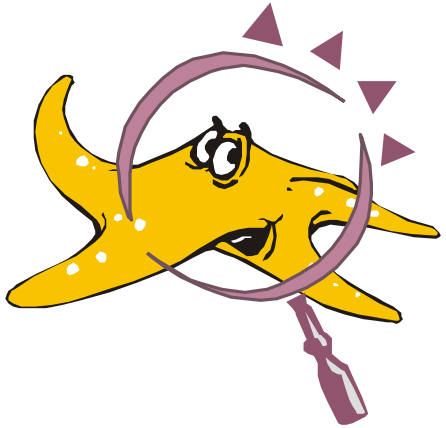


Key content points:

- With the volume of raw data gathered, there is a need to organize and process these data so that these could be presented in a summarized, orderly, and visual manner.
- Analyzed data from PCRA and secondary sources will serve as inputs to the development of the Coastal Environmental Profile which will then serve as basis for CRM Planning.

Guides in processing and analyzing data from different PCRA methods

1. Results of transect walk

- The group should consolidate their data gathered into one matrix making sure that each observation is validated by the group.

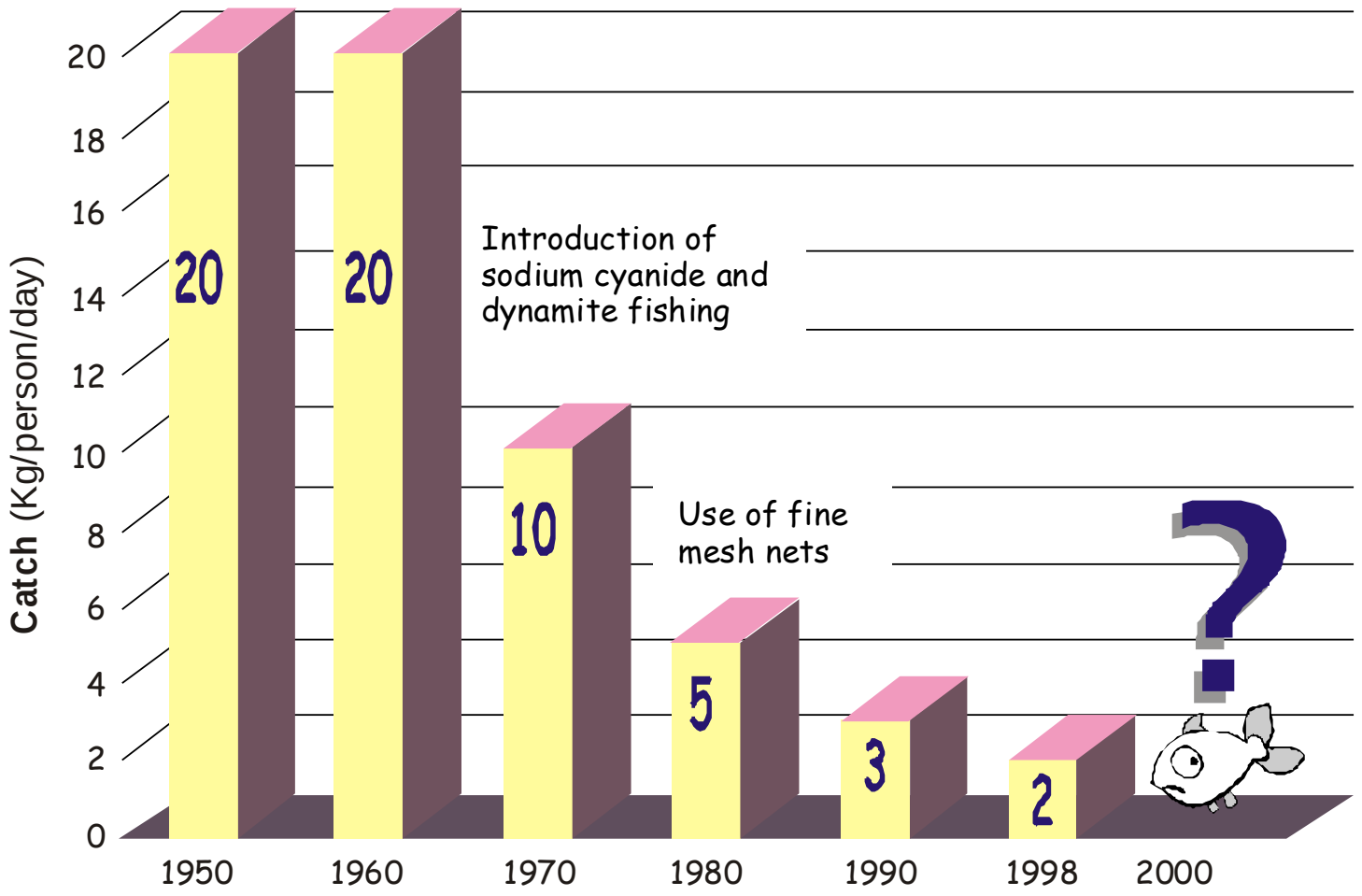
Habitat Management Parameter	Bakawan (mangrove)	Aplaya (beach)	Hunasan (tidalflat)	Damuhan (seagrass bed)	Bahura (reef/shoal)	Ilalim (deepwater)
Mga likas na kayamanan (natural resources)	Alimango, tamilok, shells, manla	Resort, shells, alimango (mangrove crab), pandan, niyog (coconut), nipa (nipa fruticans)	Hermit crab, tayong (sea urchin), babtan (sea cucumbers), shells, alimango (crabs)	Seaweeds, fish - danggit, gono, banak, pusit, banyaw-banyaw, bantol	Isda (finfish), pugita (octopus), shells, banagan (lobsters), babtan (sea cucumbers)	Isda (finfish)
Mga uri ng hanapbuhay, mga pagkakataon (types of livelihood, opportunities)	Pangisdaan (fishery), bahayan (place for houses), pantalan (pier location), gatong (firewood)	Harvest and sell above, gawan ng banig, etc. (making mats, etc.), coco products, pawid (roof shingles, wine)	Sell balatan (sea cucumbers, dried)	Harvest and sell above resources	Harvest and sell above resources	Harvest and sell above, fish deep reefs with compressor (not recommended)
Mga suliranin (problems/issues)	Bawal magputol (cutting is illegal), nik-nik (biting flies/midges)	Pagputol ng niyog (cutting of coconut trees)	Gleaning activities damage newly grown corals	More human disturbances of panti (gill net), bantol (stonefish)	Sodium cyanide fishing, blast fishing, tubli (poisonous root used to catch fish), lagtang (poisonous plant)	Trawlers, blast fishing, sodium cyanide fishing, tubli (poisonous root used to catch fish), lagtang (poisonous plant)

