4 Rhythm of the Sea

Chapter 2
ALL ABOUT PARTICIPATORY COASTAL RESOURCE ASSESSMENT
(Some Explanatory Notes)

Participatory coastal resource assessment, or PCRA, is a method of determining the status of the coastal environment in a given area with the help of local villagers. Through the PCRA process, both residents and outside facilitators are able to get a comprehensive picture or profile necessary for making plans and taking action towards the proper use of marine resources. For the benefit of local residents, we translated PCRA to *Sama-samang Pagsusuri ng Yamang Dagat*.

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The PCRA team in San Vicente took guidance from a handbook (Walters et al 1998). Since the process was new to us, however, the procedures evolved as we went along. We made good use of colorful visual aids to make it easier for fisherfolk to understand the process.

A typical day for us started with a boat ride at 8 a.m. to our destination, where we looked for our contact persons and scouted for a suitable venue. We quickly learned to be very flexible about the venue, which could be anywhere from a chapel to someone's yard in front of the beach. Before we could start the PCRA process, we usually had to wait

PARTICIPATORY COASTAL RESOURCE ASSESSMENT

- **First step towards the management and protection of coastal resources**
- **A process that values the views, opinions and knowledge of coastal resource users**

Interview

Mapping

Habitat assessment

Figure 2.1. The Participatory Coastal Resource Assessment process.

until the fishers arrived from the sea, sold their catch, and had breakfast. Three basic activities were undertaken: resource mapping, group interviews, and habitat assessment (Figure 2.1).

RESOURCE MAPPING

Resource mapping involves placement of vital coastal data on a 1:20,000 scale map of each barangay. In San Vicente, four types of data were used: location of coastal habitats, resources, uses, and issues. **Habitats** were drawn on the map using a color coding system to illustrate the eight kinds of habitat: yellow for sandy beaches, brown for rocky shoreline, orange for inshore flats, dark green for mangroves, blue for estuary, dark blue for passes or channels, light green for seagrass, and red for coral reefs (Figure 2.2).

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Next, the fishers named the most abundant fish and other **resources**

