



National Integrated
Protected Areas Programme
A special project of the DENR supported by the European Union



Results of a Baseline Survey
conducted in 1997 among communities
living within and around
Mt. Guiting-guiting Natural Park,
Romblon, Philippines



July, 1999



National Integrated Protected Areas Programme (NIPAP)

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in collaboration with the
Foundation of the Philippine Statistical Association

July 1999

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A BACKGROUND AND METHODOLOGY

The overall objective of National Integrated Protected Areas Programme (NIPAP) is to help protect, conserve, and manage natural habitats and biodiversity in eight selected Protected Areas in the Philippines. The Programme is financed through a grant from the European Union with a progressively increasing contribution from the Philippine Government. The Executing Agency is the Department of Environment and Natural Resources (DENR) and in particular the Protected Areas and Wildlife Bureau (PAWB).

In line with the "National Integrated Protected Areas System Act" of 1992 (Republic Act 7586, also known as the NIPAS Act), the implementation strategy of the Programme calls for active participation of the local communities in the planning and implementation of programmes for the protection and conservation of habitats and biodiversity. NIPAP considers that a thorough understanding of local people's knowledge, perceptions and practices, and in particular their relationships with the natural resources, forms the basis for community-based Protected Area (PA) planning. The process is iterative and progressive and is expected to enhance the empowerment of local disadvantaged groups, the integration of local knowledge and traditional resources management systems into PA management design and to represent a two-way learning process between outsiders and insiders. Given this broad rationale, the Programme decided to conduct a series of participatory learning exercises in the form of Rapid Rural Appraisals (RRAs) in each of the eight Programme sites, prior to any people-oriented project action. The RRAs focused on the less favoured social groups whose livelihood heavily rely on the natural resources located within the PAs and their surroundings. After the completion of the RRAs, baseline surveys have been conducted in a broader geographical area.

The outputs of the RRAs are regarded as an initial contribution from "potentially critical groups" in Protected Area management planning. In communities where the RRAs are conducted, community organising and participatory planning (Participatory Learning and Action, PLAs) activities will be implemented in a later stage. These are aimed at identifying and implementing community-based activities (micro-projects) that are directly linked to biodiversity conservation and that will reduce the pressures on the natural resource base. A series of focused studies (resources inventories, market studies, etc.) will complement and support the process.

The baseline surveys are undertaken to address the following objectives:

- a) Establish a baseline information on the communities living within and around the Protected Areas;
- b) quantify indicators, which may be affected by the implementation of the Programme and which could be used as a benchmarks for impact evaluations;
- c) generate information that may be useful for the preparation of the Protected Area Management Plan, for the design of Information and Education Strategies and for addressing needs and aspirations of communities affected by the establishment of the Protected Area.
- d) generate gender-disaggregated data, where significant.

B RESEARCH METHODOLOGY

Universe of study

The universe of study is represented by the communities located within or in the vicinity of the park and which rely on the natural resources of the latter for their livelihoods.

Seventeen out of 35 administrative units present on Sibuyan Island encompass portions of Mount Guiting-guiting Natural Park. Sitios located within 15 of the 17 barangays have been included in the survey.

Table 1 Respondents distribution by barangay

Survey Sites	POPCEN 1995			Distribution of respondents			
	Totals	No of households per barangay (1995 POPCEN)	Average household size (No. of members)	Number of Respondents (No.)	Repartition of surveyed households per barangay in each municipality (%)	Repartition of surveyed households within the sample (N=210) (%)	% of households surveyed on total no. of households per barangay (%)
Magdiwang Totals (study area)	2,734	500	5.47	70	100.0	33.3	14.0
1 Dulangan	687	117	5.87	18	25.7	8.6	15.4
2 Ipil	1,166	217	5.37	17	24.3	8.1	7.8
3 Jao-asan	648	126	5.14	17	24.3	8.1	13.5
4 Silum	233	40	5.83	18	25.7	8.6	45.0
Cajidiocan Totals (study area)	5,626	1,121	5.02	69	100.0	32.9	6.2
5 Cambajao	1,077	245	4.40	20	29.0	9.5	8.2
6 Cambijang	910	180	5.06	14	20.3	6.7	7.8
7 Cantagda	841	157	5.36	10	14.5	4.8	6.4
8 Danao	1,759	328	5.36	10	14.5	4.8	3.0
9 Lumbang Weste	1,039	211	4.92	15	21.7	7.1	7.1
San Fernando Totals (stud yarea)	8,122	1,414	5.74	71	100.0	33.8	5.0
10 Agtiwa	944	161	5.86	7	9.9	3.3	4.3
11 Canjalón	1,145	213	5.38	14	19.7	6.7	6.6
12 España	1,820	288	6.32	13	18.3	6.2	4.5
13 Mabulo	1,148	198	5.80	8	11.3	3.8	4.0
14 Panangcalan	584	117	4.99	7	9.9	3.3	6.0
15 Taclobo	2,481	437	5.68	22	31.0	10.5	5.0
Study area Grand Total	16,482	3,035	5.43	210	-	100.0	6.9

Sample frame

Considering the urgency of obtaining a set of baseline information before the start of in-field operations, and considering the need to focus on populations occupying specific geographical locations adjacent to the Park boundaries, purposive sampling has been used.

The common characteristics in the sample are:

- geographical location: households located close or within the Park boundary;
- dependency of the household from natural resources located within or adjacent to the Park;
- presence of Indigenous Cultural Communities (ICCs).

Sampling Unit

The sampling unit has been the household.

Stratification:

Administrative, by barangay and municipality

Sample size

As shown in Table 1, the sample size has been 210 households. Referring to the 1995 POPCEN data these represent 6.9% of the total number of households (3,025) in the sampled barangays and 2.12% of the total number of households (9,924) on Sibuyan Island. Personal interviews with heads of households or any responsible adult were conducted using the Baseline Survey Questionnaire (Appendix 1).

Questionnaire Construction

The questionnaire was constructed using topics that dealt with the various components of the Programme and was a result of various consultations with the members of the Programme Management Unit. The final questionnaire was designed for a 45-minute interview to ensure the active participation of the respondents and was written in English.

No written interview guides were provided, but information was conveyed verbally during the enumerators' orientation and training.

Field Operations

Field testing of the questionnaire was conducted in December 1996, and actual implementation was in January 1997 through the help of three (3) enumerators from MAGCAISA, the program's NGO partner in Sibuyan Island, while the MAO of Magdiwang acted as survey supervisor and 3 ISLA team members as enumerators. All enumerators were fluent with the local dialect and familiar with the area of operations. The survey area was identified in consultation with the participating NGO applying the aforementioned sampling frame.

The identification of the survey area occurred in consultation with the participating NGO applying the above mentioned sample frame. Available information included preliminary 1995-population census data, individual administrative maps, Mount Guiting-guiting National Park boundary Map and local knowledge provided by members of the NGO and LGUs. The orientation and training of the enumerators and survey supervisors followed.

The actual field survey started on January 1997 and lasted for two (2) weeks. Depending on the fluency of the respondent, the questionnaire was either administered in English, Tagalog or the local dialect, Sibuyanon.

Data Processing and Analysis

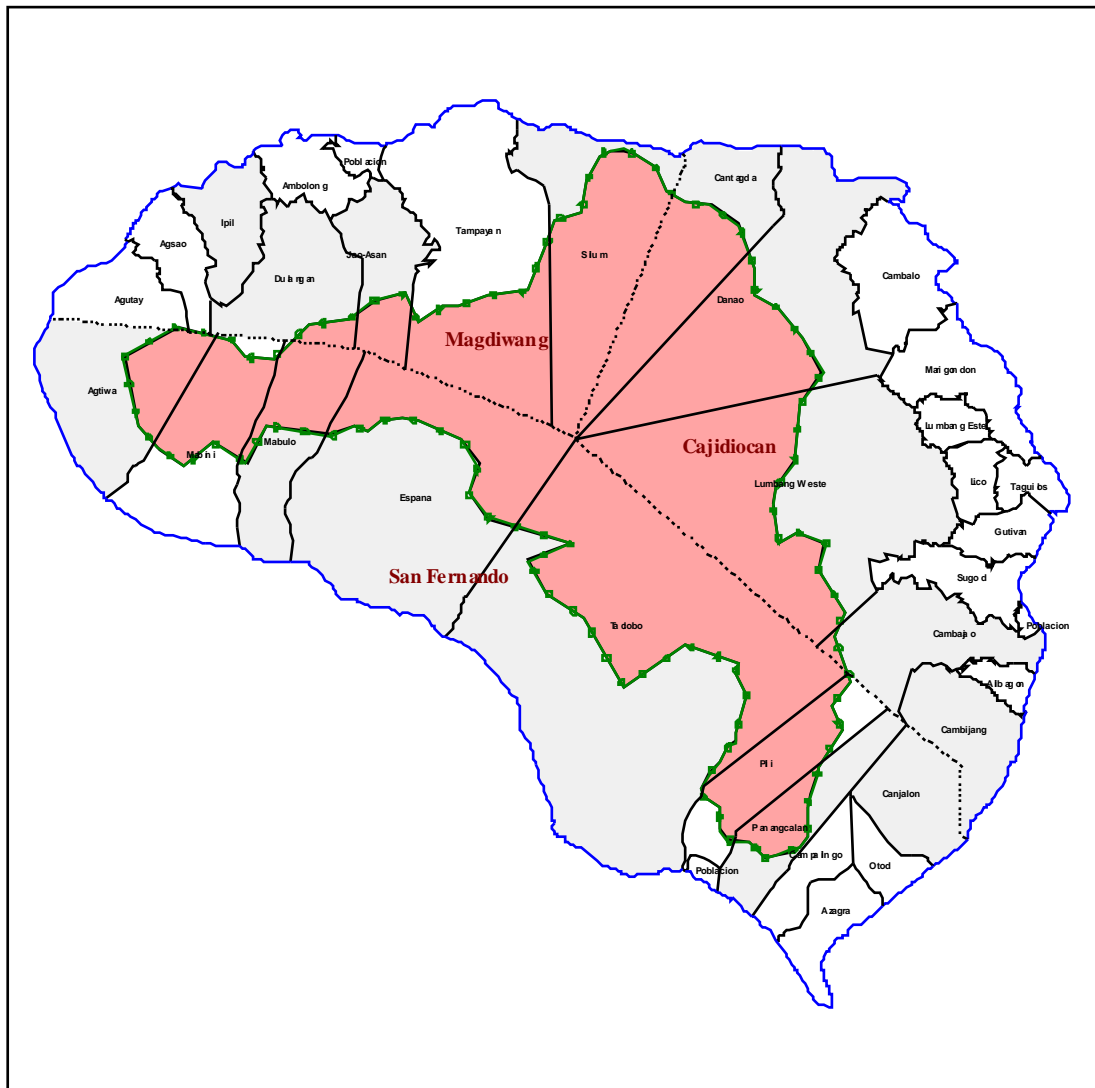
Data were processed using the Microsoft Access program for encoding and Excel program for data tabulation. Survey results were presented in frequency tables for which descriptive analysis was done.







Subject Areas

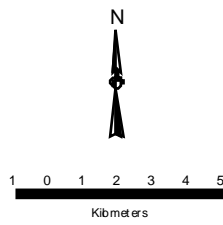
The NIPAP Baseline Survey concentrated mainly on four major areas of inquiry:

1. Basic demographic information, including migration patterns;
2. Socio-cultural patterns, covering communication networks, leadership and decision making structure vis-à-vis natural resource use;
3. Economic activities, i.e. agriculture, fisheries, livestock management and forestry, including expenditure pattern; and
4. Awareness and knowledge of environmental concepts, terms related to the implementation of the NIPAS law and the Mt. Guiting-guiting Natural Park.

Figure 1 Geographical distribution of the surveyed barangays



-  Shoreline
-  Municipal boundary
-  Barangay boundary
-  Natural Park Boundary
-  Baseline Survey Questionnaire has been Administered
-  Mt. Guiting-Guiting Natural Park



C PRESENTATION OF SURVEY RESULTS

C.1 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

C.1.1 Geographical distribution of respondents

As shown in Table 1 the 210 respondents were almost equitably distributed among the three municipalities. With respect to the household population of the single barangays the sampling has been quite balanced (8%-4%) with the exception of Barangay Silum, Dulangan and Danao where respectively 45%, 15% and 3% of the households have been interviewed.

C.1.2 Age sets

Most respondents were of middle age; 29% in the 30-39 years age bracket and 24.3% in the 40-49 age group as shown in the Table below.

Table 2 Distribution of respondents by age and by municipality

Age	Municipalities						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando			
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents for all municipalities	% to no. of respondents for all municipalities
20-29	7	10.0	16	23.2	5	7.0	28	13.3
30-39	19	27.1	15	21.7	27	38.0	61	29.0
40-49	13	18.6	13	18.8	25	35.2	51	24.3
50-59	18	25.7	9	13.0	5	7.0	32	15.2
60-69	10	14.3	14	20.3	8	11.3	32	15.2
70-79	3	4.3	2	2.9	1	1.4	6	2.9
Total	70	100.0	69	100.0	71	100.0	210	100.0

C.1.3 Educational attainments of respondents

About sixty percent of the sample respondents reached the elementary level (Table 3). Much below this proportion is 19.5% who had not gone to school, followed by 16.2% who have reached high school. Among respondents, literacy is highest in Magdiwang with about 91.5% having gone to elementary and high school. On the other hand, Cajidiocan registered the lowest literacy with 86.9% of the respondents either not having gone to school at all or have reached elementary level only.

Table 3 Distribution of respondents by educational attainment by municipality

Educational Attainment	Municipality						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando			
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents for all municipalities	% to no. of respondents for all municipalities
Elementary	48	68.6	27	39.1	50	70.0	125	59.5
No Schooling	3	4.3	33	47.8	5	7.0	41	19.5
High School	16	22.9	8	11.6	10	14.0	34	16.2
College	3	4.3	0	0.0	4	6.0	7	3.3
No Answer	0	0.0	0	0.0	2	3.0	2	1.0
Vocational	0	0.0	1	1.4	0	0.0	1	0.5
All levels	70	100.0	69	100.0	71	100.0	210	100.0

C.1.4 Ethno-linguistic Grouping

About 73% of the respondents were Sibuyanon. By location, these respondents were in Magdiwang (94.3% of the 70 interviewees) and in San Fernando with 80.3% of 71 respondents. In Cajidiocan municipality, the 69 respondents were either Sibuyanon (44.9%) or Indigenous Peoples named Tagabukid (47.8%).

Table 4 Distribution of respondents by ethno-linguistic group by municipality

Ethnic Group	Municipality						All municipalities	
	Magdiwang		Cajidiocan		San Fernando			
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents for all municipalities	% to no. of respondents for all municipalities
Sibuyanon	66	94.3	31	44.9	57	80.3	154	73.3
Tagabukid (ICC)	0	0.0	33	47.8	10	14.1	43	20.5
Masbateño	2	2.9	4	5.8	3	4.2	9	4.3
Leyteño	1	1.40	0	0.0	0	0.0	1	0.5
Ilocano	0	0.0	1	1.4	0	0.0	1	0.5
No Answer	1	1.4	0	0.0	1	1.4	2	1.0
All Groups	70	100	69	100	71	100	210	100.0

**Indigenous Cultural Communities*

Sibuyanon were located (about 30%) within less than a kilometre from the Park while 35% of the ICC respondents were situated from 1.0 to 1.5 kilometres away. A significant number of Leyteño, Masbateño and Ilocano respondents were found residing within 1.0 to 1.5 kilometres (27.3%); the same proportion were in the 2.6 to 3.0 kilometre distance (Table 5).