- Refer to other groups, e.g. the habitat assessment group for additional information of other coastal zonation like observations of the seagrass group on the condition of the area so that these could be incorporated in the matrix.

2. Results of field interviews, trend and calendar diagrams

- Data analysis will be more qualitative in nature.
- The use of percentages, frequencies, and averages could be presented if secondary data is available.
- If these type of data are gathered from estimates of the group and duly validated by the participants during the interview, it is important to note how these quantitative data were gathered.
- Community perceptions, like how resources have declined or increased over time are presented as **trend diagram**, and some seasonal activities and events are presented as **calendar diagram**.

Trend diagram of fish catch



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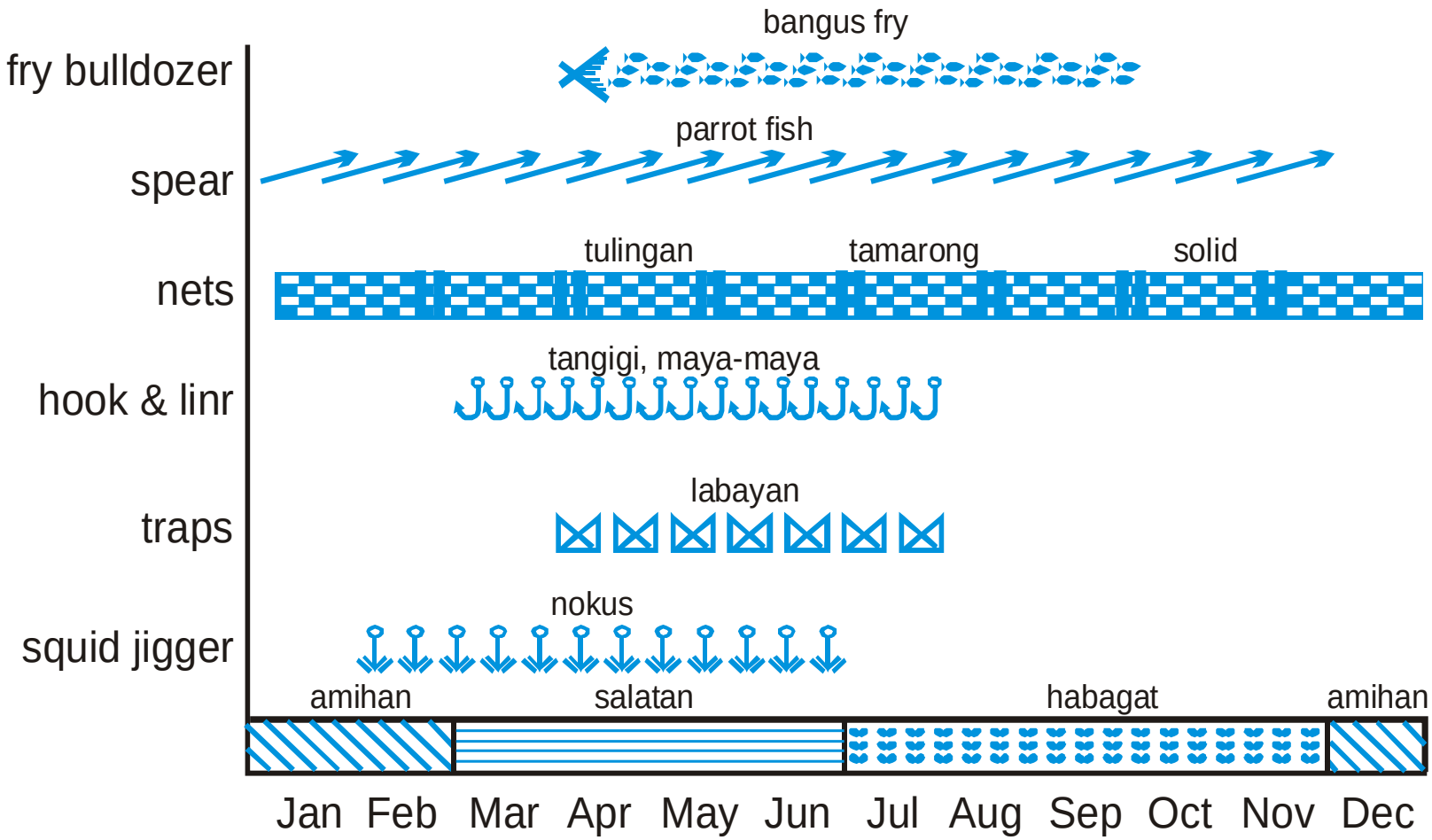
Calendar diagram on seasonality, fishing gear, and fish catch