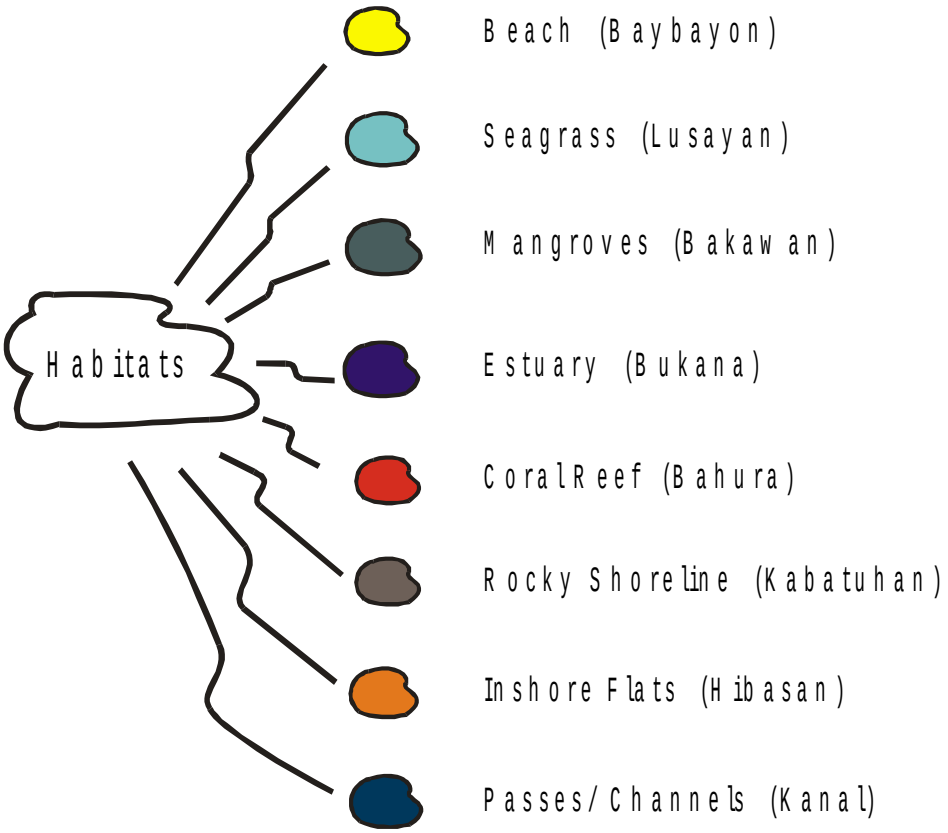


Figure 2.2. Habitats identified by the PCRA participants in San Vicente, 1997.

found in their coastal territory. These resources were given numbers, which the participants placed on the map according to the location of each resource (Figure 2.3).

The fishers then described the fishing methods they employed and the other **uses** they had for coastal resources. Again, they marked these on the map, this time with the use of letters as symbols. Finally, they identified the most pressing and relevant **issues** facing the community, using Roman numerals to mark the areas on the map where such issues occurred.