Table 5 Distribution of respondents by estimated distance of residence from the Park and by ethno-linguistic group

Distance from PA (km)	Ethno-linguistic Group								All Groups	
	Sibuyanon		ICC		Others *		No Answer			
	No. per ethno-linguistic group	% to total per group	No. per ethno-linguistic group	% to total per group	No. per ethno-linguistic group	% to total per group	No.	%	No. for all ethno-linguistic groups	% to total for all groups
< 1.0	46	29.9	1	2.3	0	0.0	1	50.0	48	22.9
1.0 - 1.5	27	17.5	15	34.9	3	27.3	0	0.0	45	21.4
1.6 - 2.0	15	9.7	8	18.6	2	18.2	0	0.0	25	11.9
2.1 - 2.5	15	9.7	4	9.3	2	18.2	0	0.0	21	10.0
2.6 - 3.0	8	5.2	4	9.3	3	27.3	0	0.0	15	7.1
3.1 - 3.5	30	19.5	7	16.3	0	0.0	0	0.0	37	17.6
3.6 - 4.0	10	6.5	4	9.3	1	9.1	0	0.0	15	7.1
4.1 - 4.5	2	1.3	0	0.0	0	0.0	0	0.0	2	1.0
No Response	1	0.6	0	0.0	0	0.0	1	50.0	2	1.0
Total	154	100.0	43	100.0	11	100.0	2	100.0	210	100.0

* Leyteño, Masbateño, Ilocano

C.1.5 Household Size

About 70% of households interviewed consisted of 3 to 7 members, with a median household size of 5 members. Among the three municipalities, Magdiwang and Cajidiocan had the same median household size of 5 members. However, San Fernando had larger household sizes with a median of 7 members each (Table 6).

Table 6 Distribution of households by household size and by municipality

Median Size of HH (No. of Members)	Municipalities						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando			
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents for all municipalities	% to no. of respondents for all municipalities
1	1	1.4	0	0.0	0	0.0	1	0.5
2	5	7.1	6	8.7	3	4.2	14	6.7
3	11	15.7	10	14.5	7	9.9	28	13.3
4	10	14.3	17	24.6	4	5.6	31	14.8
5	15	21.4	8	11.6	9	12.7	32	15.2
6	7	10.0	10	14.5	8	11.3	25	11.9
7	5	7.1	7	10.1	19	26.8	31	14.8
8	5	7.1	5	7.2	9	12.7	19	9.0
9	6	8.6	3	4.3	6	8.5	15	7.1
10	4	5.7	3	4.3	2	2.8	9	4.3
11	1	1.4	0	0.0	4	5.6	5	2.4
All sizes	70	100.0	69	100.0	71	100.0	210	100.0

C.1.6 Respondents' Estimated Distance from Park boundary

The reader should know that as of the date of the survey no boundary had been demarcated on the ground. Nonetheless before Presidential Proclamation a series of consultations had been done and maps had been shown to the residents. The question has been incorporated into the survey to assess the perception of respondents on their whereabouts vis-à-vis to a "virtual" park boundary. Most respondents (44.3% of 210) considered themselves as residing less than one and a half kilometres away from the Park boundary (Table 8). These were mostly residents of Magdiwang and San Fernando. In Cajidiocan, almost 50% of the respondents (actually residing along the boundary) considered themselves as residing 3-4 km away from the park boundary. This contradictory pattern reveals how limited knowledge upland residents in Cajidiocan had on the boundary outlining and by deduction how weak the IEC and consultation process had been (1995-1996).

In terms of construction materials most (91%) dwelling of the respondents (upland residents) were made out of light materials. The rest were either constructed of concrete, wood or combinations of both.

Table 7 Percentage distribution of respondents by residence's estimated walking distance from Park Boundary and description of dwelling unit

Description	Estimated Distance from Park Boundary (in km.)									Total per dwelling unit description	% to total No. of respondents
	<1.0	1.0-1.5	1.6-2.0	2.1-2.5	2.6-3.0	3.1-3.5	3.6-4.0	4.1-4.5			
Light Materials	46	42	23	18	14	33	13	2	191	91.0	
Concrete	0	2	0	1	0	3	2	0	8	3.8	
Lumber	1		1	1	1	1	0	0	5	2.4	
Other	0	1		0	0	0	0	0	1	0.5	
No Answer	1	0	1	1	0	0	0	0	3	1.4	
Total per distance range	48	45	25	21	15	37	15	2	210	100.0	

Table 8 Estimated walking distance of respondents' residence from Park Boundary by municipality

Distances of respondents' Residence from PA (km)	Municipalities						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando		No. of respondents for all municipalities	% to no. of respondents for all municipalities
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality		
< 1.0	32	46	2	3	14	20	48	22.9
1.0 - 1.5	13	19	14	20	18	25	45	21.4
1.6 - 2.0	5	7	1	1	19	27	25	11.9
2.1 - 2.5	0	0	7	10	14	20	21	10.0
2.6 - 3.0	4	6	9	13	2	3	15	7.1
3.1 - 3.5	15	21	22	32	0	0	37	17.6
3.6 - 4.0	1	1	12	17	2	3	15	7.1
4.0 - 4.5	0	0	2	3	0	0	2	1.0
No Answer	0	0	0	0	2	2	2	1.0
Total	70	100	69	100	71	100	210	100.0

SOCIO-CULTURAL CHARACTERISTICS

C.1.7 Migration Pattern

The majority (80%) of the respondents has been residing in their barangays since birth (Table 9), 9% was born in other barangays, but in the same municipality. About 8% originated from either other provinces or regions. The data reveal that among municipalities, the highest percentage of in-migration affects Magdiwang with 12.9% of the respondents having settled there from either other municipalities or regions.

Table 9 Distribution of respondents by place of birth and by municipality

Place of Birth	Municipality						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando		No. of respondents for all municipalities	% to no. of respondents to all municipalities
	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality	No. of respondents per municipality	% to no. of respondents per municipality		
Born in the place	49	70	62	89.9	58	81.7	169	80.5
Same municipality different barangay	11	15.7	2	2.9	6	8.5	19	9.0
Other regions	7	10	5	7.2	5	7.0	17	8.1
Same Province different Municipality	2	2.9	0	0.0	1	1.4	3	1.4
Same barangay different Sitio	1	1.4	0	0.0	1	1.4	2	1.0
Total	70	100.0	69	100.0	71	100.0	210	100.0

C.1.8 Communication Pattern

C.1.8.1 Sources of Information

The radio is the predominant source of information (76.2%) of the respondents as shown in the Table below. The second popular source is neighbours as reported by 55.2% of the respondents. While this is the pattern in Magdiwang and San Fernando, Cajidiocan respondents relies more on NGOs (65.2%) rather than the radio (53.6%). Moreover, in Magdiwang, Government technicians and posters are known sources to 21.4% and 18.6% of the respondents, respectively. Television has not been mentioned by any of the respondents

Table 10 Distribution of respondents by source of information and by municipality

Source of Information	Source of information mentioned						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando		Frequency of mention (No.)	Percentage on total No. of Respondents (N=210)
	Frequency of mention (No.)	Percentage on total No. of Respondents (N=70)	Frequency of mention (No.)	Percentage on total No. of Respondents (N=69)	Frequency of mention (No.)	Percentage on total No. of Respondents (N=71)		
Radio	68	97.1	37	53.6	55	77.5	160	76.2
Neighbours	47	67.1	5	7.2	64	90.1	116	55.2
NGOs	0	0.0	45	65.2	0	0.0	45	21.4
Government technician	15	21.4	4	5.8	2	2.8	21	10.0
Posters	13	18.6	1	1.4	0	0.0	14	6.7
LGUs	5	7.1	0	0.0	0	0.0	5	2.4
Newspaper	2	2.9	2	2.9	0	0.0	4	1.9
Church & relatives	0	0.0	0	0.0	1	1.4	1	0.5
Television	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	1	1.4	1	0.5
No Answer	0	0.0	11	15.9	1	1.4	12	5.7
Totals	150		105		124		379	

Of the 116 respondents who source information from neighbours 82.8% said they discuss general events (i.e. community news, current events) (Table 11). This information is accessed at specific hours of the day.

Table 11 Type of information sourced from neighbours by frequency of access at different time periods

Type of Information	Frequency of Access by Time Periods						Total	
	All Day	Specific hours of the day	Weekly	Monthly / Periodically	Annually	No Answer	No. of Responses per Information Type	% to Total Responses per Information Type
General Events	14	76	1	1	4	0	96	82.8
Health, nutrition, general Events	0	7	0	0	0	0	7	6.0
Environmental	0	0	0	0	3	0	3	2.6
General Event and Political	0	3	0	0	0	0	3	2.6
No Answer	0	1	0	0	0	1	2	1.7
Agricultural	1	0	0	0	0	0	1	0.9
Health and Nutrition	0	0	0	0	1	0	1	0.9
Agriculture and Political	0	1	0	0	0	0	1	0.9
Environmental and Political	1	0	0	0	0	0	1	0.9
Others	0	1	0	0	0	0	1	0.9
Total per time period	15	89	1	1	8	1	116	100.0

There were 162 respondents (77% of 210 respondents) who cited the radio as their source of information. The type of information they prefer is general events (58.6%) and general events combined to health, nutrition and political matters. These are accessed mostly at specific hours of the day (Table 12).

Among these 162 radio-listeners, 37% identified DZRH as their favourite station, followed by 21% who favoured DYBR. Listeners of the latter station tune in for information concerning general events, while DZRH listeners is after general events (26 of 60 respondents) followed by a combination of health and nutrition and general events (10 of 60). A significant combined proportion of 2-radio station listeners of 33.3% prefers the DZMM/DZRH, DZRH/DYBR, DZMM/DYOW and DZRH/DYOW. Regarding preferred listening time, the majority (95 of 162 respondents) chooses afternoon programs, especially between 1 PM and 2 PM (Table 14).

Table 12 Number of respondents citing different types of information from radio and respective frequency of access

Type of information	Frequency of Access				Total	
	All day	Specific Hours of the day	Periodical/ annually	No Answer	No. of Responses per Information Type	% to Total Responses per Information Type
General Events	21	69	1	4	95	58.6
Health/Nutrition and General Events	0	13	0	0	13	8.0
General Events and Political	0	10	0	1	11	6.8
Environmental	4	0	0	0	4	2.5
Agricultural and General Events	0	3	0	1	4	2.5
Political	1	2	0	0	3	1.9
Environmental and General Events	0	2	0	0	2	1.2
Environmental, General Events and Political	0	2	0	0	2	1.2
Agricultural	0	0	0	1	1	0.6
Environmental and Political	0	1	0	0	1	0.6
Health/Nutrition and Environmental	0	1	0	0	1	0.6
Agricultural, Environmental and General Events	0	1	0	0	1	0.6
Health/Nutrition, General Events and Political	0	1	0	0	1	0.6
Health/Nutrition, Environment & General Events	0	1	0	0	1	0.6
No Answer	17	1	0	4	22	13.6
Total number of responses per time period	43	107	1	11	162	100.0

Table 13 Preferred Radio Station and Type of Information

Station	Agricultural	Environmental	General Events	Political	Health/Nutrition and General Events	Environmental and Political	General Events and Political	Agricultural and General Events	Health/Nutrition and Environmental	Environmental and General Events	Agricultural, Environmental and General Events	Health/Nutrition, Environmental and General Events	Political, Environmental and General Events	No Answer	Total Number of Responses	Percentage of Total Responses (n=210)	
DZRH	0	1	26	0	10	1	8	1	1	2	0	0	0	1	9	60	37.0
DYBR	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	34	21.0
DZMM/DZRH	1	3	7	0	1	0	2	3	0	0	1	1	1	0	0	20	12.3
DZRH/DYOW	0	0	4	1	0	0	0	0	0	0	0	0	0	7	0	12	7.4
DZRH/DYBR	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7	4.3
DZMM	0	0	2	1	0	0	1	0	0	0	0	0	0	2	6	3.7	
DZMM/DYOW	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	1.9	
DYBA	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	1.2	
DYOW	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1.2	
DWXI	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1.2	
DZRH/DYRO	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1.2
DZAS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.6	
DYRO	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.6	
No Answer	0	0	7	0	2	0	0	0	0	0	0	0	1	0	10	6.2	
Total No. of Respondents	1	4	95	3	13	1	11	4	1	2	1	1	2	10	13	16	100

Table 14 Preferred radio station and listening time for radio

Station	Preferred Time				Total		
	AM	PM	1-2 p.m.	No Answer	No. of Responses per Station	% to Total Responses per Station	% of total Respondents (n=210)
DZRH	5	1	38	16	60	37.0	28.6
DYBR	2	19	12	1	34	21.0	16.2
DZMM/DZRH	1	0	10	9	20	12.3	9.5
DZRH/DYOW	1	0	1	10	12	7.4	5.7
DZRH/DYBR	0	2	3	2	7	4.3	3.3
DZMM	2	0	1	3	6	3.7	2.9
DZMM/DYOW	0	0	0	3	3	1.9	1.4
DYBA	0	0	1	1	2	1.2	0.9
DYOW	0	0	0	2	2	1.2	0.9
DWXI	2	0	0	0	2	1.2	0.9
DZRH/DYRO	0	0	1	1	2	1.2	0.9
DZAS	1	0	0	0	1	0.6	0.5
DYRO	0	0	1	0	1	0.6	0.5
No Answer	0	4	1	5	10	6.2	4.8
Total No. of Responses	14	26	69	53	162	100.0	

Although environmental information is seldom accessed, still 197 out of the 210 respondents answered the question, “If information is environmental, what do you do with the information?” More than half or 53.8% (Table 15) said they share it with others while 34.8% said they kept it to themselves.

Table 15 What is done with environmental information

Action Taken	No. of responses	% to Total No. of Responses
Disseminate/share with others	113	53.8
Keep information to themselves	73	34.8
No response	13	6.2
Practice what the information says	10	4.8
Seek for more information	1	0.5
Total number of respondents	210	100.0

C.1.8.2 Relation with outsiders and institutions

Respondents were asked which Government institutions visited them (Table 16). Only 42.9% (90 out of 210) answered the question affirmatively. Of these, 48.8% said that the extension workers were from the Department of Health (DOH); 30% from the Department of Agriculture (DA); 21% from the Department of Environment and Natural Resources (DENR) and 20% from the Department of Interior and Local Government (DILG). Local officials like the Municipal Mayor and other barangay officials were visible to 14.4% and 13.3% of the respondents, respectively.

Table 16 Distribution of respondents by Government Organisations visiting them and by municipality

Government Organisations	Municipality						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando		Frequency of mention (No.)	% on total no. of respondents (N=210)
	Frequency of mention (No.)	% of total respondent per municipality* (n=70)	Frequency of mention (No.)	% of total respondent per municipality* (n=69)	Frequency of mention (No.)	% of total respondent per municipality* (n=71)		
DOH	42	60.0	0	0.0	2	2.8	44	21.0
DA	22	31.4	3	4.3	2	2.8	27	12.9
DENR	5	7.1	2	2.9	12	16.9	19	9.0
DILG	14	20.0	0	0.0	4	5.6	18	8.6
Municipal Mayor	0	0.0	10	14.5	3	4.2	13	6.2
Bgy. Officials	0	0.0	11	15.9	1	1.4	12	5.7
PCA	4	5.7	0	0.0	2	2.8	6	2.9
DSWD	5	7.1	0	0.0	0	0.0	5	2.4
DAR	0	0.0	1	1.4	1	1.4	4	1.9
PNP	1	1.4	2	2.9	0	0.0	3	1.4
MFPC	0	0.0	0	0.0	3	4.2	3	1.4
Municipal Assessor	0	0.0	0	0.0	2	2.8	2	1.0
DECS	1	1.4	1	1.4	0	0.0	2	1.0
Municipal Eng.	0	0.0	0	0.0	2	2.8	2	1.0
NIA	3	4.3	0	0.0	1	1.4	2	1.0
Coast Guard	1	1.4	0	0.0	0	0.0	1	0.5
No Answer	23	32.9	49	71.0	48	67.6	120	57.1
Totals	121	100.0	79	100.0	83	100.0	283	100.0

By municipality, awareness was highest among Magdiwang respondents with visits of DOH (60%), DA (31.4%) and DILG (20%) officials. Cajidiocan interviewees were more exposed to their barangay officials (15.9%) and Municipal Mayor (14.5%) rather than to the extension staff of DA (4.3%) and DENR (2.9%). More respondents of San Fernando (16.9%) experienced relating with DENR technicians but had a fairly weak exposure to those from other Government institutions.