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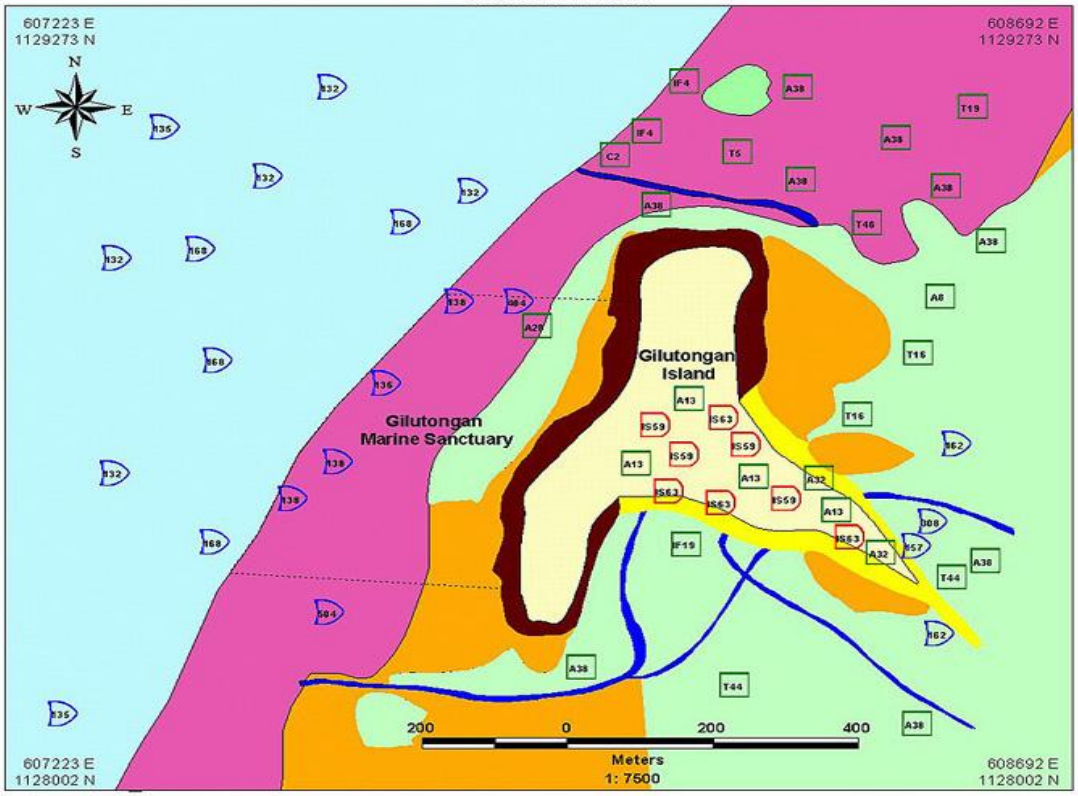
3. Results of community mapping

- The resource map is a consolidation of the information gathered from different PCRA methods.
- The output of the mapping activity will then be finalized by incorporating data that were gathered from the transect walk, coral, mangrove and seagrass assessment groups.
- By doing so, data discrepancies may be filled in and a more comprehensive data may be reflected in the map.
- Make sure that the legend is complete.
- Some efforts should be extended by the assisting organizations to provide some glossary of common English names equivalent to local names which most often vary from one place to another.

Coastal Resources

GILUTONGAN Island



Legend :

HABITATS

- Sandy beach
- Rocky shoreline
- Inshore flats
- Seagrass beds
- Coral reef
- Passes/channels
- Terrestrial zone
- Marine zone
- Fish sanctuary

RESOURCES

- 132 Flying fish
- 135 Garfish, needlefish
- 136 Goatfish
- 138 Groupers, seabasses, perchlets
- 157 Mullets
- 162 Rabbitfish, spinefeet
- 168 Scads
- 308 Conches
- 404 Mantis shrimps
- 504 Red algae