After the mapping session, the same participants completed **Transect Diagrams**

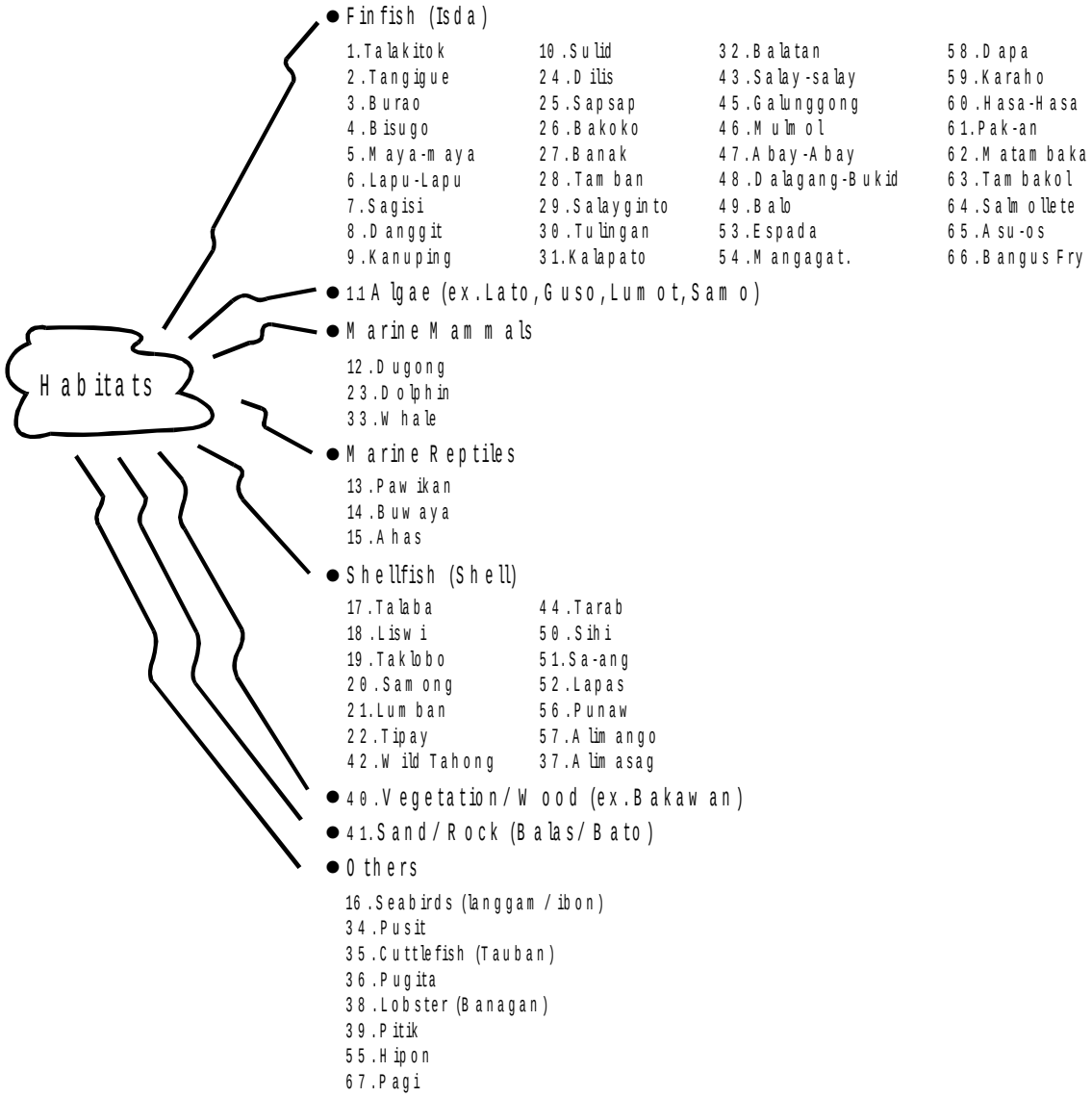


Figure 2.3. Coastal resources identified by the PCRA participants in San Vicente, 1997.

(Figure 2.4) that showed the resources, uses, and issues in relation to various habitats. The PCRA team discovered that it was easier and less time-consuming for the participants if one facilitator completed the diagram while the resource mapping was being done. The fishers also prepared **Calendar Maps** showing monthly rainfall and wind patterns and depicting the seasonal use of fishing gear (Figure 2.5). Finally, they took a trip back in time, usually to the year when they first settled in the village, to come up with a **Trend Map** showing fish catch through the years (Figure 2.5).

GROUP INTERVIEWS

Given the short time available, we found it difficult to do random interviews. So, instead of going from house to house, we gathered together PCRA participants for group interviews.

Group interviews proved to be effective in getting critical data, such as number of households, household size, availability of social services, sources of livelihood, land and boat ownership, seasonality of fishing gear, activities of women, marketing of fish catch, sources of credit, and issues and problems faced by the community. The familiarity of the villagers with each other made it easier for them to confirm or challenge the responses of participants to the questions asked during the interviews. Most participants were female, many of them with children in tow.

HABITAT ASSESSMENT

After the resource mapping and group interviews, most of the participants got together to evaluate four coastal habitats in their village according to a simplified set of criteria (Figure 2.6). Since the residents were familiar with their area, it was easy for them to assess the condition of these habitats. Disagreements were rare in this session, which served as an eye-opener to many residents who used to take their environment for granted. Data for beaches, mangroves, and seagrass were recorded, and the assessment of coral reefs was validated through field exercises.

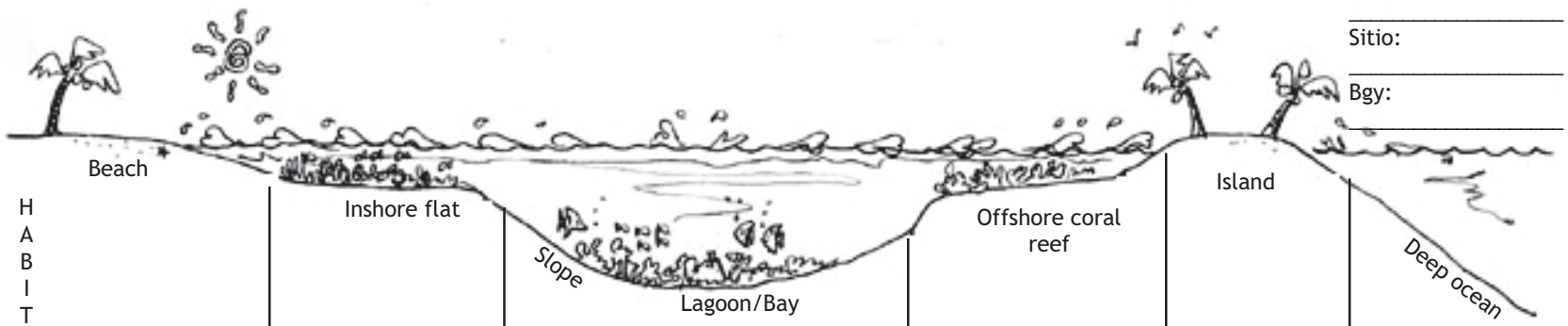
Since the residents were familiar with their area, it was easy for them to assess the condition of these habitats.