C.1.8.3 Reasons for interaction with established institutions

Various reasons were put forward by respondents for institutions interacting with them as shown on Table 17. Out of 44 respondents who interacted with the Department of Health (DOH), 30 had consultations while five had medical check-ups. Out of 27 respondents who interacted with Officers of the Department of Agriculture (DA), 11 did it because the latter were disseminating information or gathering data, 6 because they were dispersing livestock and seedlings. For the Department of Interior and Local Government (DILG), 13 of 18 respondents said that DILG gathered and/or disseminated information (7) and conducted meeting/general assembly (6). For the 10 respondents who interacted with representatives of the Department of Environment and Natural Resources (DENR), 3 recalled that DENR Officers were gathering or disseminating information and 3 that the Officers were on patrolling or monitoring activities. A significant number of 120 respondents did not give any reason for institutions interacting with them.

Table 17 Respondent's reasons for interaction with Institutions visiting their area

Institutions	Gather Or disseminate information	Consultation	Meeting/GA	Medical check-up	Awareness campaign	Livestock dispersal	Confiscation of timber products	Permit issuance	Survey/census of students	Patrolling/monitoring	Seed dispersal	Distribution of fertilisers	Awarding of tax declaration	Others	Not Applicable	No Answer	Total Number of Responses per Office	% to Total Responses per Office*
DOH	3	30	0	5	1	1	0	0	0	0	0	0	0	0	1	3	44	15.5
DA	11	0	1	0	3	2	0	0	0	0	3	0	0	0	1	6	27	9.5
DENR	3	0	1	0	0	0	2	0	9	3	0	0	0	0	0	1	19	6.7
DILG	7	0	6	0	1	0	0	0	0	0	0	0	0	0	1	3	18	6.4
PNP	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3	1.1
PCA	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	2	6	2.1
Municipal Mayor	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	10	13	4.6
Municipal Assessor	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.7
Coast Guard	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
DSWD	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	5	1.8
DECS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0.7
MFPC	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3	1.1
Municipal Engineer	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.7
Brgy. Officials	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	12	4.2
DAR	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	1.4
Others	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.7
No Answer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	120	42.4
Total number of responses per reasons cited	32	31	12	5	9	3	2	2	11	8	3	3	1	1	3	157	283	100.0

* Multiple responses

C.1.8.4 Services extended by institutions

Of the 90 respondents who admitted that Government Officers visited area, 32 or one third reported that 11 Government Institutions were able to help them through their information dissemination activities (Table 18). In addition to its information dissemination service, the DA also gave seedlings, free vaccine and pre-natal service to animals and dispersed hogs. Respondents visited by DOH got free vaccine or medicine and pre-natal services. DENR awarded stewardship certificates and the municipal Government developed springs for water delivery.

Table 18 Distribution of respondent by Government offices visiting their village and help extended to them

Help Extended	Institutions														Totals			
	DOH	DA	DENR	DILG	PNP	PCA	Mun. Mayor	Mun. Assessor	Coast Guard	DSWD	DECS	MFPC	Mun. Eng. Brgy. Officials	DAR	No Answer	Total No. of Responses per help extended	% to Total No. of Responses for help extended	% to Total No. of Respondents (n=210)
Services	19	7	1	3	0	4	0	0	0	4	1	0	1	5	0	45	27.6	21.4
Info. Dissemination	0	7	2	10	2	0	1	0	0	1	1	1	0	5	1	32	19.6	15.2
Spring Development	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9	5.5	4.3
Stewardship Cert.	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	4.9	3.8
Free Medicine	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	4.3	3.3
Give seeds/seedlings	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7	4.3	3.3
Free Vaccine & Pre-Natal	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3.7	2.9
Free Vaccine & medicine	3	0	0	0	0	0	0	1	0	0	0	0	0	1	0	5	3.1	2.4
Free Vaccine	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2.5	1.9
Provide Funds & Supply	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	4	2.5	1.9
Pre-Natal	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1.2	1.0
Fertiliser	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.6	0.5
Security	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.6	0.5
Hog dispersal	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.6	0.5
None	1	1	5	0	0	0	0	1	0	0	0	1	0	1	0	10	6.1	4.8
No Answer	3	4	2	4	0	1	2	0	1	0	0	0	1	1	2	21	12.9	10.0
Total No. of Responses per Office cited	44	27	19	18	3	6	13	2	1	5	2	3	2	12	4	2	163	100.0

C.1.8.5 Relation with Tourists

When queried on whether or not tourists visit their area, respondents were almost split in half, i.e. 52% responded affirmatively while 46.7% said otherwise (Table 19).

Table 19 Tourist visiting the area by municipality

	Yes		No		No Answer		Total	
	No.	Row %	No.	Row %	No.	Row %	No.	Row %
Magdiwang	56	80.0	14	20.0	0	0.0	70	100.0
Cajidiocan	38	54.3	31	44.9	0	0.0	69	100.0
San Fernando	16	22.9	53	74.6	2	2.8	71	100.0
All municipalities	110	52.4	98	46.7	2	1.0	210	100.0

Magdiwang appears to have more visiting tourists (80% of the 70 respondents provided an affirmative answer) while San Fernando the least. The Cajidiocan sample is evenly distributed. A higher frequency of visiting tourists in Magdiwang may be linked to the presence of the pier where the Viva Liners are docking three times a week, and to the relatively better organised tourist infrastructures.

According to the respondents most tourists, whether local or foreign, visit the area periodically as shown in Table 20. The majority of the respondents reported not deriving any benefit from these encounters. However, of the few (22 respondents) who claimed having derived benefits, these came from foreigners and were in the form of health information and education (25%), environmental information (16.7%) and opportunity to meet (16.7%) and social interaction (8.3%) (Table 21).

Table 20 Visiting tourists by frequency and by municipality

Frequency of Tourists Visit	Municipality						All Municipalities			
	Magdiwang		Cajidiocan		San Fernando		Local		Foreign	
	Local	Foreign	Local	Foreign	Local	Foreign	No.	%	No.	%
Quarter / semester	1	0	0	0	0	0	1	1.6	0	0.0
Annual	14	11	0	0	0	0	14	21.9	11	14.3
Periodic	5	18	30	24	2	5	37	57.8	47	61.0
Occasional	9	7	0	3	0	9	9	14.1	19	24.7
No answer	2	0	0	0	1	0	3	4.7	0	0.0
Total	31	36	30	27	3	14	64	100.0	77	100.0

Table 21 Perceived derived benefits from tourists and type of benefit

For those who answered "YES" in Table 19	Frequency of mention		% to Total "Yes" responses	
<i>Do you benefit?</i>				
Yes	22		20.0	
No	88		80.0	
Total	110		100.0	
<i>If Yes, what benefits derived</i>	From local tourists		From foreign tourists	
	No. of responses	% to total number of responses	No. of responses	% to total number of responses
Friendly relation	0	0.0	1	8.3
Health info. and education	1	8.3	3	25.0
Environmental info.	0	0.0	2	16.7
Opportunity to meet Other people	1	8.3	2	16.7
No Answer	10	83.3	4	33.3
Total	12	100.0	12	100.0

When probed further, respondents gave the following reasons why tourists (local and foreign) visit Mt. Guiting-guiting. According to 48% of the respondents of the three municipalities, local tourists come for hiking and/or mountain climbing. Out of the 85

respondents who gave reasons on why foreign tourists visit the area, 25% said that these come for hiking and/or mountaineering. As shown in Table 22, among the 3 municipalities Cajidiocan registered most responses. Apart from hiking and mountain climbing, local tourists come as balikbayans or for visiting friends. Foreign tourists are perceived having additional motivations including swimming, sightseeing, and studying the local dialect and picture taking.

Table 22 Respondents' opinion on why tourists visit Mt. Guiting-guiting by municipality.

Visitor's Reasons	Municipalities						All Municipalities			
	Magdiwang		Cajidiocan		San Fernando		Local		Foreign	
	Local	Foreign	Local	Foreign	Local	Foreign	No.	%	No.	%
Balikbayan/vacation	14	0	0	0	0	0	14	22.6	0	0
Visit friends	7	0	0	0	0	0	7	11.3	0	0
Hiking/Mt. Climbing	7	3	21	18	2	0	30	48.4	21	24.7
Sell goods	2	0	0	0	0	0	2	3.2	0	0
Swimming	0	0	9	8	0	0	9	14.5	8	9.4
Gather butterflies	0	2	0	0	0	0	0	0	2	2.4
Sight seeing	0	10	0	0	0	2	0	0	12	14.1
To learn native dialect	0	14	0	0	0	2	0	0	16	18.8
Render free medical services	0	1	0	0	0	0	0	0	1	1.2
Cross country	0	1	0	8	0	0	0	0	9	10.6
Resort/Spot hunting	0	4	0	0	0	10	0	0	14	16.5
Others	0	1	0	1	0	0	0	0	2	2.4
Total of reasons	30	36	30	35	2	14	62	100.0	85	100.0

C.1.9 Local Power Structure

C.1.9.1 Community Mobilisation

For the purpose of this baseline survey, local power structure refers to the formal or informal community organisations or persons who have influence toward decisions and actions affecting the community in terms of natural resource management. Some of the community activities undertaken in the survey area are socio-cultural (fiestas, religious activities, etc.), meetings and general assemblies and mobilisation for environmental and political purposes. As Table 23 shows, the barangay officials generally lead in mobilising the community. In Cajidiocan, where most of the Indigenous Peoples are located, the chieftain, a traditional leader, continue to exert influence. Noticeable is the finding that among the 210 respondents, only one mentioned an NGO as a leader in community mobilisation.

Table 23 Position of person who leads in mobilisations by municipality

Position	Municipality						Total*	
	Magdiwang n=70		Cajidiocan n=69		San Fernando n=71		No. of respondents for all municipalities	%to no. of respondents for all municipalities
	No. of respondents	%to no. of respondents	No. of respondents	%to no. of respondents	No. of respondents	%to no. of respondents		
Barangay Captain	65	93	0	0	22	31	87	41.4
Barangay Council	34	49	27	39	49	69	110	52.4
Chieftain/Leader	1	1	35	51	1	1	37	17.6
NGO	0	0	1	1	0	0	1	0.5
Others	2	3	0	0	2	3	4	1.9
No response	3	4	5	7	14	20	22	10.5

*Multiple response. Totals will not add up to 100%

C.1.9.2 Control on Resource Use

The respondents were asked: "If you need to gather natural resources, do you need to ask permission from somebody?" Table 24 shows that among the three municipalities, it was only in Magdiwang that respondents said they need to ask

permission. Respondents in Cajidiocan and San Fernando exercise their “right to use” and gather natural resources from the PA as the need arises without asking permission from anybody. For the respondents who do ask permission, they approach the barangay captain to gather hardwood. Only one respondent said he would approach the DENR forester.

Table 24 Need for permission to gather natural resources

Need to ask Permission	Municipality						Total	
	Magdiwang		Cajidiocan		San Fernando		No. of respondents for all municipalities	%to no. of respondents for all municipalities
	No. of respondents per municipality	%to no. of respondents per municipality	No. of respondents per municipality	%to no. of respondents per municipality	No. of respondents per municipality	%to no. of respondents per municipality		
Yes	57	81.4	3	4.3	3	4.2	63	30.0
No	10	14.3	64	92.8	68	95.8	142	67.6
No response	3	4.3	2	2.9	0	0.0	5	2.4
Total	70	100.0	69	100.0	71	100.0	210	100.0

Table 25 Natural resource and position sought for permission

Natural Resource	Position of person sought for permission				Total	
	Bgy. Captain	DENR/Forester	Mayor/MFPC	No answer	Frequency of response (No.)	Relative frequency of response (%)
Hardwood	54	1	0	0	55	83.3
Not specified	3	2	2	4	11	16.7
Total	57	3	2	4	66	100.0

C.1.9.3 Conflict resolution in the context of natural resource use

The question asked here was “*If the community is faced with a conflict situation related to natural resource use, to whom do the villagers run for help?*” Apparently, the respondents did not limit their answers to problems related to natural resource use, but cited even personal problems. Table 26 shows that 26% of the conflicts mentioned is personal in nature and the barangay captain is the authority sought for help. “Illegal activities” and “land disputes” are the second and third priority problems. Again the respondents run to the barangay captain for help. DENR foresters do not seem to make their presence felt in the area. The residents do not perceive them as persons who can help in conflict resolution.

Table 26 Distribution of conflict situations on natural resources use and entity sought for help

Type of conflict	Entity sought for help					Total	
	Bgy. Captain	Kagawad	DENR/Forester	Police/LGU	None	Frequency of response (No.)	Relative frequency of response (%)
Personal	54	0	0	1	0	55	26.2
Illegal activities	15	0	1	1	1	18	8.6
Land disputes	5	1	0	1	0	7	3.3
Environmental	2	1	0	0	0	3	1.4
Charcoal Making	3	0	0	0	0	3	1.4
Confiscation of lumber	0	0	1	0	0	1	0.5
None	0	0	0	0	10	10	4.8
No answer	2	1	0	0	128	131	62.4
Total	81	3	2	3	139	228	

C.2 ECONOMIC ACTIVITIES

In this Baseline Survey, two of the criteria used in the selection of sample households were proximity to the Park and the households' dependence on the Park's resources for subsistence and income generating purposes. Thus, households located in the coastal communities were not included in the sample.

This selection process may account for the fact that farming was ranked as either the primary or secondary source of income of almost 60% of the respondents, while the harvesting of forest products (forestry) was the primary or secondary income source of the 36% of the respondents. This is shown in Table 27.

Table 27 Distribution of respondents in all municipalities by source of income and by their ranking of income sources.

Rank	Farming		Fishing		Livestock		Forestry		Provide Labour		Basket weaving		Copra		Others	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Primary	61	29.0	12	5.7	12	5.7	61	29.0	23	11.0	7	3.3	8	3.8	23	11.0
Secondary	64	30.5	16	7.6	48	22.9	15	7.1	18	8.6	15	7.1	8	3.8	17	8.1
Tertiary	18	8.6	16	7.6	61	29.0	24	11.4	12	5.7	1	0.5	2	1.0	5	2.4
Fourth	3	1.4	2	1.0	13	6.2	9	4.3	8	3.8	0	0.0	0	0.0	2	1.0
Fifth	2	1.0	0	0.0	2	1.0	3	1.4	0	0.0	0	0.0	0	0.0	0	0.0
No Answer	62	29.5	164	78.1	74	35.2	98	46.7	147	70.0	187	89.0	192	91.4	163	77.6
Total	210	100	210	100	210	100	210	100	208	99.05	210	100	210	100	210	100

Due to the geographical location of the survey, only 5.7% of the respondents reported fishing being their primary income source, although around 15% ranked this activity as either secondary or tertiary livelihood.

More than half (51.9%) of the respondents ranked livestock raising as either secondary or tertiary source of income. Evidently, most of the respondents use this activity to complement their income. Other primary and secondary sources of income are home-based cottage industries related to farming and harvesting of forest products. These are mostly basket weaving using nito (10.4%), copra making (7.6%), and others (19.1%). About 20% of the respondents cited "provision of labour" (wage labour) as primary source of income.

Although all three municipalities are located in the small island of Sibuyan, there are significant differences in the livelihood activities in the three sites. For instance, in Magdiwang, the primary income source of 41.4% of the respondents is "other" activities, including cottage industries such as basket weaving, store keeping, copra making and basket weaving. Another 41.4% likewise reported the aforementioned activities as their secondary source of income. Thus, almost 83% of the respondents in Magdiwang are engaged in "home based" activities as either a primary or secondary income source. Farming is the next most important activity with 44.3% of the 70 respondents, ranking it as either primary or secondary income source.

Table 28 Distribution of respondents in Magdiwang by source of income and by their ranking of income sources.