USES

- A8 Fish cages
- A13 Human settlements/ built-up areas
- A28 Protected areas (formal and informal)
- A32 Resorts
- A38 Seaweed culture
- C2 Compressors
- IF4 Explosives
- IF19 *Panlukos* (tuckseine) with torch and/or flammable substance
- T5 Bottom set gill nets
- T16 Filter nets
- T19 Fish shelters
- T44 Trap nets
- T46 Gleaning

ISSUES

- IS59 Lack of electricity
- IS63 Lack of potable water

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4. Results of coral reef habitat assessment

Snorkel survey method

CORAL REEF HABITAT ASSESSMENT
TRANSECT DATA PROCESSING

Getting the average % cover:

T no.	Q no.	LHC	LSC	DSC	CR	HRS	S	Total	Observations
1	1	20	20	0	10	30	20	100	Algae, reef fish
	2	20	20	0	10	30	20	100	Parrotfish, sea urchins
	3	5	20	0	25	10	40	100	Rubbles
2	1	20	20	0	10	20	30	100	Damaged corals due to anchor
	2	20	5	15	20	30	10	100	Seaweed farm
	3	20	20	10	30	20	0	100	-do-
3	1	15	5	20	20	30	100	100	-do-
	2	20	25	0	25	5	25	100	Sea urchins
	3	20	30	0	0	10	40	100	Seagrass

STEP 1: Take the averages of each component, per transect

T no.	Q no.	LHC	LSC	DSC	CR	HRS	S	Total	Observations
1	1	20	20	0	10	30	20	100	
	2	20	20	0	10	30	20	100	
	3	5	20	0	25	10	40	100	
		15.0	**20.0**	**0.0**	**15.0**	**23.3**	**26.7**	**100.00**	
2	1	20	20	0	10	20	30	100	
	2	20	5	15	20	30	10	100	
		20.0	**12.5**	**7.5**	**15.0**	**25.0**	**20.0**	**100**	
3	1	15	5	20	20	30	100	100	
	2	20	25	0	25	5	25	100	
	3	20	30	0	0	10	40	100	
		18.3	**20.0**	**6.7**	**15.0**	**15.0**	**25.0**	**100.00**	

STEP 2: Add the averages by component from each transect

	LHC	LSC	DSC	CR	HRS	S
	15	20	0	15	23.3	26.7
	20	12.5	7.5	15	25	20
	18.3	20	6.7	15	15	25
Total:	**53.3**	**52.5**	**14.2**	**45**	**63.3**	**71.7**

STEP 3: Divide the totals of the averages of each component by the number of transects in the survey

Total # of transects: 3	LHC	LSC	DSC	CR	HRS	S
	53.3/3	52.5/3	14.2/3	45/3	63.3/3	71.7/3

Average % cover:	LHC	LSC	DSC	CR	HRS	S	Total
	17.8	17.5	4.7	15	21.1	23.9	100

Adapted from: Municipality of Moalboal 2002.

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Habitat criteria rating chart for coral reefs

CONDITION	CRITERIA
Excellent	76-100% coverage live coral cover
Good	51-75% coverage live coral cover
Fair	26-50% coverage live coral cover
Poor	0-25% coverage live coral cover

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Manta tow method

Manta Tow Data Form

Site name: _____ Date: _____

Tow no.	Location	LHC	LSC	DSC	CR	HRS	S	Total
1	From church to house of Pepe	15	10	25	25	15	10	100
2	From Pepe's house to *balete* tree	10	10	30	15	30	5	100
3	From *balete* tree to Vina's Resort	20	15	10	10	10	35	100
4	From Vina's Resort to marine sanctuary guardhouse	30	20	10	10	20	10	100
5	From marine sanctuary guardhouse to school	35	20	10	15	10	10	100
6	From school to Mayor's house	20	15	15	10	15	25	100
7	From Mayor's house to Pablina's Resort	40	25	10	10	5	10	100
8	From Pablina's Resort to the "Cliff"	50	30	10	5	5	0	100
9	From the "Cliff" to "Tubod"	30	15	10	15	10	20	100
10	From "Tubod" to barangay wharf	15	5	30	25	10	15	100

Note: All figures in percent.