Volunteers helped the PCRA team identify a large section of the coral reef in the area, and later accompanied some members of the team in checking the condition of the corals through snorkel observation. The snorkelers surveyed 10 designated underwater stations, examining a one-

Date: _____

Sitio: _____

Bgy: _____



HABITAT						
RESOURCES						
USES						
ISSUES						

Figure 2.4. Basic format for transect diagrams.

square meter patch of corals at each stop (Figure 2.7). On a waterproof slate they recorded the percentage of sand, rubble, rock, dead standing coral, live hard coral, and soft coral found in each station. Later, they computed the average for all 10 stations to come up with a figure that represented the approximate condition of the reef (Figure 2.8).

In preparation for the implementation of PCRA in the barangays, a two-day training was held in the San Vicente poblacion for leaders of fishers' associations and other key persons in the coastal villages. During the training, Hector Mandal of the Strategic Environmental Plan-San Vicente Project (SEP-SVP) presented the latest statistics on coastal resources and general information about the municipality. Ma. Fe Divinagracia summarized the results of marine surveys conducted in May 1996 by Silliman University for CRMP. Consultant Susan Gavino of the Environmental Education and Communication Project, also funded by USAID, presented the findings of a study on environmental awareness among local government officials in Palawan. CRMP Coordinator Alan White provided an overview of coastal resource management and explained the vision and goals of CRMP. Consultants Jim Maragos and Susan Siar of

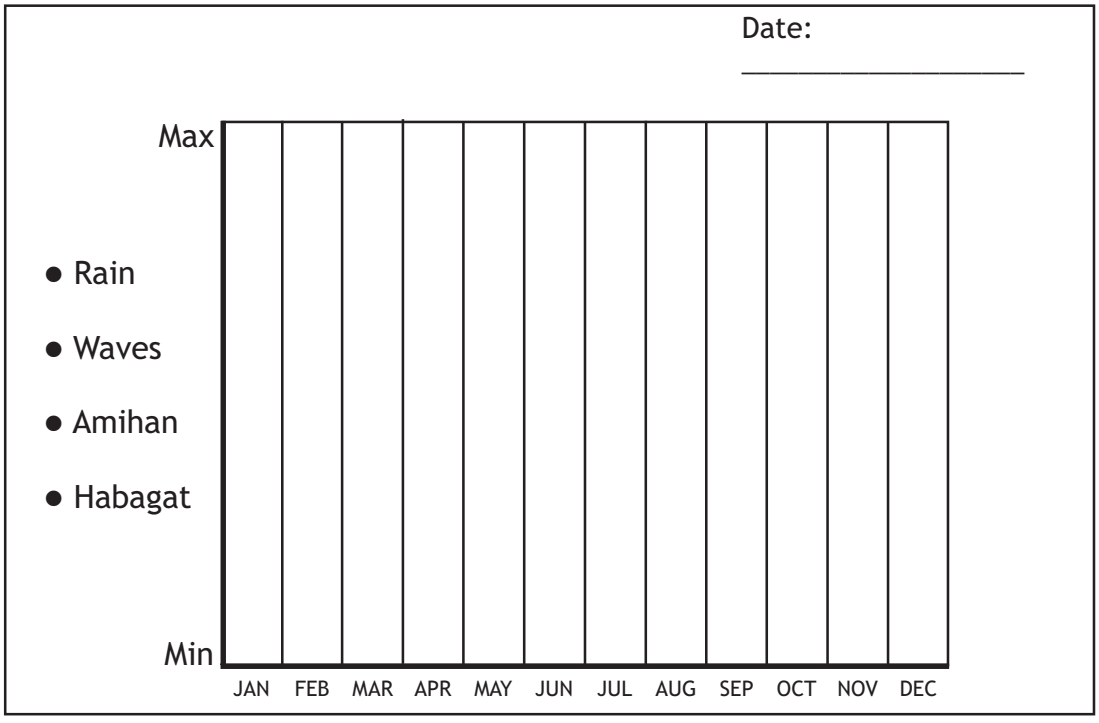


Figure 2.5. Basic format for trend and calendar maps. This is used to plot rainfall and wind patterns, seasonal use of fishing gear, fish catch and other relevant trends.