Rank	Farming		Fishing		Livestock		Forestry		Provide Labour		Basket weaving		Copra		Others	
	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality	No. of respondents	% to Total respondents in municipality
Primary	20	28.6	6	8.6	2	2.9	2	2.9	11	15.7	7	10.0	7	10.0	15	21.4
Secondary	11	15.7	3	4.3	17	24.3	2	2.9	5	7.1	15	21.4	8	11.4	6	8.6
Tertiary	2	2.9	3	4.3	27	38.6	1	1.4	5	7.1	1	1.4	2	2.9	3	4.3
Fourth	1	1.4	0	0.0	3	4.3	0	0.0	1	1.4	0	0.0	0	0.0	2	2.9
Fifth	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
No Answer	36	51.4	58	82.9	21	30.0	65	92.9	48	68.6	47	67.1	53	75.7	44	62.9
Total	70	100	70	100	70	100	70	100	70	100	70	100	70	100	70	100

In Cajidiocan, the primary pursuit of the 70% of the respondents is the harvesting of forest products. Fishing is minimal. Livestock raising is the secondary or tertiary source of income for 49% of the respondents. Farming is the primary and secondary source of income of 18.8% and 59.4% respectively.

Table 29 Distribution of respondents in Cajidiocan by source of income and by their ranking of income sources.

Rank	Farming		Fishing		Livestock		Forestry		Provide Labour		Basket weaving		Copra		Others	
	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality
Primary	13	18.8	1	1.4	6	8.7	48	69.6	0	0	0	0	0	0	0	0
Secondary	41	59.4	0	0.0	15	21.7	7	10.1	0	0	0	0	0	0	0	0
Tertiary	8	11.6	3	4.3	19	27.5	9	13.0	0	0	0	0	0	0	0	0
Fourth	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0	0
Fifth	0	0.0	0	0.0	0	0.0	1	1.4	0	0	0	0	0	0	0	0
No Answer	7	10.1	65	94.2	29	42.0	4	5.8	69	100	69	100	69	100	69	100
Total	69	100.0	69	100.0	69	100.0	69	100.0	69	100	69	100	69	100	69	100

Farming is the principal activity in San Fernando, with 56.3% of the respondents ranking it as either primary or secondary source of income. This municipality has the highest proportion (36.6%) which identified "provision of labour" as source of income.

Table 30 Distribution of respondents in San Fernando by source of income and by their ranking of income sources

Rank	Farming		Fishing		Livestock		Forestry		Provide Labour		Basket weaving		Copra		Others	
	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality	No.	% to Total respondents in municipality
Primary	28	39.4	5	7.0	4	5.6	11	15.5	13	18.3	0	0	1	1.4	9	12.7
Secondary	12	16.9	13	18.3	16	22.5	6	8.5	13	18.3	0	0	0	0.0	10	14.1
Tertiary	8	11.3	10	14.1	15	21.1	14	19.7	7	9.9	0	0	0	0.0	2	2.8
Fourth	2	2.8	2	2.8	10	14.1	9	12.7	7	9.9	0	0	0	0.0	0	0.0
Fifth	2	2.8	0	0.0	2	2.8	2	2.8	0	0.0	0	0	0	0.0	0	0.0
NA	19	26.8	41	57.7	24	33.8	29	40.8	31	43.7	71	100	70	98.6	50	70.4
Total	71	100.0	71	100.0	71	100.0	71	100.0	71	100.0	71	100	71	100.0	71	100.0

C.2.1 Farming

C.2.1.1 Ranking based on income source

Of the 210 respondents, 148 or 70% are farmers. Among these 41% ranked farming as their primary income source while 43% considered it as their secondary source. The 148 farmers are distributed as follows: 34 in Magdiwang, 62 in Cajidiocan and 52 in San Fernando. More than half of the farmers in San Fernando considered farming as their primary occupation. In Cajidiocan, only 13 out of 62 farmers reported farming as their main source of income, although 41 farmers said it is their secondary source.

Table 31 Rank of farming as income source by municipality

Rank	Municipality						Total	
	Magdiwang		Cajidiocan		San Fernando		Total respondents for all municipalities	% to Total responses of respondents engaged in farming for all municipalities
	No. of respondents	% to Total Respondents whose livelihood is farming	No. of respondents	% to Total Respondents whose livelihood is farming	No. of respondents	% to Total Respondents whose livelihood is farming		
Primary	20	58.8	13	21.0	28	53.8	61	41.2
Secondary	11	32.4	41	66.1	12	23.1	64	43.2
Tertiary	2	5.9	8	12.9	8	15.4	18	12.2
Fourth	1	2.9	0	0.0	2	3.8	3	2.0
Fifth	0	0.0	0	0.0	2	3.8	2	1.4
Total	34	50.0	62	100.0	52	100.0	148	100.0

C.2.1.2 Farm Size

The NIPAP RRA report (1997) states that a large percentage of farms in Sibuyan are less than one hectare in area. This is confirmed by the findings of the Baseline Survey where 58% of the farms were less than one hectare. (The respondents are located mainly in the upper portions of the low lands.) Further, 70% of the farms are less than two hectares. Only six out of the 148 farms may be considered large (more than 5 hectares.) Cajidiocan has the smallest farms where 55 out 62 farms are less than one hectare. San Fernando farmers have relatively larger farms with median sizes of around 2.5 hectares.

Table 32 Distribution of farm size of respondents engaged in farming by municipality.

Farm size (hectares)	Municipality			Total	
	Magdiwang	Cajidiocan	San Fernando	Total Respondents per Category	% to Total No. of Respondents engaged in Farming
<1	14	55	17	86	58.1
1.0-1.9	8	3	7	18	12.2
2.0-2.9	6	0	4	10	6.8
3.0-3.9	0	0	3	3	2.0
4.0-4.9	0	0	7	7	4.7
5.0-5.9	1	0	1	2	1.4
6.0-7.9	0	0	3	3	2.0
8.0-9.9	0	0	1	1	0.7
>10.0	1	0	1	2	1.4
No Answer	4	4	8	16	10.8
Total	34	62	52	148	100.0

C.2.1.3 Land Tenure

Table 33 Tenurial status by municipality

Tenurial Status	Municipality						Total	
	Magdiwang		Cajidiocan		San Fernando		No. of responses	% to Total No. of Respondents engaged in Farming
	No. of Responses	% to Total No. of Respondents engaged in farming per municipality	No. of Responses	% to Total No. of Respondents engaged in farming per municipality	No. of Responses	% to Total No. of Respondents engaged in farming per municipality		
Tenant	15	44	29	47	12	23	56	37.8
Owned	9	26	7	11	25	48	41	27.7
Rented	2	6	20	32	0	0	22	14.9
Leased	4	12	0	0	2	4	6	4.1
Others	0	0	0	0	2	4	2	1.4
No response	4	12	6	10	11	21	21	14.2
Total	34	100	62	100	52	100	148	100.0

Table 31 shows the tenurial status of the farmers by municipality. In Magdiwang, 44.1% (15 out of 34 farmers) are tenants, while in Cajidiocan the corresponding proportion is 47% (29 out of 62). In Cajidiocan 32.2% (20 out of 62 farmers) rent their farms. Table 32 shows that these rented farms are less than one hectare each. In San Fernando, almost one-half (25 out of 52) of the farms is rented. In sum, 37.8% of all the farms is tenanted while 27.7% is owned.

Table 34 Distribution of respondents engaged in farming by farm size and tenurial status

Farm Size (hectares)	Tenurial Status						Total	
	Tenant	Owned	Leased	Rented	Others	No Response on farm size	Total No. of Responses per farm size category	% to total respondents engaged in farming
<1.0	39	21	1	22	0	3	86	58.1
1.0 - 1.9	8	8	1	1	0	0	18	12.2
2.0 - 2.9	4	3	2	1	0	0	10	6.8
3.0 - 3.9	2	0	0	0	0	1	3	2.0
4.0-4.9	1	3	0	0	2	1	7	4.7
5.0-5.9	0	2	0	0	0	0	2	1.4
6.0-7.9	1	2	0	0	0	0	3	2.0
8.0-9.9	0	1	0	0	0	0	1	0.7
>10.0	1	1	0	0	0	0	2	1.4
No Response on tenurial status	0	0	0	0	0	16	16	10.8
Total No. of Respondents by tenurial status	56	41	4	24	2	21	148	100.00

C.2.1.4 Years in farming

Table 35 shows the number of years the farmers in the survey have been engaged in farming. About 22% said one to five years, another 22% eleven to twenty years and 20% twenty-one to 30 years. In Cajidiocan, almost one-half (30 out of 62) has been engaged in farming 6 to 20 years.

Table 35 Distribution of respondents engaged in farming by number of years in farming and by municipality

Years in Farming	Municipality			Total	
	Magdiwang	Cajidiocan	San Fernando	Total No. of Respondents per category	% to Total No. of Respondents Engaged in Farming for all Municipalities
<1	0	0	1	1	0.7
1 – 10	12	26	15	53	35.8
11 – 20	6	15	11	32	21.6
21 – 30	8	11	10	29	19.6
31 – 40	4	4	2	10	6.8
41 – 50	0	0	3	3	2.0
>50	0	0	1	1	0.7
No Answer	4	6	9	19	12.8
Total	34	62	52	148	100.0

C.2.1.5 Location of farm

Location of farm is defined either uphill or downhill with respect to the residence of the respondents. Table 36 shows that majority of the farms are uphill while about one third are downhill. Regardless of the location of the farm, a large number of the farms are less than 30 minutes away from the farmers' residence. This is especially true for the farms located downhill (33 out of 38 who responded).

In relation to the tenurial status, (Table 34) of the 41 farms claimed to be owned by the farmers, 28 or 68 % are located uphill.

Table 36 Distribution of location of farms by walking hours from farmers' residence

Location of farm	Number of walking hours						Total	
	<0.5	0.6 - 1.0	1.0 - 1.5	1.6 - 2.0	2.1 - 3.0	No Response on "location of farm"	Total No. of Respondents per Location category	% to total No. of Respondents engaged in farming
Uphill	41	22	7	1	2	10	83	56.1
Downhill	33	3	0	1	1	4	42	28.3
Others	1	0	0	0	0	0	1	0.7
No Response on "no. of hours spent"	5	0	0	0	0	17	22	14.9
Total No. of Respondents per "walking hours" category	80	25	7	2	3	31	148	100.0

Table 37 Distribution of farmers by location of farm and tenurial status

Location of farm	Tenurial status						Total	
	Tenant	Owned	Leased	Rented	Others	No Response on "location of farm"	Total No. of Responses per Location	% to total No. of Respondents engaged in farming
Uphill	31	28	0	17	2	5	83	56.1
Downhill	19	13	4	6	0	0	42	28.4
Others	1	0	0	0	0	0	1	0.7
No Response on "tenurial status"	5	0	0	1	0	16	22	14.9
Total No. of Responses per Tenurial Status	56	41	4	24	2	21	148	100.0

C.2.1.6 Gender division of labour in farming

Farming in rural Philippines is well known to be participated in by most members of the household, both male and female. This is likewise true for the farms in the survey sites as shown in Table 38. The study however did not reveal what specific tasks in the farm the adults and children of either sex undertake.

Table 38 Members of household involved in farming

Household members	Frequency of mention (No.)	Relative Frequency to total No. of respondents who are engaged in farming (n=148)
Adult male and adult female	74	50.0
Adult female	23	15.5
Adult male	21	14.2
Adult male, adult female and male child	9	6.1
Adult male and male child	7	4.7
Adult female, male child and female child	2	1.4
Male child	1	0.7
Female child	1	0.7
Adult male, adult female and female child	1	0.7
No Response	9	6.1
Total	148	100.0

C.2.1.7 Source of water for crops

This survey item had a large non-response rate (48%). However, among the 77 farmers who did respond, 40 said their farms were rain-fed. These were mostly located uphill. Of the 34 farmers located downhill that responded, 21 said they source their water from rivers and springs. Although there are national and communal irrigation systems operating in Sibuyan (e.g. Cantingas River Irrigation System and the Tampayan Communal Irrigation System) only 8 or 5.4 % of the respondents utilise this source of water. All eight farms are located downhill.

Table 39 Distribution of farmers by water supply and location of farm

Water Supply	Farm Location									
	Uphill		Downhill		Others		No answer to type of "water supply"		Total per Water Supply Category	
	No. of Respondents with Uphill Farms per category	% to Total Uphill Farms	No. of Respondents with Downhill Farms per category	% to Total Downhill Farms	No. of Respondents in Others category	% to Total Others Category	No. of Respondents	% to Total Respondents in Category	No. of Total Respondents	Relative Frequency to total No. of respondents who are engaged in farming (n=148)
Rainfed	36	43.4	3	7.1	1	100.0	0	0.0	40	27.0
Rivers/Springs	6	7.2	21	50.0	0	0.0	0	0.0	27	18.2
Irrigation System	0	0.0	8	19.0	0	0.0	0	0.0	8	5.4
Others	0	0.0	2	4.8	0	0.0	0	0.0	2	1.4
No answer to "location"	41	49.4	8	19.0	0	0.0	22	100.0	71	48.0
Total per Location	83	100.0	42	100.0	1	100.0	22	100.0	148	100.0

C.2.1.8 Perceived constraints in farming

Irrigated lands in Sibuyan are mostly planted with rice while swidden/upland farms (kaingin) are planted with bananas and root crops such as cassava, sweet potato and taro. The farmers in the survey were asked what difficulties they encountered in the course of their farming. The constraints most of them mentioned were lack or shortage of land, lack of capital, pest/disease, lack selected seeds, and others as listed in Table 40.

Table 40 Distribution of constraints experienced by respondents in farming (n=148)

Constraints Mentioned	Frequency of Mention (No.)	Relative Frequency to total frequency of mention of response (n=261) (%)	Relative Frequency to total No. of respondents who are engaged in farming (n=148)
Lack of Capital	57	21.8	38.5
Lack/shortage of land	44	16.9	29.7
Lack of Selected seeds	35	13.4	23.6
Lack of Technical support	28	10.7	18.9
Pest/diseases	23	8.8	15.5
Labour force	12	4.6	8.1
Lack of Market outlets	11	4.2	7.4
Fertilisers/chemicals	10	3.8	6.8
Lack of Irrigation	9	3.4	6.1
Others	9	3.4	6.1
Lack of Selected breeds	5	1.9	3.4
Inadequacy of Skills	3	1.1	2.0
Lack or Inadequacy of Fishing gear	1	0.4	0.7
Water	1	0.4	0.7
No Response	13	5.0	8.8
Total	261	100.0	

C.2.1.9 Desired new crops**Table 41 Distribution of crops that farmers would like to raise**

New Crops	Frequency of Mention (No.)	Relative Frequency to total frequency of mention of response (n=251) (%)	Relative Frequency to total No. of respondents who were engaged in farming (n=148)
String Beans	28	11.2	18.9
Potato	23	9.2	15.5
Rice	16	6.4	10.8
Sweet Potato	16	6.4	10.8
Cabbage	15	6.0	10.1
Gabi	14	5.6	9.5
Sayote	14	5.6	9.5
Pechay	11	4.4	7.4
Coffee	10	4.0	6.8
Eggplant	10	4.0	6.8
Lanzones	7	2.8	4.7
Banana	7	2.8	4.7
Mustard	7	2.8	4.7
Mango	6	2.4	4.1
Cassava	6	2.4	4.1
Corn	6	2.4	4.1
Carrots	6	2.4	4.1
Citrus	5	2.0	3.4
Peanuts	5	2.0	3.4
Squash	5	2.0	3.4
Coconut	5	2.0	3.4
Onion	4	1.6	2.7
Radish	4	1.6	2.7
Mongo	3	1.2	2.0
Garlic	3	1.2	2.0
Kalamansi	3	1.2	2.0
Okra	3	1.2	2.0
Cacao	2	0.8	1.4
Rambutan	2	0.8	1.4
Pakwan	1	0.4	0.7
Pineapple	1	0.4	0.7
Starapple	1	0.4	0.7
Not Applicable	2	0.8	1.4
Total	251	100.0	

The farmers in the survey were asked what new crops they would like to raise. Among the answers were taro, rice, potato, coffee and vegetables such as sayote, cabbage, pechay, eggplant, string beans, etc. (Table 41). The farmers felt that diversifying their farms by planting new crops, especially vegetables would be beneficial to their livelihood.