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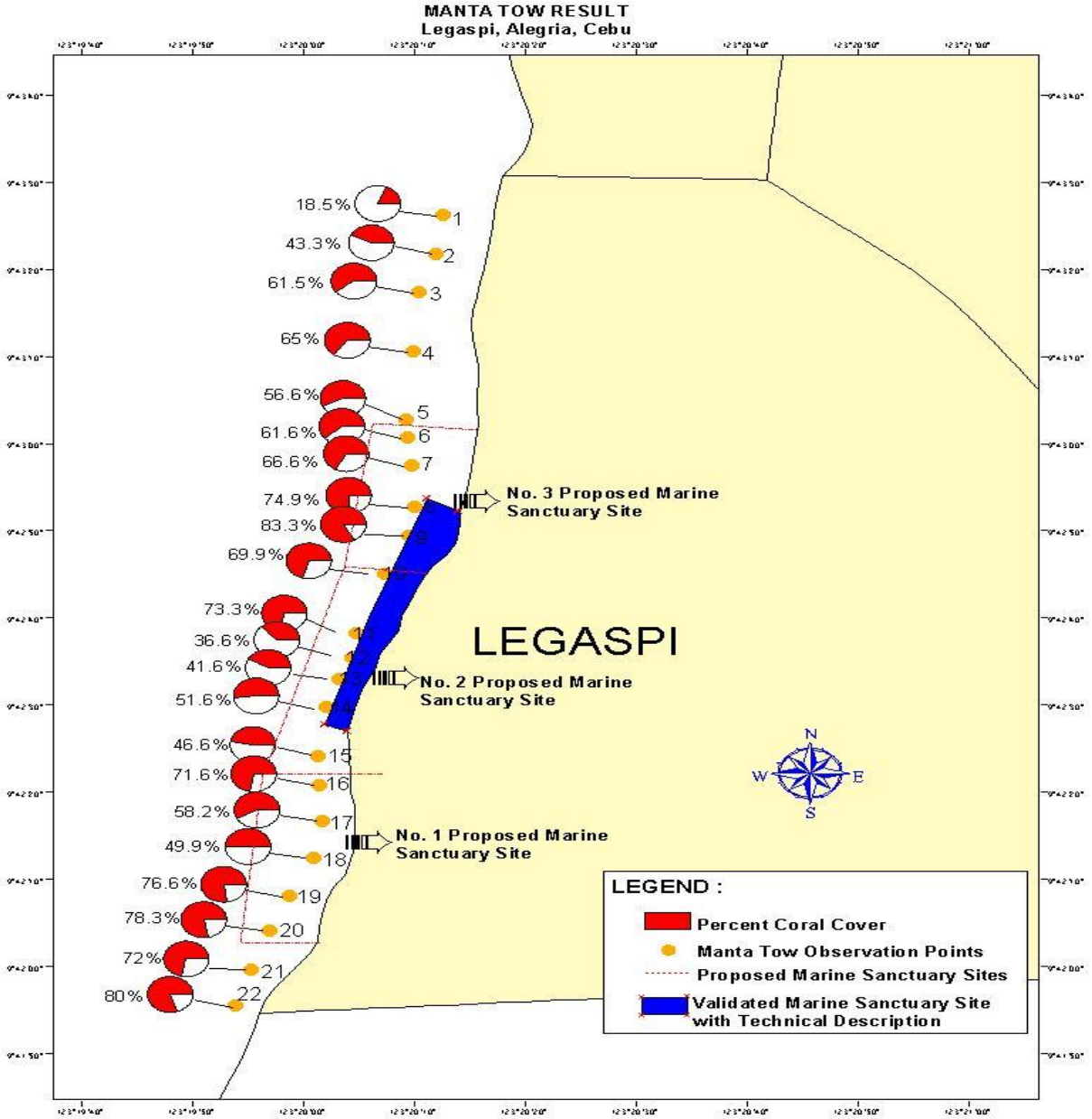

Score	% Cover	Symbol
1	0-10%	
2	11-30%	
3	31-50%	
4	51-75%	
5	76-100%	

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Point intercept method

POINT INTERCEPT METHOD DATA FORM

Site name: _____ Municipality/province: _____ Date: _____

Observer: _____ Transect no. 10 Depth: _____

Benthic lifeforms/coral reef components	Number of sampling points found	Estimated percentage cover
Live hard coral	卌 卌 卌 卌 卌 卌 卌 卌 II	21
Live soft coral	卌 卌 卌 I	8
White dead coral	--	0
Dead coral with algae	卌 卌 卌 卌 卌 I	13
Turf algae	--	0
Fleshy microalgae	卌 卌	6
Coralline algae	卌 I	3
Sponges	--	0
Other animals	卌 卌 卌 II	8.5
Seagrass	卌 卌	5
Rubble	卌 卌 卌 卌 卌	12.5
Rock	卌 卌 卌 卌 卌 III	14
Sand/silt	卌 卌 卌 III	9

To get the estimated percentage cover = $\frac{\text{42 live hard coral observed}}{\text{200 observation points}}$ = 21%

(50-m transect line with observation every 25 cm)

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POINT INTERCEPT METHOD DATA SUMMARY FORM