The level of participation was very high, resulting in quality information. This is reflected in the barangay resource maps produced and the contents of this profile.

CORIAL conducted a "mini-PCRA" and explained the entire process. Actual resource assessment was conducted in Boayan Island the following day.

The PCRA team was heartened by the enthusiasm of coastal villagers. At first we were a bit apprehensive that participants would not be willing to reveal sensitive information, such as the location of coral reefs, which amounted to intellectual property for some of them. But we experienced very few occasions when the fishers showed reluctance in putting everything they knew on the map. In general, the level of participation was very high, resulting in quality information. This is reflected in the barangay resource maps produced and the contents of this profile.

CONDITION (Kalagayan)	BEACH (Baybayin)	SEAGRASS (Lusayan)	CORAL REEF (Bahura)	MANGROVE (Bakawan)
Excellent (Pinakamaganda)	Undisturbed wide beach (Hindi nagalaw, malapad)	76-100% Live seagrass, no sediment (Buhay na lusay, walang burak)	76-100% Cover live coral (Buhay na bahura)	76-100% No cutting or disturbance (Walang pagputol na ginagawa)
Good (Maganda)	Undisturbed narrow beach (Hindi nagalaw, hindi malapad)	51-75% Suspended sediments only (May burak na nakalutang sa tubig)	51-75% Cover live coral (Buhay na bahura)	51-75% Cutting for firewood, poles (Pinuputol para panggatong, pagpapatayo ng bahay)
Fair (Katamtaman)	Some pollution, erosion, fallen trees (May dumi, natumbang kahoy)	26-50% Seasonal sedimentation on bottom (Binabaha kung minsan, kulay putik ang tubig at ilalim)	26-50% Cover live coral (Buhay na bahura)	26-50% Fishponds (Ginagawang palaisdaan)
Poor/Low (Hindi maganda/ sira)	Heavy pollution, seawalls, major erosion, modification (Sobrang dumi, maraming pagbabago)	0-25% Permanent sedimentation on bottom (Kulay putik na talaga, ex. pier)	0-25% Cover live coral (buhay na bahura)	0-25% Land or trees removed, reclamation (Pinutol ang mga kahoy)

Figure 2.6. Simplified set of criteria for habitat assessment.

Station	Sand (Buhangin)	Rubble (Durog)	Rock (Malaking bato)	Dead Standing Coral (Patay na Bakawan)	Hard Living Coral (Buhay na Bakawan)	Soft Coral (Malambot)	TOTAL (%)	REMARKS
1	50			50			100	
2	25		25	50			100	
3		50	50				100	
4				100			100	
5								
6								
7								
8								
9								
10								
TOTAL (%)								

Figure 2.7. Habitat assessment recorded on snorkeling slate.

SUBSTRATE SHEET

(Percent Cover)

Location: Panindigan
Transect: 10 station/observer
Method: Systematic snorkeling
Transect No.:

Recorder: Alan White, Paul Sgarlato, Ma. Fe Divinagracia
Date: Feb. 17, 1997
Tide:
Weather: Sunny/Slight wind
Water Visibility: 2-3 m

Depth	1	2	3	Mean
Substrate				
Sand & Other	10	18	30	19.3
Coral Rubble	Ø	21	5	8.7
Rock & Block	36	1	27	21.3
Dead Standing Coral	1	37	5	14.3
Total Sediment	47	77	67	63.7
Hard Coral	53	23	33	36.3
Soft Coral	Ø	Ø	Ø	Ø
Total Coral	53	23	33	36.3
Seagrasses				
Algae	/			
Sponges				
Total	drastic changes in depth from 5 m to 2.5 m			
Notes	Large areas of coral changing to mushroom coral to rock to sand			

Figure 2.8. Substrate sheet showing approximate condition of the reef.