However, certain constraints prevent them from doing so. Among these are lack of the following: land, capital, technical support, selected seeds, fertilisers, market outlets and others shown in Table 42.

Table 42 Distribution of constraints preventing farmers from raising new crops (n=148)

Constraints	Frequency of Mention (No.)	Relative Frequency to total frequency of mention of response (n=487) (%)	Relative Frequency to total No. of respondents engaged in farming (n=148) (%)
Lack of capital	142	29.2	95.9
Lack of selected seeds	124	25.5	83.8
Lack/shortage of land	61	12.5	41.2
Lack of technical support	46	9.4	31.1
Lack of labour force	31	6.4	20.9
Lack of market outlets	28	5.7	18.9
Pest/diseases	19	3.9	12.8
Lack of fertilisers or chemicals	19	3.9	12.8
Lack of skills	4	0.8	2.7
Others	4	0.8	2.7
None	4	0.8	2.7
Lack of tools	3	0.6	2.0
Irrigation	1	0.2	0.7
No Answer	1	0.2	0.7
Total frequency of responses	487	100.0	

C.2.2 Use of forest resources

C.2.2.1 Ranking as income source

As shown in Table 43, 112 respondents out of the 210 sampled in this survey admitted that the harvesting of forest products is a livelihood activity in their community. Of these 112 respondents, 61 or 54.5% ranked this activity as a primary income source.

Table 43 Rank of forestry as income source by municipality

Rank	Municipality						Total	
	Magdiwang		Cajidiocan		San Fernando		All Municipalities	
	No. of responses	% to responses per municipality	No. of responses	% to responses per municipality	No. of responses	% to responses per municipality	No. of responses	% to total no. of respondents engaged in forestry for all municipalities
Primary	2	40	48	74	11	26	61	54.5
Secondary	2	40	7	11	6	14	15	13.4
Tertiary	1	20	9	14	14	33	24	21.4
Fourth	0	0	0	0	9	21	9	8.0
Fifth	0	0	1	1	2	6	3	2.7
Total	5	100	65	100	42	100	112	100.0

Cajidiocan had 65; San Fernando had 42 and Magdiwang only 5 respondents who reported forestry as income source. The importance of this livelihood activity to the Cajidiocan respondents is somewhat striking as almost all of them reported it as a

source of income. In fact, 48 out of 65 or 73.8% depend on it as a primary income source.

In terms of the total respondent size, 112 out of the 210 respondents, or 53% were engaged in livelihood, which concerns or involves forest products. The concentration of this is in Cajidiocan, where 65 of the 71 respondents (92%) were engaged in livelihood activities concerned with forestry.

C.2.2.2 Harvesting of forest products

The respondents were asked to list forest products, which were important for the livelihood of the people in their sitio. The results are shown in Table 44. The most commonly mentioned are nito, vines, timber, honey, rattan and medicinal plants.

Table 44 Distribution of harvested forest products

Forest Products	Frequency of Mention (No.)	Relative Frequency to total no. of mention (n=809) (%)	Relative Frequency to total no. of respondents (n=210)
Nito	192	23.7	91.4
Vines	135	16.7	64.3
Timber	101	12.5	48.1
Honey	98	12.1	46.7
Rattan	85	10.5	40.5
Medicinal Plants	60	7.4	28.6
Wild Fruits	53	6.6	25.2
Almaciga Resin	40	4.9	19.0
Freshwater Fish	27	3.3	12.9
Others	7	0.9	3.3
Orchids	3	0.4	1.4
Bago Leaves	3	0.4	1.4
No Response	3	0.4	1.4
Game	2	0.2	1.0
Total number of responses	809	100.0	

The respondents were also asked how far they had to walk to gather Non-Timber Forest Products (NTFP). The elaboration of the responses in Table 44 indicates that the median (the class is shaded) walking time necessary to justify the effort for harvesting nito is between ½ and 1 hour, for harvesting rattan 1, to 1 and ½ hours and for harvesting honey 2.6 to 3 hours. These findings are quite encouraging considering the relatively limited time necessary to reach the harvesting grounds of most NTFP. This indicates that at the time of the survey the resources were still abundant.

Table 45 Distribution of walking distances justifying the effort in harvesting NTFP

NTFP Product	Classes of walking distance in hours (median classes are shaded)												Total No.
	<0.5	0.5-1.0	1.1-1.5	1.6-2.0	2.1-2.5	2.6-3.0	3.1-4.0	4.1-5.0	5.1-6.0	6.1-7.0	7.1-12	No Answer	
Nito	60	68	17	15	3	10	6	0	0	0	0	1	180
Vines	8	27	30	14	2	7	19	11	5	1	0	1	125
Honey	2	5	2	11	22	17	11	11	7	0	5	0	93
Rattan	6	30	10	3	1	10	13	2	5	1	1	0	82
Medicinal plants	52	2	0	1	0	0	0	0	0	0	0	0	55
Wild Fruits	28	8	9	4	0	0	0	0	0	0	0	0	49
Almaciga Resin	2	1	10	10	11	1	2	0	0	0	1	0	38
Bago Leaves	1	3	0	0	0	0	0	0	0	0	0	0	4
Orchids	1	0	0	0	0	2	0	0	0	0	0	0	3
Others	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	160	145	78	58	39	47	51	24	17	2	7	2	630

C.2.3 Source of fuel

90% of the respondents uses exclusively firewood for cooking (Table 46). Other fuels used are charcoal, Liquefied petroleum Gas (LPG) and electricity. Another 6% use firewood in combination with charcoal and electricity.

Table 46 Source of fuel for cooking by type

Type of fuel (and combinations)	Frequency of mention (No.)	Relative Frequency on total No. of respondents (n=210)
Firewood	189	90.0
Firewood and Charcoal	11	5.2
Charcoal	2	1.0
LPG and Charcoal	2	1.0
Firewood and LPG	2	1.0
LPG	1	0.5
LPG and Electricity	1	0.5
No response	2	1.0
Total	210	100.0

C.2.3.1 Harvest and use of firewood

The respondents meet their firewood needs mostly in the mountains. A few gather it from their surroundings or the seashore.

Table 47 Source of firewood for cooking purposes

Source of firewood	Frequency of Mention (Number)	Relative Frequency on the total number of responses (n=202) in %	Relative Frequency (% on the total number of respondents) (n=210)
Mountain	184	91.1	87.6
Seashore	8	4.0	3.8
Surroundings	4	2.0	1.9
No Response	3	1.5	1.4
Mountains & Seashore	2	1.0	1.0
Store	1	0.5	0.5
Total	202	100.00	

Those using firewood were questioned on the daily domestic consumption. In the analysis of the data the replies were grouped into classes of five-unit intervals (pieces of firewood) as shown in Table 48. The median number of pieces of firewood used by each household on a daily basis is 12. Considering the average volume of one piece of firewood being 1,400 cm³, then the daily family consumption corresponds to 0.017 m³ or 0.6 cubic feet of stack wood. The yearly estimated consumption of fuelwood per household is therefore 6.2 m³. Considering the total number of households residing on the Island approximating 10,000 and the percentage of these using firewood (90%), the estimated yearly firewood consumption totals 55,800 m³. Adding to this the requirements of the bakeries and the ones for heating purposes (upland settlers), it is reasonable to set the fuelwood demand close to 70,000 m³ per year.

Table 48 Number of pieces of firewood consumed by households for cooking per day

Daily consumption of pieces of firewood for cooking purposes (classes)	Frequency of Mention (no.)	Relative Frequency (% on the total number of responses) (n=202)	Relative Frequency (% on the total number of respondents) (n=210)
5 – 10	65	32.0	31.0
11 – 15	71	35.0	33.8
16 – 20	40	20.0	19.0
21 – 25	7	3.5	3.33
26 – 30	3	1.5	1.43
Uncertain*	16	8.0	7.62
TOTAL	202	100.0	

C.2.3.2 Forest products for construction purposes

Respondents identified seven main forest products used for constructing dwellings. As mentioned in Table 8, about 95% of the respondents lives in houses made of light materials like bamboo, wood/timber, coconut or nipa leaves and coco-lumber.

Except for cement, these construction materials are generally gathered from the mountain/forest.

Table 49 Construction material by use

Material	House Construction	Post	Flooring	Walling/ Roofing	No answer	Total per material type	Relative Frequency on the total number of responses (n=306) in %	Relative Frequency (%on the total number of respondents) (n=210)
Lumber	178	9	0	7	1	195	63.7	92.9
Coco/Nipa leaves	50	0	0	7	0	57	18.6	27.1
Bamboo	14	0	1	0	0	15	4.9	7.1
Coco lumber	5	0	0	4	0	9	2.9	4.3
Banga leaves	7	0	0	0	0	7	2.3	3.3
Luway	5	0	0	0	0	5	1.6	2.4
Cement	4	0	0	0	0	4	1.3	1.9
Cogon	0	0	0	1	0	1	0.3	0.5
GI Sheet	1	0	0	0	0	1	0.3	0.5
No answer	0	0	0	0	12	12	3.9	5.7
Total per Use	264	9	1	19	13	306	100.0	

Table 50 Construction material by source

Material	Mountain/ Forest	Store	Seashore/ Farm	Downhill	Forest & Downhill	No Answer for Source	Frequency of mention (No.)	Relative Frequency on the total number of responses (n=306) in %	Relative Frequency (%on the total number of respondents) (n=210)
Wood/timber/Lumber	195	0	0	0	1	1	197	64.4	93.8
Coco/Nipa leaves	35	0	1	16	5	0	57	18.6	27.1
Bamboo	5	0	1	4	5	0	15	4.9	7.1
Coco lumber	5	1	0	0	3	0	9	2.9	4.3
Banga leaves	7	0	0	0	0	0	7	2.3	3.3
Luway	5	0	0	0	0	0	5	1.6	2.4
Cement	0	4	0	0	0	0	4	1.3	1.9
Cogon	1	0	0	0	0	0	1	0.3	0.5
GI Sheet	0	1	0	0	0	0	1	0.3	0.5
No Answer for Material Used	0	0	0	0	0	12	12	3.9	5.7
Totals	251	6	2	20	14	13	306	100.0	

C.2.3.3 Fuel for lighting

Another material gathered from the forest is almaciga resin, which some respondents said they used for lighting purposes. However, almost all households (99.5%) use kerosene. (Table 51)

Table 51 Fuel for lighting by source

Fuel	Store	Forest	Generator	Frequency of mention (No.)	Relative Frequency on the total number of responses (n=237) in %	Relative Frequency to the total number of respondents (n=210) %
Kerosene	209	0	0	209	88.2	99.5
Almaciga Resin	0	27	0	27	11.4	12.9
Electricity	0	0	1	1	0.4	0.5
Total	209	27	1	237	100.0	

C.2.3.4 Game as part of the diet

The respondents were asked if game is part of the diet of the members of their community. About three-fourths (75%) of the respondents in Magdiwang and San Fernando answered positively. Surprisingly, all the sampled households in Cajidiocan answered "NO" as shown in Table 52.

The answers are likely not to correspond to reality¹. First we would like to recall that 70% of the respondents in Cajidiocan ranked forestry as their primary source of income, secondly almost 48% of the respondents in the municipality are Indigenous Peoples, who are known to make ample use game in their diet.

Table 52 Wild animals as part of the community's diet

Response	Municipality			Total	
	Magdiwang	Cajidiocan	San Fernando	Frequency of mention (No.)	Relative Frequency (%on the total number of respondents) (n=210)
Yes	51	0	53	104	49.5
No	13	69	18	100	47.6
No answer	6	0	0	6	2.9
Total	70	69	71	210	100.0

In San Fernando and Magdiwang, the most commonly eaten game includes wild pig, and wild chicken. Alarming for conservationists, 14% of those acknowledging that game is part of their neighbours diet included bats in the menu Table 53.

Table 53 Distribution of wild game as part of the community's diet

Type of game	Frequency of mention (No.)	Relative Frequency on the total number of responses (n=143) in %	Relative Frequency (%on the total number of respondents acknowledging game being part of the diet of the community) (n=104)*
Wild Pig	66	46.2	63.5
Wild chicken	52	36.4	50.0
Bats	15	10.5	14.4
Monkey	4	2.8	3.8
Flying Lizard	4	2.8	3.8
Snake	2	1.4	1.9
Total	143	100.0	

C.2.3.5 Gender division of labour in forest related activities

In many studies on "women and the environment" in less developed countries, the task of gathering firewood has always been associated with women. The result of this Baseline Survey however shows that in Sibuyan Island, this activity is shared jointly by both males and females including children. (Table 54). Only 49 respondents reported this to be the responsibility of the male member of the household.

The gathering of construction materials for dwelling units is predominantly a male activity. Nonetheless women share the burden as well as shown in Table 55.

¹ The bias in replying may be due to an erroneous translation of the term "game" or to the fact that the enumerator was known as a member of the Forest Protection MSFP thus representing the law enforcers.

Table 54 Household member involved in gathering firewood

Household member	Frequency of mention (No.)	Relative Frequency (%) on the total number of responses (n=210)	Relative Frequency (% on the total number of respondents) (N=210)
Adult male and female	50	23.8	23.8
All members of household	35	16.7	16.7
Adults and male child	26	12.4	12.4
Adult male	22	10.5	10.5
Adult male and male child	19	9.0	9.0
Male child	8	3.8	3.8
Adult female	5	2.4	2.4
Adults and female child	5	2.4	2.4
Adult female and male child	3	1.4	1.4
Male and female children	3	1.4	1.4
Adult female and children	3	1.4	1.4
Adult female and female child	2	1.0	1.0
Female child	1	0.5	0.5
Adult male and female child	1	0.5	0.5
No answer	27	12.9	12.9
Total	210	100.0	100.0

Table 55 Household members involved in gathering construction materials

Construction materials	Adult male	Adult male and female	Male child	Adult female	Adult male and male child	Adult female and male child	Adult male, adult female and male child	All members of household	Not applicable	No Answer to household member involved in gathering	Total per material category	Relative Frequency to total number of responses (%) (n=299)	Relative Frequency to total number of respondents (%) (N=210)*
Wood/timber	117	30	10	2	6	1	3	2	4	13	188	63.5	89.5
Coco/nipa leaves	23	27	0	3	1	1	2	0	0	0	57	19.3	27.1
Coco lumber	5	1	1	0	1	0	0	0	0	1	9	3.0	4.3
Lumber	6	0	0	0	1	0	0	0	0	0	7	2.4	3.3
Banga leaves	0	6	0	0	0	0	1	0	0	0	7	2.4	3.3
Bamboo	3	1	0	0	0	1	0	0	0	0	5	1.7	2.4
Luway	0	5	0	0	0	0	0	0	0	0	5	1.7	2.4
Cement	0	1	0	0	0	0	0	0	1	2	4	1.3	1.9
Cogon	1	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Gl sheets	0	0	0	0	0	0	0	0	1	0	1	0.3	0.5
No Answer to type of construction material gathered	0	0	0	0	0	0	0	0	0	12	12	4.0	5.7
Total per household member type	155	71	11	5	9	3	6	2	6	16	296	100.0	

*Multiple response. Percentages will not add up to 100%.

C.2.3.6 Experience and attitudes towards tree planting

Respondents were asked how many and what types of trees they had planted. The answers have been encouraging since 65% of the respondents claimed having planted a range of one to ten trees and 81% a range of 1 to 20 trees.