Site name: Gilutongan Marine Sanctuary								Municipality & province: CORDOVA, CEBU						
Zone/sector:	Outside							Inside						
Month and year:	November 1999							November 1999						
Transect no:	1	2	3	9	10			4	5	6	7	8		
Types/groups	Sub-total					Total	Avg.	Sub-total					Total	Avg.
Live hard coral	44.0%	28.0%	56.5%	41.0%	15.3%	184.8	37%	65.0%	58.5%	24.1%	42.5%	38.5%	228.6	45.7%
Soft coral	0.0%	0.0%	0.0%	0.0%	0.5%	0.5	0%	0.5%	0.0%	0.0%	0.5%	0.0%	1.0	0.2%
White dead coral	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	4.0%	6.5%	1.0%	11.5	2.3%
Dead coral with algae	4.0%	5.0%	9.0%	7.0%	2.6%	27.6	6%	9.0%	12.0%	13.6%	18.0%	12.0%	64.6	12.9%
Sponges	0.0%	0.0%	0.0%	0.5%	0.5%	1.0	0%	2.0%	1.0%	1.5%	2.0%	1.0%	7.5	1.5%
Other animals	0.0%	0.0%	0.0%	0.0%	0.5%	0.5	0%	1.0%	0.0%	1.5%	0.0%	0.5%	3.0	0.6%
Turf algae	0.0%	0.0%	7.5%	0.0%	0.0%	7.5	2%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5	0.1%
Fleshy macroalgae	11.5%	27.5%	0.0%	0.0%	0.5%	39.5	8%	0.0%	0.0%	0.0%	0.5%	0.0%	0.5	0.1%
Coralline algae	0.5%	0.0%	0.0%	0.0%	0.5%	1.0	0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5	0.1%
Seagrass	0.0%	0.0%	0.0%	0.0%	2.6%	2.6	1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0%
Rubble	6.0%	9.5%	6.5%	5.0%	0.5%	27.5	6%	9.5%	9.5%	17.1%	9.5%	14.0%	59.6	11.9%
Rock	14.5%	15.0%	9.5%	4.0%	6.6%	49.6	10%	8.0%	7.0%	5.5%	3.0%	2.0%	25.5	5.1%
Sand/silt	19.5%	15%	11.0%	42.5%	69.9%	157.9	32%	5.0%	12.0	32.2%	17.5%	30.5%	97.2	19.4%
Invertebrates														
Diadema	7	21	2	5	3	38	7.6	?	92	6	6	?	104	35
Sea cucumber	1	0	1	2	2	6	1.2	?	0	2	1	?	3	1

Source: Uychiaoco *et al.* 2001.

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5. Results of seagrass habitat assessment

SEAGRASS HABITAT ASSESSMENT
TRANSECT DATA PROCESSING

Getting the average % cover:

Transect no.	Quadrat no.	Species	% cover	Substrate	Other observations
1	1		0	Sandy	Shell, *bakay-bakay*
	2		0	Rocky	*Bakay-bakay*
	3	*Halophila*	25	Rocky, muddy	
	4		0	Sandy, muddy	
	5		0	Rocky	*Panas*
2	1		0	Sandy, rocky	
3	1		0	Sandy, rocky	Murky
	2	*Halodule*	12	Sandy, rocky	
	3	*Halodule*	55	Sandy, rocky	
	4	*Halodule*	40	Sandy, rocky	
	5	*Halodule*	25	Sandy, rocky	
		Thalassia	5		

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STEP 1: Take the average % cover of each transect by dividing the total per transect by number of quadrats

Transect no.	Quadrat no.	Species	% cover	Substrate	Other observations
1	1		0	Sandy	Shell, *bakay-bakay*
	2		0	Rocky	*Bakay-bakay*
	3	*Halophila*	25	Rocky, muddy	
	4		0	Sandy, muddy	
	5		0	Rocky	*Panas*
			25/5 = 5%		
2	1		0	Sandy, rocky	
			0/1 = 0%		
3	1		0	Sandy, rocky	Murky
	2	*Halodule*	12	Sandy, rocky	
	3	*Halodule*	55	Sandy, rocky	
	4	*Halodule*	40	Sandy, rocky	
	5	*Halodule*	25	Sandy, rocky	
		Thalassia	5		
			137/5 = 27.4%		

STEP 2: Add the averages from each transect.

	% cover
	5
	0
	27.4
Total:	32.4

STEP 3: Divide the totals of the averages of each component by the number of transects in the survey.

Total # of transects: 3

% cover
32.4/3

Average % cover:

% cover
10.8

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Status/ Classification	Criteria for Evaluation	Management Priority
Pristine seagrass beds	High or low species diversity bordering land masses or islands far removed from human habitations, disturbed only be the normal intensity of natural elements; often form thick assemblages in shallow waters	High priority for protection and management
Disturbed seagrass beds	High or low diversity beds occupying bays and coves, near human habitations; these beds receive constant impacts of human activities such as slight to moderate physical disturbance and various kinds of pollution that are not severe enough to eliminate or kill the seagrasses	High priority for minimizing the existing human impacts in the area
Altered seagrass beds	Low species diversity permanently and completely changed or converted in to other coastal uses like fish ponds, land fill or heavily impacted by sedimentation and physical damage	Low priority for management unless rehabilitation is still possible in area
Emergent seagrass beds	Low species diversity, largely controlled by extreme physico-chemico conditions such as low levels of salinity or variations thereof within the natural environment	Medium priority for management and conservation depending on controlling conditions

6. Results of mangrove habitat assessment

$$\text{Percent crown cover} = \frac{\text{Total crown cover of all trees}}{\text{Total area sampled}}$$

$$\text{Regeneration per m}^2 = \frac{\text{Total regeneration count}}{\text{Total no. of regeneration plots}}$$

$$\text{Average height} = \frac{\text{Total height of all trees recorded}}{\text{Total number of trees recorded}}$$

Condition	Criteria
Excellent	76% and above in % crown cover 1 regeneration per m^2 Above 5 m in average tree height Undisturbed to negligible disturbance
Good	51-75% crown cover <1 - 0.76% regeneration per m^2 <5m - 3m average height of trees Slight disturbance and few cuttings
Fair	26-50% crown cover 0.50 - 0.75 regeneration per m^2 <3m - 2m average height of trees Moderate disturbance and noticeable cuttings
Poor	0-25% crown cover <0.50 regeneration per m^2 <2m average height of trees Heavy disturbance/cuttings/pollution, rampant coversion to other uses, nearly destroyed