Table 56 Tree Species and Number of Trees Planted

Tree Species	Frequency of mention per number of trees planted												No Answer to number of trees planted	Frequency of mention (No.)	Relative Frequency on Total No. of Responses (%)	Relative Frequency (% on total no. of respondents) (N=210)
	1-10	11-20	21-30	31-40	41-50	51-60	61-70	81-90	91-100	101-110	111-120					
Mango	91	21	6	1	7	2	0	0	0	0	1	0	1	130	35.4	61.9
Jack-tree	41	3	0	0	0	0	0	0	0	0	0	0	1	45	12.3	21.4
Avocado	29	3	0	0	1	0	0	0	0	0	0	0	0	33	9.0	15.7
Coconut	11	9	1	2	0	0	2	2	1	0	2	0	0	30	8.2	14.3
Banana	7	9	4	1	4	0	0	0	2	0	0	0	0	27	7.4	12.9
Mahogany	6	3	2	0	3	1	0	0	1	0	1	0	0	17	4.6	8.1
Santol	8	0	0	0	0	0	0	0	0	0	0	0	0	8	2.2	3.8
Citrus/Pomelo	3	3	1	0	0	0	0	0	0	0	1	0	0	8	2.2	3.8
Narra	2	1	1	0	2	0	0	0	0	0	1	0	0	7	1.8	3.3
Calamansi	4	0	1	0	0	1	0	0	0	0	0	0	0	6	1.6	2.9
Chico	4	1	0	0	0	0	0	0	0	0	0	0	0	5	1.4	2.4
Paper Tree	0	1	1	0	0	0	0	0	0	1	0	1	0	4	1.1	1.9
Guava	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0.8	1.4
Papaya	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0.8	1.4
Coffee	0	0	0	0	1	1	0	0	0	0	1	0	0	3	0.8	1.4
Starapple	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5	1.0
Cashew	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5	1.0
Apitong	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Tambis/Makopa	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Duhut	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Bamboo	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Balaw	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Buri	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
Ipil-Ipil	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.3	0.5
Molave	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
None	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
No Response	0	0	0	0	0	0	0	0	0	0	0	0	0	25	6.8	11.9
Total	220	56	18	4	18	5	2	2	5	1	8	2	367	100		

*Multiple response. Percentages will not add up to 100%

The above table shows that mango is the most widely planted species as stated by 130 or 62% of the respondents. Other widely planted trees are avocado, “banana”, coconut and jack-tree. Nine respondents stated having planted more than 100 trees, particularly mahogany, coconut, citrus, coffee, paper tree, narra and ipil-ipil.

When questioned on what species of trees they would like to plant, the majority (54.3%) cited mainly fast growing exotic species like mahogany (mentioned by 54% of the respondents), eucalyptus (15%) and paper-tree (14%). Interestingly native forest species, including lauan (7%), nito (7%) and narra (5%) encountered some favours among the respondents as shown below.

Table 57 Distribution of tree (and other) species respondents would like to plant

Tree Species	Frequency of mention (No.)	Relative Frequency (% on the total number of responses (n=298)*	Relative Frequency (% on the total number of respondents) (N=210)
Mahogany	114	38.3	54.3
Eucalyptus	31	10.4	14.8
Paper tree	29	9.7	13.8
Lauan	15	5.0	7.1
Nito	14	4.7	6.7
Narra	11	3.7	5.2
Mango	1	0.3	0.5
Balaw	1	0.3	0.5
Buri	1	0.3	0.5
Cotton Tree	1	0.3	0.5
Tanguile	1	0.3	0.5
No answer	79	26.5	37.6
Total	298	100.0	

Respondents were later questioned on what constraints them from planting such species. The answers are summarised in the Table below and include in decreasing order of importance lack of the following: land, capital, technical support, selected seeds and market outlets.

Table 58 Constraints mentioned by respondents who would like to plant new tree species

Constraints/problems	Total Frequency of mention for each category for all tree types (No.)	Relative Frequency (%) on the total number of responses (n=477)	Relative Frequency (%on the total number of respondents) (N=131)
Lack of Capital	166	34.8	126.7
Lack of Technical support	99	20.8	75.6
Insufficient Market outlets	81	17.0	61.8
Lack/shortage of land	64	13.4	48.9
Lack of Selected seeds	45	9.4	34.4
Inadequate Labour force	9	1.9	6.9
Lack of Information	2	0.4	1.5
Inadequate Skills	2	0.4	1.5
Lack of Tools	2	0.4	1.5
Lack of Transportation	2	0.4	1.5
Pest/diseases	1	0.2	0.8
Lack of Water for Irrigation	1	0.2	0.8
Others	1	0.2	0.8
No Answer	2	0.4	1.5
Total number of responses	477	100.0	

*Multiple responses, Percentages will not add up to 100

C.2.4 Fisheries

C.2.4.1 Ranking as income source

Considering that the sample of the survey has been purposively selected close to the park, thus in the upper portions of the foothills, it is remarkable that 22% of the sample households considers this activity as a source of income. In these cases the activity may be practised in freshwaters. In the case of some barangays where the steep mountain slopes directly lead to the seashore, fisheries are easily coupled to harvesting of forest resources. As an example this is the case of barangays Silum (Magdiwang) and Taclobo (San Fernando), where farming is constraint by shortage of arable land and harvesting of forest resources and fishing are complementary seasonal enterprises.

Table 59 Rank of fishery as an income source by municipality

Rank	Municipality			Total per Rank	
	Magdiwang	Cajidiocan	San Fernando	Frequency of mention for all municipalities (No.)	Relative Frequency (%on the total number of respondents engaged in fishing (n=46)
Primary	6	1	5	12	26.1
Secondary	3	0	13	16	34.8
Tertiary	3	3	10	16	34.8
Fourth	0	0	2	2	4.3
Fifth	0	0	0	0	0.0
No Answer	0	0	0	0	0.0
Total per Municipality	12	4	30	46	100.0

As Table 59 shows, 12 of the 46 fishermen ranked this activity as a primary source of income, while 16 ranked it as secondary, and another 16 as tertiary income source.

C.2.4.2 Perceived constraints in fishing

The constraints perceived by the fishermen include lack of fishing gear, boats and capital. Limited fishing grounds are mentioned as well. This may be coupled to the fact that the waters surrounding Sibuyan Island are generally very deep and powerful vessels are needed for fishing.

Table 60 Constraints mentioned by fishermen

Constraints/problems	Frequency of mention (No.)	Relative Frequency (% on the total number of responses (n=63))	Relative Frequency (% on the total number of respondents engaged in fishing) (n=46)
Lack of fishing gear	20	31.7	43.5
Lack of <i>banca</i> or boat	12	19.0	26.1
Lack of capital	9	14.3	19.6
Limited Fishing ground	4	6.3	8.7
Lack of selected fingerlings	3	4.8	6.5
Lack of tools	2	3.2	4.3
Lack of skills	1	1.6	2.2
Pest/diseases	1	1.6	2.2
Market outlets	1	1.6	2.2
Others	2	3.2	4.3
No response	8	12.7	17.4
Total number of responses	63	100.0	

C.2.5 Wage labour

C.2.5.1 Ranking as an income source

Of the 210 respondents in this survey, 62 or 30% works for wages. Table 61 shows that 22 of these wage earners are from Magdiwang, 40 from San Fernando and none from Cajidiocan.

Table 61 Rank of wage labour as an income source

Rank	Municipality			All Municipalities	
	Magdiwang	Cajidiocan	San Fernando	Frequency of mention (No.)	Relative Frequency (% on the total number of respondents engaged in wage labour (n=62))
Primary	11	0	13	24	38.7
Secondary	5	0	13	18	29.0
Tertiary	5	0	7	12	19.4
Fourth	1	0	7	8	12.9
Fifth	0	0	0	0	0.0
No Answer	0	0	0	0	0.0
Total	22	0	40	62	100.0

Table 61 shows that 38.7% of these 62 respondents consider wage labour as its primary source of income, while 29% consider it as the secondary source. This constitutes two thirds of all wage labourers.

The involvement of household members in wage labour is shown in Table 62. As expected, the adults predominate. Noteworthy is that, in San Fernando, there seem to be more female wage earners than male.

Table 62 Involved household members in what appears to be wage labour

Household members	Municipality			All municipalities	
	Magdiwang	Cajidiocan	San Fernando	Frequency of mention (No.)	Relative Frequency (% on the total number of respondents engaged in wage labour. (n=62)
Adult female	3	0	14	17	27.4
Adult male and adult female	3	0	13	16	25.8
Adult male	11	0	3	14	22.6
Other combinations	0	0	4	4	6.5
Male child	1	0	0	1	1.6
Female child	1	0	0	1	1.6
No Answer	3	0	6	9	14.5
Total	22	0	40	62	100.0

C.2.6 Livestock and poultry production

C.2.6.1 Ranking as an income source

Among the 210 respondents in the survey, 136 or 65% said they were poultry or livestock raisers. However, only 12 or 5.7% considered livestock and poultry as their primary income source (Table 63). Thus, many respondents use this activity only to supplement their incomes.

Table 63 Rank of livestock as income source of livestock raisers by municipality

Rank	Municipality						All Municipalities	
	Magdiwang		Cajidiocan		San Fernando		Frequency of mention (No.)	Relative Frequency (% on the total number of respondents engaged in livestock raising (n=136)
	No.	%	No.	%	No.	%		
Primary	2	4	6	15	4	9	12	8.8
Secondary	17	35	15	37	16	34	48	35.3
Tertiary	27	55	19	48	15	32	61	44.9
Fourth	3	6	0	0	10	21	13	9.6
Fifth	0	0	0	0	2	4	2	1.5
Total	49	100	40	100	47	100	136	100.0

As Table 63 shows, while 12 of the 136 livestock and poultry raisers ranked this as primary, 109 or 80% considered this activity as secondary or tertiary source of income. This ranking is most evident in Magdiwang where the equivalent proportion is 90%.

C.2.6.2 Gender division of labour in livestock and poultry

Among the 136 respondents, more females (23.5%) are involved in livestock and poultry management than males (13.2%). In 30% of the responses, both male and female adults are involved (Table 64). As in farming therefore, women are active participants in the livestock and poultry industry.

Table 64 Household member involved in livestock management

Household member	Frequency of mention (No.)	Relative Frequency (% on the total number of responses (n=136))	Relative Frequency (% on the total number of respondents engaged in livestock raising (n=136))
Adult male and adult female	41	30.1	19.5
Adult female	32	23.5	15.2
Adult male	18	13.2	8.6
Adult male, adult female and male child	12	8.8	5.7
Adult male and male child	4	2.9	1.9
Adult female and male child	4	2.9	1.9
Adult female, male child and female child	4	2.9	1.9
Adult male, adult female and female child	3	2.2	1.4
Combination of all	3	2.2	1.4
Male child	2	1.5	0.9
Female child	1	0.7	0.5
Adult female and female child	1	0.7	0.5
No Answer	11	8.1	5.2
Total	136	100.0	

C.2.6.3 Desired new type of livestock

When asked what new breeds of livestock or poultry they would like to raise, the respondents came up with a variety of stocks shown in Table 65. The most commonly mentioned were swine (44%) and cows (34%). Around 23% wanted to raise 45-day-old chicks and another 23% preferred carabaos.

Table 65 Type of Livestock that respondents would like to raise

Type of Livestock	Frequency of mention (No.)	Relative Frequency (% on total no. of responses (n=332))	Relative Frequency (% on total no. of respondents (n=210)*)
Hogs/swine	92	27.7	43.8
Cow	71	21.4	33.8
Chicken (45 day old)	48	14.5	22.9
Carabao	48	14.5	22.9
No Answer	31	9.3	14.8
Goats	26	7.8	12.4
Horses	12	3.6	5.7
Duck	4	1.2	1.9
Total Responses	332	100.0	

*Multiple responses. Total will not add up to 100%

C.2.6.4 Perceived problems and constraints in livestock production

Respondents expressed interest in starting livestock and/or poultry production or expanding existing ones. However, they listed the constraints that would prevent them from doing so.

These include in decreasing order of importance lack of the following: capital, technical support, selected breeds and market outlets.

Table 66 Perceived constraints and problems in raising new livestock

Constraints/problems	Total Frequency of mention per category for all types of livestock (No.)	Relative Frequency (% on total no. of responses (n=546))	Relative Frequency on total no. of respondents (n=210)
Lack of capital	246	45.1	117.1
Lack of selected breeds	110	20.1	52.4
Lack of technical support	81	14.8	38.6
Lack of market outlets	36	6.6	17.1
Lack/shortage of land	23	4.2	11.0
Lack of feeds	23	4.2	11.0
None	10	1.8	4.8
Lack of labour force	7	1.3	3.3
Pest/diseases	4	0.7	1.9
Fertilisers/chemicals/medicines	3	0.5	1.4
Lack of skills	1	0.2	0.5
Others	2	0.4	1.0
Total	546	100.0	

C.2.7 Other income sources

As mentioned before, many of the respondents are engaged in “other” activities to generate additional income for the household. Most prominent among these are basket weaving and copra making. Baskets are woven from nito, rattan and vines.

These activities are most prevalent in Magdiwang, where a third (33%) of the respondents is engaged in basket weaving and one fourth (25%) in copra making. About 31% has “other” sources of income such as gathering of tuba, sea weeds and sea cucumbers, nipa making, charcoal making, home made pastries and store keeping.

In contrast, respondents from Cajidiocan do not have “other” income sources. As shown in Table 29, they only engage in farming, fishing, livestock raising and harvesting of forest products.

In San Fernando, 30% of the respondents are engaged in “other” activities to augment their income from farming and wage labour which are the primary activities of more than half of the respondents.

C.2.8 Household Yearly Expenditure Pattern

The economic welfare of a community is usually measured by the income level of its residents. However, income is a concept often difficult to estimate, and economists sometimes use proxy variables. One such proxy is the level of expenditure of a household.

In the case of the Sibuyan study, it was felt that a detailed expenditure survey would not be feasible since the respondents might not be able to recall exactly how much they spent for each expenditure item for a particular time period. Instead, they were asked to estimate *the proportion* of their total yearly expenses allotted to such items as food, clothing, education, medicine/health, house repair, fuel/electricity, recreation and other household needs.

C.2.8.1 Expenditure on food

Table 67 Expenditure pattern of Mt. Guiting-guiting respondents

Expenditure Items	Magdiwang	Cajidiocan	San Fernando	Total
	Mean Expenditure (%) n=67	Mean Expenditure (%) N=69	Mean Expenditure (%) N=71	Mean Expenditure (%) n=207
Food	58.5	75.4	58.8	64.2
Fuel & other household needs	2.2	2.2	20.9	8.6
Education	12.1	2.0	8.5	7.5
Clothing	11.7	7.0	2.7	7.0
Medicinal/health	12.1	2.4	3.1	5.8
Recreation	0.8	6.3	5.1	4.1
House repair	2.7	4.6	0.9	2.8
Total	100.0	100.0	100.0	100.0

As per Table 67, 64.2% of the expenditure budget of the respondents goes to food. This percentage is higher than the 56% reported by the 1997 Family Income Expenditure Survey (FIES) of the National Statistics Office for rural Philippines. Studies here show that one measure of poverty level is the proportion of total expenditures allotted to food. Thus, we might conclude that the Sibuyan respondents are poorer than the rural population of the Philippines in general.

However, if we examine the expenditure patterns of the single municipality, we note significant differences. The Magdiwang and San Fernando households reported food budget allotments of 58.5% and 58.8% respectively. These are very near the values reported in the 1997 FIES of NSO. Cajidiocan respondents on the other hand, reported that 75.4% of their expenditure went to food, with very little left for other items. This indicator of the poverty level in the upland areas of Cajidiocan can perhaps be associated to the fact that - as shown in Table 29 - there is little economic activity in the area with 70% of the respondents dependent on the harvesting of forest products as their primary activity, plus some agriculture and livestock raising. Another factor that may have contributed to the low economic activity and poverty level in Cajidiocan would be the fact that almost 50% of the respondents surveyed in Cajidiocan are marginalised Indigenous People, who do not have too much in terms of livelihood sources, and consequently disposable income.

C.2.8.2 Expenditure on other items

The surveyed households in the survey spent 7.0% of their budget on clothing, 7.5% on education, 5.8% on medicine/health, 2.8% on house repair, 4.1% on recreation and 8.6% on fuel and other household needs. Behind these average figures however are differences indicative of the economic activities prevalent in each municipality.

In Magdiwang, for instance, 12% is allotted to each of the following: clothing, and health care. This is more than the corresponding allocation in the other two municipalities. It may be hypothesised that this is related to the fact that activities in Magdiwang are more varied. Apart from agriculture (28.6%), the primary occupations of the 41.4% of the respondents are "other" activities such as copra making, basket weaving, storekeeping, etc.

In the uplands of Cajidiocan, where the primary occupation of 70% of the population is the gathering of forest products, 7.0% is allotted to clothing, 4.6% to house repair and 6.3% to recreation with minimal expenditure for the other items.

A special mention should go to the proportion of the yearly expenditures allocated to education. Magdiwang registers the highest share with 12%, followed by San Fernando (8.5%) and lastly by Cajidiocan (2%).

In San Fernando farming is the primary occupation of 39.4% of the respondents, but wage labour is the primary and secondary sources of income of 36.6%. This might explain why 8.5% is allotted to education, 20.9% to other household needs since these households may have relatively more cash on hand. The distribution of the different percentages allotted to the various expenditure items in each municipality is shown in Annex 1, Annex 2 and Annex 3. The median percentage for each expenditure item can be easily discerned from the distributions. The number of respondents who reported spending on each item is also shown. Again, Cajidiocan differs from the other two municipalities in that, apart from food, most of the respondents reported spending only on clothing, house repair and recreation.

C.3 ENVIRONMENTAL AWARENESS

C.3.1 Observed Changes in the Availability of Natural Resources

The respondents were asked what changes in the environment they noticed, over the years. Almost a third (29%) of the respondents kept silent, falling into a remarkably consistent “no answer” category. Among the responses given the disappearance of big trees (observation mentioned by 24% of all respondents) is the most frequently noticed change.

Table 68 Changes observed by respondents on the resources and environment

Observed changes	Frequency of mention (No.)	Relative Frequency (% on total no. of responses (n= 316))	Relative Frequency on total no. of respondents (n=210)
Disappearance of big trees nearby	51	16.1	24.3
Decreasing species of fauna/flora in nearby places	29	9.2	13.8
Fewer fresh water shrimps/fish	24	7.6	11.4
Decreasing soil fertility	20	6.3	9.5
Decreasing forest density	15	4.7	7.1
Migration of fauna	15	4.7	7.1
Scarcity of water	14	4.4	6.7
Frequent floods during rainy months	12	3.8	5.7
Disappearance of NTFP nearby	11	3.5	5.2
Introduction of new species of shrubs	10	3.2	4.8
Silting of river beds	10	3.2	4.8
Scarcity of sea products	9	2.8	4.3
Drying up of creeks/ rivers during summer	9	2.8	4.3
Exploitation of forest products	8	2.5	3.8
Conversion of forested area into farms	8	2.5	3.8
High incidence of soil erosion in nearby areas	8	2.5	3.8
River/creeks become muddy	2	0.6	1.0
No answer	61	19.3	29.0
Total	316	100.0	

Other responses were also related to forest denudation or dwindling of forest resources. Some observations related to depletion of the forest cover include decreasing forest density which accounted for 7.1%, exploitation of forest products (3.8%) and the conversion of forested area into farms which accounted for 3.8%. As a result of the depletion of the forest cover, the following changes were also observed which are actually direct repercussions of the depletion or decrease in the number of trees in the area. The related observations were: high incidence of soil erosion in nearby areas (3.8%) which has caused frequent floods in the rainy season (5.7%). Thus, the depletion of forest resources and its repercussions are clearly observed and noticed by the residents of the area. The second most important

change identified by 14% of all respondents is the decreasing population of flora and fauna, specifically of freshwater shrimps and fish (11.4%).

A series of responses are related to the disturbance of the forest cover and include "decrease in soil fertility" (cited by 9.5% of all respondents), scarcity of water (7%) and irregular water flow (4%) in creeks and rivers, frequent flooding (5.7%), siltation (4.8) and soil erosion (3.8%). Interestingly 7% of the respondents noticed a displacement of wild animals and almost 5% the introduction of exotic shrub species.

C.3.2 Perceived Effects of Environmental Changes on the Household

The survey tried to elicit the opinion of the respondents with regards to the effect of the observed changes to their household (Table 69). This would provide an insight on their perception on how environmental changes have been affecting their life.

In this case 10% of the respondents did not provide any answer. The majority (28.6%) of the respondents stated that environmental changes did not affect their life. In fact the changes noticed are not as dramatic as in other Protected Areas. "Disappearance of big trees" and "decrease in forest density" do mean that the forests are still there, even if their natural stand has been affected generated undesired effects as noticed by others, who mentioned "scarcity of food" (13%) and low income (12.4%). The latter is related to increased difficulty in gathering resources (mentioned by 11% of the respondents), lower production (5.7%). Other perceived effects include emotional difficulty (9%), physical insecurity (fear 7.6%), fear related to flooding (7.6%) and increased risk (3%). This mix of emotions and fears deserves an interpretation. Probably it is related to the fact that on the Island the river courses are generally sided by steep slopes and are prone to flash floods. Considering that the riverbeds are the commonly used access ways to the mountain and to the deeper forests, increased flooding phenomena, render the access to the interior of the island more risky. Fear may also relate to increased risk in hiking along steep pathways, made muddier by decreased forest cover and increased exposure to direct rainfall.

Table 69 Distribution of opinions on the effect of observed changes to household

Effects	Frequency of mention (No.)	Relative Frequency to total responses (n= 246) (%)	Relative Frequency on total no. of respondents (n=210)
No effect	60	24.4	28.6
Scarcity of food sources	27	11.0	12.9
Low income	26	10.6	12.4
Resources are hard to gather	23	9.3	11.0
Emotionally difficult to cope up	19	7.7	9.0
Floods	16	6.5	7.6
Fear	14	5.7	6.7
Low production/low harvest	12	4.9	5.7
Limited water supply	7	2.8	3.3
Risky/laborious	6	2.4	2.9
Create new alternatives	4	1.6	1.9
High expenditures	3	1.2	1.4
Hard to grow crops	3	1.2	1.4
Changes just accepted	3	1.2	1.4
Muddy soil	1	0.4	0.5
Expensive/laborious	1	0.4	0.5
No Answer	21	8.5	10.0
Total	246	100.0	

C.3.3 Wild Animals encountered

In general terms a consistent majority of the respondents (70%) said that they sighted wild animals within a month of the survey. Nonetheless there are consistent differences among municipalities. The one with most frequent sightings has been Cajidiocan, where 100% of the respondents provided affirmative answers. San Fernando followed (90%), while Magdiwang registered the least encounters (20%).

Table 70 Respondents' encounter with wild animal

Response	Municipality						All municipalities	
	Magdiwang		Cajidiocan		San Fernando		Frequency of mention (No.)	Relative frequency on total number of respondents (N=210)
	Frequency of mention (No.)	% of response per municipality	Frequency of mention (No.)	% of response per municipality	Frequency of mention (No.)	% of response per municipality		
Yes	14	20.0	69	100.0	64	90.0	147	70.0
No	51	73.0	0	0.0	7	10.0	58	27.6
No answer	5	7.0	0	0.0	0	0.0	5	2.4
Total	70	100.0	69	100.0	71	100.0	210	100.0

The species most frequently sighted are snakes, accounting for 23.7% of all sightings (334), followed by flying lizard (20.7%) and monkeys (13.5%). Analysing the data versus the total number of respondents (n=147), almost half (53.7%) of those who encountered wild species met snakes, 47% flying lizards, 30.6% monkeys, 23.8% birds and 23% foxes as shown in Table 72. The place where most sightings were reported are Sitios Guin-alan and Cabuylanan.

Table 71 Kind of wild animals sighted by place of sighting

Place of sighting	Species									Totals by location of sighting		
	Monkey	Snakes	Fox	Flying Lizard	Bats	Wild chicken	Wild pigs	Birds	Others	Frequency of mention (No.)	Relative Frequency on total no. of response (%)	Relative Frequency on total no. of respondents (n=210) (%)
Guin-alan	2	11	6	11	2	0	0	2	0	34	10.2	23.1
Cabuylanan	1	11	8	7	3	1	0	0	0	31	9.3	21.1
Cambijang, Ilaya	0	6	5	9	5	0	0	4	0	29	8.7	19.7
Anahaw	3	4	0	1	0	6	8	1	0	23	6.9	15.6
Camagong	3	4	5	5	3	0	0	0	0	20	6.0	13.6
Cantagda	1	5	0	8	0	0	0	5	0	19	5.7	12.9
Manabo	1	4	0	3	0	0	4	4	1	17	5.1	11.6
Talaba	4	4	0	2	2	0	1	3	0	16	4.8	10.9
Cambayong	0	3	4	6	1	0	0	0	0	14	4.2	9.5
Tinimbanan	5	2	0	0	0	3	4	0	0	14	4.2	9.5
Suong	3	4	0	3	0	1	0	2	0	13	3.9	8.8
Camanglad	0	1	3	6	1	0	0	1	0	12	3.6	8.2
Cruz	3	3	0	0	0	0	0	6	0	12	3.6	8.2
Silum	6	0	0	0	0	3	2	0	0	11	3.3	7.5
Malapena	3	2	1	0	0	1	0	3	0	10	3.0	6.8
Punong	1	4	0	2	2	0	0	0	0	9	2.7	6.1
Olango	2	3	0	2	1	0	0	0	0	8	2.4	5.4
Agsiud	0	3	1	2	0	0	1	0	0	7	2.1	4.8
Malbog	0	1	0	2	0	1	1	2	0	7	2.1	4.8
Panangcalan	2	0	0	0	0	2	2	0	0	6	1.8	4.1
Campalong	1	1	0	0	0	0	2	1	0	5	1.5	3.4
Guitacan	1	1	0	0	0	1	1	0	0	4	1.2	2.7
Pinamitanan	1	1	0	0	0	1	0	1	0	4	1.2	2.7
Dulangan	0	0	0	0	0	1	2	0	0	3	0.9	2.0
Jao-Asan	0	1	1	0	0	1	0	0	0	3	0.9	2.0
Ipil, Ilaya	1	0	0	0	0	1	0	0	0	2	0.6	1.4
Campalong	0	0	0	0	0	0	0	0	0	0	0.0	0.0
No Answer	1	0	0	0	0	0	0	0	0	1	0.3	0.7
Totals by species	45	79	34	69	20	23	28	35	1	334	100	
Relative frequency of sightings by species	13.5	23.7	10.2	20.7	6.0	6.9	8.4	10.5	0.3	100.0		

Less frequently sighted species include fox (10% of sightings), birds, wild pigs, wild chicken and bats.

Table 72 Kind of wild animals sighted one month before the survey

Kind of wild animal	Frequency of mention (No.)	Relative Frequency on total responses (n= 334) (%)	Relative Frequency on total number of respondents (N=147) (%)
Snakes	79	23.7	53.7
Flying lizard	69	20.7	46.9
Monkey	45	13.5	30.6
Birds	35	10.5	23.8
Fox	34	10.2	23.1
Wild pigs	28	8.4	19.0
Wild chicken	23	6.9	15.6
Bats	20	6.0	13.6
Others	1	0.3	0.7
Total	334	100.00	

C.3.4 Importance attached to specific ecological settings

In view of designing Information and education campaigns and for outsiders to interact with insiders it is of utmost importance to understand the latter perceptions and set of values. The following sections elaborate on a series of questions put to the respondents and try to describe the perceptions and status of knowledge prior to the actual implementation of NIPAP field activities.

C.3.4.1 Perceived Importance of Pristine Forest Cover

The importance the respondents placed on a "pristine forest cover" has been associated with "flood control" and "soil protection", "livelihood", "clear waters" (Table 73). Most respondents view forest cover as an effective protection against flooding and soil erosion (32.9%). Second in order of importance is the livelihood (21%) supported by a pristine cover. Importance related to physical beauty and clean waters follow.

Table 73 Importance attached by respondents to pristine forest cover (1st mention)

Importance	Frequency of mention (No.)	Relative frequency on total number of respondents (N=210)
Flood control/prevent soil erosion	69	32.9
Source of livelihood	44	21.0
Cleanness of water would be maintained	16	7.6
Nice to see	16	7.6
Air is cold and fresh	15	7.1
Maintain the balance of ecology	12	5.7
Scarcity of water would be avoided	11	5.2
Forest preservation/protection	6	2.9
Resources are easy to gather	3	1.4
Tourist Attraction	2	1.0
No Answer	16	7.6
Total	210	100.0

C.3.4.2 Perceived Importance of an Intact Coral Reef

The respondent-residents were asked what kind of importance they attach to intact coral reefs. Of the 210 respondents 47.1% (99), did not provide any response. Of

those who responded, 58.6% related intact coral reefs to the abundance of fish in their area, as these are the spawning grounds of numerous aquatic species.

Table 74 Importance attached by respondents to the presence of intact coral reef

Importance	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Fish will be abundant	65	31.0
Habitat of fishes	19	9.0
Reproduction ground for fishes	15	7.1
Easy to catch fishes	10	4.8
Plenty of shells	2	1.0
No Answer	99	47.1
Total	210	100.0

C.4 UNDERSTANDING OF TERMS

The knowledge of a series of key-terms and acronyms is linked to the level of awareness with regards to the implementation of the Government's policy on biodiversity conservation and the establishment of "Protected Areas". The following portion of the survey has been exploring these topics to quantify benchmarks to be used for future impact evaluations.

C.4.1 Understanding of "NIPAS"

When asked if they know what NIPAS, or the National Integrated Protected Areas System, means, the majority or 89% of the respondents stated they did not. There are slight differences per municipality: Magdiwang registered the highest portion of positive responses as shown in the Table below.

Table 75 Distribution the respondents by knowledge of term and by Municipality

Response	Municipality						Total	
	Magdiwang		Cajidiocan		San Fernando		No. of Responses for all municipalities	% to total responses for all municipalities
	No.	%	No.	%	No.	%		
Yes	8	12	5	7	7	10	20	9.5
No	59	84	64	93	64	90	187	89.0
No Answer	3	4	0	0	0	0	3	1.4
Total	70	100	69	100	71	100	210	100.0

Those (20) providing an affirmative answer where questioned on their understanding of the acronym only 50% replied. Out of these only four provided the correct answer.

Nonetheless when queried on the source of their information the 20 respondents stated that they heard the acronym NIPAS at seminars (25%), from Barangay officials (15%), MFPC members (15%) and NGOs (10%).

C.4.2 Understanding of the acronym "PAMB"

Only 10% of all respondents knew the term "PAMB", meaning Protected Areas Management Board.

Table 76 Distribution the respondents by knowledge of term and by Municipality

Response	Municipality						All municipalities	
	Magdiwang		Cajidiocan		San Fernando		Total No. of Responses for all municipalities	% to total No. of respondents for all municipalities
	No. of responses	% to total respondents per municipality	No. of responses	% to total respondents per municipality	No. of responses	% to total respondents per municipality		
Yes	7	10	6	7	8	11	21	10.0
No	59	84	63	93	63	89	185	88.1
No response	4	6	0	0	0	0	4	1.9
Total	70	100	69	100	71	100	210	100.0

Those who knew it were asked to identify the source of that information. 19% learned it from meetings or seminars, (14.3%) from their Barangay captains and the remaining from LGU's, NGO's and other MFPC members. Those stating to know the term were asked if they knew who represented them in the PAMB. Only 30% provided the correct answer. In synthesis only 3.3% of the sample (210 respondents) knew the correct meaning of PAMB.

C.4.3 Understanding of the term "Protected Area"

More than half (55.2% or 116 respondents) of the 210 respondents stated to know of the term "Protected Area". The highest rate of positive responses has been registered in Magdiwang followed by Cajidiocan as shown in the Table below.