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DATA SHEET FOR MANGROVE ASSESSMENT

Transect no. 1

Recorder: Renclar de los Reyes

Date April 11, 2003

Location Mahayahay (Site) Duhaylungsod (Barangay) Talibon (Municipality) Bohol (Province)

Quadrat no.	Tree no.	Substrate	Species	Height (m)	Crown diameter (average of 2 readings*)	Observations (disturbance, threats, uses, cuttings, garbage, fauna)
1	1	Muddy	*Bakauan babae* (*Rhizopora mucronata*)	6	2	Crabs, birds, seasnake, undisturbed
	2	Muddy	*Bakauan lalaki* (*Rhizopora apiculata*)	5	1.5	
	3	Muddy	*Pagatpat* (*Sonneratia alba*)	6	2	
	4	Muddy	*Bakauan babae* (*Rhizopora mucronata*)	5	2	
	5	Muddy	*Bakauan lalaki* (*Rhizopora apiculata*)	4	1.5	
2	1	Muddy	*Pagatpat* (*Sonneratia alba*)	5	1.5	Shells, undisturbed
	2	Muddy	*Bakauan lalaki* (*Rhizopora apiculata*)	4	1	
	3	Sandy	*Bungalon* (*Avicennia marina*)	6	1.5	
	4	Sandy	*Piapi* (*Avicennia lanata*)	5	1.5	
			TOTAL	**46**	**14.5**	

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- Crown diameter (2 measures) - the average of the crown width at the widest point and a second width measurement made 90^{o} to the diameter at the widest point.

- Crown cover is calculated using the formula $\pi/4d^2$ or $0.7854d^2$ (d as the total crown diameter)

- To get the crown cover for each tree = 0.7854 x (crown diameter)^2

- To get the total crown diameter = $0.7854(2)^2 + 0.7854\ (1.5)^2 + 0.7854(2)^2 + 0.7854(2)^2 + 0.7854(1.5)^2 + 0.7854(1.5)^2 + 0.7854(1)^2 + 0.7854(1.5)^2 + 0.7854(1.5)^2$ = **19.04 m^2**

- To get percent crown cover :

$$\frac{\text{Total crown cover of all trees}}{\text{Total area sampled}} = \frac{19.04}{\text{2 quadrats x 100m}^2} = \frac{19.04}{200} = 9.53\%$$

- To get the average height = $\frac{\text{Total height of all trees recorded}}{\text{Total number of trees recorded}} = \frac{46}{9} =$ **5.11 m**

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DATA SHEET FOR MANGROVE REGENERATION

Transect no. 1

Recorder: Renclar de los Reyes

Date April 11, 2003

Location

Site	Barangay
Talibon	Bohol
Municipality	Province

Quadrat no.	Plot	Species	Count	Remarks (average height, status, etc.)
1	1	*Bakauan lalaki* (*Rhizopora apiculata*)	2	Other seedlings were not seen due to high tide
		Pagatpat (*Sonneratia alba*)	1.5	
	2	*Bungalon* (*Avicennia marina*)	2	
		Pagatpat (*Sonneratia alba*)	2	
	3	*Piapi* (*Avicennia lanata*)	1.5	
2	1	*Pagatpat* (*Sonneratia alba*)	1.5	
	2	*Piapi* (*Avicennia lanata*)	2	
	3	*Bungalon* (*Avicennia marina*)	1.5	

2

1

1

2

1

Regeneration per m² = $\frac{\text{Total regeneration count}}{\text{Total no. of regeneration plots}} = \frac{2+2+2+1+1+2+1+1}{6} = \frac{12}{6} = 2$

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RESULTS SUMMARY:

1. % crown cover = 9.53%
2. Average height = 5.11 m
3. Regeneration per m^2 = 2

Therefore, the mangrove area with the data used in the example above is in poor condition.

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7. Results of the fish visual census

FISH ABUNDANCE DATA FORM

Site: Tuka I (buffer zone)		Municipality and province: Kiamba, Sarangani			
Transect no.: 10	Depth (m):	Coordinates: 5°59.10' N, 124°36.71'E			
Date (month/day/year): 3/20/99	Time:	Left observer: Ben Banquil	Right observer: Andre Uychiaoco		
Habitat notes:		Horizontal visibility: (m): 3.5	Angle of slope: 15-20°	Transect orientation (NEWS): East	
Family	Species	Record number of fishes per size class			
		1-10 cm	11-20 cm	21-30 cm	Specify sizes for >30 cm
<EPINEPHELINAE> groupers, *lapu-lapu*		2			
Barramundi cod; *senorita*					
<LUTJANIDAE> snappers; *maya-maya*		12			
<HAEMULIDAE> sweetlips; grunts; *lipti*					
<LETHRINIDAE> emperors; *katambak*		1			
CARANGIDAE jacks; trevallies; *talakitok*					
CAESIONIDAE fusiliers; *dalagang bukid; solid*					
NEMIPTERIDAE coral breams; *silay*		4			
MULLIDAE goatfishes; *timbongan*		7	2		
BALISTIDAE triggerfishes; *pakol*		11			
CHAETODONTIDAE butterflyfishes; *alibangbang*		24			
POMACANTHIDAE angelfishes; *adlo*					
LABRIDAE wrasses; *labayan*		26			
Humphead wrasse; *mameng*					
[SCARIDAE] parrotfishes; *molmol*		4			
Bumphead parrotfish; *taungan*					
[ACANTHURIDAE] surgeonfish; *indangan*		33			
[SIGANIDAE] rabbitfishes; *kitong; danggit*			1		
[KYPHOSIDAE]* rudderfishes; *ilak*			1		
POMACENTRIDAE damselfishes; *peleta*		670			
ANTHIINAE fairy basslets; *bilang-bilang*		12			
Zanclus cornutus					
Moorish idol; *sanggowanding*					
sharks					
rays					
sea turtles					
others	cardinalfish filefish soldierfish flutemouth	6 3 3	1		

Legend: <fishes> = major reef carnivores; [fishes] = major reef herbivores; **fishes** = fishes which are indicators of hard corals

Source: Uychiaoco *et al.* 2001.

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DATA SUMMARY FORM

Site name: Tuka Reef (Barangay Poblacion)									Municipality and province: Kiamba, Sarangani								
Zone/sector:	Outside								Inside								
Month and year:	March 1999								March 1999								
Transect no.:	1	2	3	9	10				4	5	6	7	8				
Types/groups	Subtotal						Total	Ave.	Subtotal						Total	Ave.	
Groupers	5	0	2	3	2		12	2.4	5	2	3	2	6		18	3.6	
Snappers	5	0	1	2	13		22	4.4	3	7	4	1	1		16	3.2	
Sweetlips	1	0	0	1	0		2	0.4	0	0	0	0	0		0	0	
Emperors	0	0	2	0	1		3	0.6	16	0	5	1	1		23	4.6	
Jacks	0	0	1	2	0		3	0.6	0	0	1	10	1		12	2.4	
Fusiliers	13	0	0	35	0		48	9.6	0	0	1	0	0		1	0.2	
Spinecheeks	1	0	2	14	4		21	4.2	12	0	14	3	2		31	6.2	
Goatfishes	22	18	21	36	9		106	21.2	7	23	16	5	0		51	10.2	
Triggerfishes	33	20	41	36	11		141	28.2	9	15	21	34	27		106	21.2	
Butterflyfishes	82	43	54	49	24		252	50.4	21	55	50	24	58		208	41.6	
Angelfishes	26	16	21	15	0		78	15.6	9	45	20	12	4		90	18	
Wrasses	69	65	83	272	26		515	103	30	619	239	64	128		1080	216	
Parrotfishes	11	8	0	2	4		25	5	2	12	13	2	51		80	16	
Surgeonfishes	122	74	44	118	43		401	80.2	61	215	227	33	264		800	160	
Rabbitfishes	5	0	1	0	0		6	1.2	1	10	9	2	2		24	4.8	
Damselfishes	1032	1157	1420	617	670		4896	979.2	868	972	686	662	439		3627	725.4	
Fairy basslets	13	18	3	45	12		91	18.2	4	1	12	9	1		27	5.4	
Moorish idol	3	2	2	6	0		13	2.6	1	12	11	0	3		27	5.4	
Cardinalfishes	76	0	0	0	6		82	16.4	3	0	2	2	1		8	1.6	
Filefishes	3	0	7	0	3		13	2.6	0	0	0	7	2		9	1.8	
Soldierfishes	38	1	9	0	3		51	10.2	9	0	10	0	10		29	5.8	
Hawkfishes	3	2	0	0	1		6	1.2	0	0	5	0	0		5	1	

Source: Uychiaoco *et al.* 2001.

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FISH ABUNDANCE GRAPH

Fish type Visayan English	October 1998 Inside sanctuary	October 1998 Outside sanctuary	March 1999 Inside sanctuary	March 1999 Outside sanctuary	November 1999 Inside sanctuary	November 1999 Outside sanctuary	March 2000 Inside sanctuary	March 2000 Outside sanctuary	March 2001 Inside sanctuary	March 2001 Outside sanctuary
Lapu-lapu Grouper										
Labayan Wrasse										
Lipti Sweetlip										
Kalambak Emperor										
Solid Fusilier										
Timbungon Goatfish										
Silay Bream										
Alibangbang Butterflyfish										
Indanguan Surgeonfish										
Kilong Rabbitfish										
Bawtalo Needlefish										
Molmol Parrotfish										
Samok Mojarras										

Legend (fish observed per 500 m² survey area):

1 - 5 fish

6 - 25 fish

26 - 125 fish

126 - 625 fish

More than 626 fish

Sources: Coastal Resource Management Project (CRMP) / University of the Philippines - Marine Science Institute (UP-MSI). Community-based monitoring team includes representatives of the Municipality of Cordova, Barangay Gilutongan, DENR Region VII, BFAR Region VII, the University of San Carlos - Marine Biology Section (USC-MBS), and International Marinelife Alliance - Philippines.

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