Table 77 Distribution the respondents by knowledge of term and by Municipality

Response	Municipality						All municipalities	
	Magdiwang		Cajidiocan		San Fernando		No. of total responses for all municipalities	% to total responses for all municipalities
	No. of responses per municipality	% to total responses per municipality	No. of responses	% of responses per municipality	No. of responses	% to total responses per municipality		
Yes	53	76	50	72	13	18	116	55.2
No	14	20	19	28	58	82	91	43.3
No response	3	4	0	0	0	0	3	1.4
Total	70	100	69	100	71	100	210	100.0

The majority (46% or 53 respondents) of those who heard the term (116) interpret it as "protection of the forest", "of Mt. Guiting-guiting" or "of the Natural resources (NR)". A consistent 17.2% sees in the concept as a "prohibition on cutting trees". About 30% of the sample did not provide any answer or claimed no knowledge

Questioned on the source of their knowledge only 56% of those claiming to know gave responses. Of these, 24.1% obtained the information from NGO's working in the area, 14.7% from MFPC members and 13.8% through the LGU. A consistent 23% did not provide any answer.

C.4.4 Understanding of the term "NIPAP"

Respondents were also queried if they have heard the acronym "NIPAP". Only 3% stated they did. Of those who did only 1 was able to identify NIPAP as a program for protecting natural resources.

The majority of all respondents would like to know more about NIPAP as 66.7% expressed positive interest in knowing about NIPAP, but there were also 31.9% of respondents that did not give any answer to the question, which can be interpreted as disinterest on their part (Table 78).

Table 78 Distribution of respondent's by interest to knowing more of NIPAP

Interest to know more about NIPAP	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Yes	140	66.7
No	3	1.4
No Answer	67	31.9
Total number of respondents	210	100.0

C.4.5 Knowledge of Mt. Guiting-guiting Natural Park

The respondents were asked if they ever heard about Mt. Guiting-guiting Natural Park. A large majority (85.7% of 210) knew about the existence of the Park.

Table 79 Respondent's knowledge of Mt. Guiting-guiting as a Natural Park

Awareness of Mt. Guiting-guiting	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Yes	180	85.7
No	28	13.3
No Answer	2	1.0
Total	210	100.0

They also expressed very positive views on Mt. Guiting-guiting being a Natural Park, as 17.2% said that it would protect Mt. Guiting-guiting and another 16.1% lauded it as a good move done by concerned people. Other responses include the creation of more jobs (8.3%) and the transformation of Mt. Guiting-guiting as a tourist attraction.

Table 80 Distribution by views on Mt. Guiting-guiting being a Park

View on Mt. Guiting-guiting being a Park	Frequency of mention (No.) (1 st answer)	Relative Frequency of responses on total number of responses (n=180)
Protect Mt. Guiting-guiting	31	17.2
Good move done by concerned authorities	29	16.1
Create more jobs for the people	15	8.3
Tourist attraction	14	7.8
Protect the forest	13	7.2
Sign of development for Sibuyan	11	6.1
Will become a park	9	5.0
Stop illegal logging	8	4.4
No more source of livelihood	7	3.9
Declared one of the Protected Areas in the Phils.	4	2.2
Conserve/protect the environment	3	1.7
Good for the people but will affect the livelihood	3	1.7
There will be landslides when made into a park	3	1.7
Foreigners will supervise the park	2	1.1
Sibuyan Is. will benefit from this project	2	1.1
Not Applicable	9	5.0
Don't Know	9	5.0
No Answer	8	4.4
Total	180	100.0

The 154 respondents who expressed an opinion were questioned whether they have been sharing it, with others. A consistent percentage (35%) did not provide any answer as shown in Table 81. Those who did mentioned neighbours, relatives and friends. Only a few individuals have discussed the matter with local officials.

Table 81 Entities with whom respondents shared views on MGGNP

Entity with whom views have been shared	Frequency of mention (first answer) (No.)	Relative Frequency of responses on total number of respondents who had an opinion (n=154)
No answer	54	35.1
Neighbours	18	11.7
Relatives	16	10.4
Friends and relatives	13	8.4
Community	11	7.1
Friends	9	5.8
Neighbours and friends	8	5.2
Neighbours and relatives	7	4.5
Barangay Captain	6	3.9
Neighbours, friends and relatives	6	3.9
Household Members	2	1.3
Household Members, neighbours, friends and relatives	2	1.3
Teachers	1	0.6
Not Applicable	1	0.6
Total	154	100.0

Although they were able to discuss and talk about the issue with one another, there was still a feeling that nothing much has been done to improve the situation. A

number of respondents (34%) said that nothing has been done. This may not be totally true because 19% said that an education campaign has been launched on forest conservation, as well as an effort to get the people to co-operate in conservation of the forest resources. (Table 82)

The positive attitude exhibited by the respondents is a good sign of future co-operation by the residents in the area, as they expressed optimism in the benefits that may arise from the development and preservation of Mt. Guiting-guiting. The people may just need to see positive and tangible results of efforts that have been done by officials with whom they have discussed their views.

Table 82 Entities with whom views on Mt. Guiting-guiting have been shared and follow-up action

Entity	Prohibit cutting of trees	No response/ action	Disseminate information to students	Adminish people to co-operate	Conserve/ Protect the Forest	Educate the people on conservation	No Answer	Total No. of Responses	Relative Frequency to total Responses (%)
Neighbours	1	4	1	3	0	7	2	18	18.0
Relatives	1	2	2	4	0	6	1	16	16.0
Friends and relatives	0	8	0	0	0	0	5	13	13.0
Community	1	4	0	2	1	3	0	11	11.0
Friends	0	4	1	0	0	0	4	9	9.0
Neighbours and friends	0	3	0	0	1	0	4	8	8.0
Barangay captain/Kagawad	1	3	0	0	0	0	3	7	7.0
Neighbours and relatives	0	2	1	1	1	1	1	7	7.0
Neighbours, friends and relatives	0	2	0	2	0	1	1	6	6.0
Household member	0	2	0	0	0	0	0	2	2.0
Household members,	0	0	0	0	1	1	0	2	2.0
Teachers	0	0	1	0	0	0	0	1	1.0
friends, relatives, neighbours	0	0	0	0	0	0	0	0	0
Total responses	4	34	6	12	4	19	21	100	100.0

C.5 PSYCO-ATTITUDINAL CHARACTERISTICS

The individual's perception on their "status" and on how they visualise their "future" is an important indicator of the degree of satisfaction of a given situation and on the manner they see change to occur and affect them in the medium term. Respondents were questioned on how they envision their personal, family and community life in five years from the time of the survey.

Further they were questioned on how they feel NIPAP will affect their life.

C.5.1 Respondents' vision of life 5 years from the time of the survey

Questioned on their personal perception, 37.6% or 79 of the total respondents did not provide any answer. Of those who responded (131), 59 or 45% produced a bleak outlook, as they perceive their status getting poorer. Another 14.3% expects no changes and 5.7% very little improvement. Only 11 respondents gave positive outlooks of the future as 9 respondents (4.3%) said that they would have a stable or successful job, one (1) said that life would be stable and another one expects to have more fishing boats (Table 83).

Table 83 Vision of the respondents of their life 5 years from the time of the survey

Vision	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Become even poorer	59	28.1
No changes	30	14.3
Little improvement	12	5.7
Have a permanent job/successful	9	4.3
Lesser income	6	2.9
Out of this world	5	2.4
Don't know	4	1.9
Not applicable	3	1.4
More fishing boats	1	0.5
High income	1	0.5
Life would be stable	1	0.5
No response	79	37.6
Total Respondents	210	100.0

A different scenario is presented when questioned on the future prospects of the community as a whole. More than half of the respondents (57.1%) is optimistic. Only 27% does not forecast any change. Some respondents identified "community leaders" as a crucial factor influencing quality of development.

Table 84 Vision of the community life 5 years from the time of the survey

Vision	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Progressive/developed	120	57.1
No change	57	27.1
Depends on the leadership	18	8.6
Become more populated	11	5.2
More school buildings	2	1.0
Improvements on agricultural aspect	2	1.0
Total	210	100.00

C.5.2 Perceived effects of NIPAP on individual and community life

All respondents were invited to predict how NIPAP would affect their life and the one of the community. Even with an extremely low level of knowledge as discussed in section C.4.4, the views are optimistic as 55.2% of the sample views NIPAP as a vehicle of progress and development. Almost 15% does not expect any induced change and some 10.5% points out that leadership in Programme implementation would play a crucial role. Almost 12% kept silent, had no opinion or provided a non applicable answer.

Table 85 Perceived impact of NIPAP on the individual and community life

Vision	Frequency of mention (No.)	Relative Frequency on total number of respondents (N=210)
Progressive/developed	116	55.2
The same	31	14.8
Depend on the leadership	22	10.5
No answer	20	9.5
Become more populated	11	5.2
Improvements on agricultural aspect	3	1.4
Don't know	3	1.4
More school buildings	2	1.0
Not applicable	2	1.0
Total number of respondents	210	100.0

Generally, there are not many differing opinions with respect to NIPAP's integration, at best they are hopeful that it will be a tool for development. Although as earlier stated, they do not know yet the extent of the program's effects, it still remains a source of hope for the respondents. If NIPAP will consider their aspirations and view of an improved life, in their development efforts, and the benefits that NIPAP brings them will coincide with their needs, then it will be a fruitful co-operative effort between the program and the residents.

The real test here would be the early years of implementation, as there will be expected displacement of income in the early phases, which will be recovered in the future. But then, the people's support will depend on their level of patience or tolerance. If a drop in economic benefits is observed, even at the short run, they will definitely have something to say against the program and will discontinue their support, at worst even undermine the program's success. It is to be remembered that these residents are subsistence workers and may not have enough patience for declined incomes.

C.6 SUMMARY OF FINDINGS AND RECOMMENDATIONS

This final section of the report contains a consolidated list of issues and problems which surfaced in the survey and which would require foremost attention by the program management plan for a more effective implementation of the NIPAP. A set of recommendations for these identified issues are offered and follow-up studies on matters, which the survey missed, are also suggested.

Findings related to the universe of study	Recommendations
Within the 3 surveyed municipalities there are considerable differences in terms of (a) access to information (Section C.1.8.1), (b) interaction of community members with Government institutions (C.1.8.2); (c) exposure to tourists (Section C.1.8.5); leadership and control over resource use (C.1.9); level of economic development (C.2) and poverty (C.2.8.1)	These differences need to be taken into consideration in the formulation of the different municipal action plans (e.g. IEC)
Women share most of the economic activities with men	Project activities will find an easy ground for adequately involve women. Nonetheless gender issues should be paid adequate attention.
While the radio is the most commonly accessed source of information, there are differences in terms of surveyed areas, with Cajidiocan being behind San Fernando and Magdiwang.	Appropriate information media need to be chosen, depending on the location and target groups. The survey provides some basic information for IEC specialists (see Section C.1.8)
The Indigenous People of Lumbang West are extremely poor and marginalised. Government agencies hardly service them (Section C.1.8.2), their investment into education is limited (C.2.8.2) and they heavily rely on forest products for their livelihood.	The concerned LGU (Cajidiocan) and externally supported interventions should focus on this community in particular.
Reported interactions with tourists are most frequent in Magdiwang and least frequent in San Fernando. [N.B. This may be linked to the fact that the main access point in Sibuyan is the pier situated in the municipality. Cajidiocan benefits as well of maritime connections with the Capital, but connections are less frequent.] The few benefits derived from visiting tourists are non-monetary.	Project implementers should work on assisting grassroots in developing skills enabling them to provide services to visiting tourists, thus generating a new non-resource based income source.
Among Sibuyan and Indigenous People the Barangay Captains and Chieftains respectively, represent the driving forces in community mobilisation.	This pattern should be taken in due consideration by Project implementers.
Magdiwang residents are quite aware that permission is needed to harvest resources from the forest as discussed in Section C.1.9.2. A different scenario characterises the other two municipalities. Those seeking for permission for harvesting or advise on conflict resolution (on resource use) call on the Barangay Captain and not on DENR Officials. (see Section C.1.9.3)	Again IEC should be tailored on a municipal basis. DENR need to establish its presence on the Island and to interact more efficiently with the communities.
Except for Magdiwang, where non-resource based enterprises are quite developed (see Section Table 28 in Section C.2) both San Fernando and Cajidiocan strongly depend on the NR base for the sustenance of their population. Thus pressure on NR base may be lower in Magdiwang, compared to the other municipalities.	This finding should be taken into consideration in planning NR management and enterprise development.
Farmers are interested in diversifying production (C.2.1.9) but perceive lack of capital, land and technical support as their main limitations.	Crop diversification is important, particularly to introduce rotation and spread income throughout the year. Considering the positive attitude of farmers towards diversification concerned entities should provide the necessary backup in the form of technical know-how and financial support. Nonetheless attention should be paid to avoid introducing exotic species into the Island.
The dependency on NTFP of the communities residing close to the park is extremely high, particularly in Cajidiocan and San Fernando. Nito is the most commonly harvested resource, followed by vines, timber, honey and rattan (see Table 44 in Section C.2.2).	This finding should be taken into consideration in planning NR management and enterprise development.
The distance of NTFP harvesting grounds from the residence of the respondents is relative small as discussed in Section C.2.2.2. This means that the resources are still abundant.	This indicator is extremely useful in determining indirectly the availability and distribution of resources. It should be updated at regular intervals (e.g. 3-4 years)

Findings related to the universe of study	Recommendations
<p>As discussed in Section C.2.3.1 a consistent portion of the respondents depends on firewood for cooking. The mean daily family consumption of stack wood is 0.6 cubic feet. The yearly estimated firewood consumption on the Island (including households and bakeries) is 70,000 m3.</p>	<p>Considering the high incidence of use of firewood for cooking purposes, the demand could be reduced either promoting the adoption of alternative sources of fuel (LPG) or through optimizing combustion through a cookstove dispersal Programme. It is advisable to involve Shell Philippines in the first option.</p>
<p>As discussed in Section C.2.3.4 wild animals, birds and reptiles are commonly eaten on the Island. This puts consistent pressure on the resources.</p>	<p>This finding should be taken into consideration in PA planning through the regulation on hunting practices and trade of game.</p>
<p>There is a prevailing interest in planting exotic, fast-growing tree species. Nonetheless native tree species, including lauan and narra encounter some favours as well.</p> <p>Lack of capital and land and insufficient market outlets (see Section C.2.3.6) refrain respondents from planting trees.</p>	<p>Attention should be paid in introducing exotic or in promoting the growing of invasive species due to the risk of inducing "biological pollution". Worldwide the latter represents the major threat to biodiversity conservation.</p> <p>Recently introduced legislation (CBFM) could address the aspiration of the communities. Supporting Institutions need to define their intervention policy. Community-based Forest Management need to be taken into consideration in the Zoning process of PA Planning.</p>
<p>Many residents of the Island depend on both fisheries and harvesting of forest resources. This particularly in the areas where farming is limited by lack of arable land as explained in C.2.4.1. In this forestry-fishery-based subsistence activities are seasonal.</p>	<p>Reduces access to forest resources through increased protection or restrictive zoning may shift pressure from the inland to the coastal ecosystems. Institutions involved in conservation activities should consider these social groups as critical in view of their high dependency of sensible ecosystems and on the fact that their activities are purely extractive, compared to farming which is productive.</p>
<p>Income generated from the provision of labour is relevant both in Magdiwang and San Fernando. Men and woman are equally involved.</p>	
<p>Livestock production is a primary source of income for almost 9% of the respondent, mainly located in the upper portions of Cajidiocan. In most cases livestock production is considered as an ancillary income generating activity as discussed in C.2.6.1. In terms of implementing responsibilities women are slightly predominating on men. Children are involved as well.</p> <p>Lack of capital, selected breeds, technical support and market outlets (see Section C.2.6.4) refrain respondents from planting trees.</p>	<p>Small-scale livestock and poultry production helps rural folks in saving (e.g. piggy bank) and generating quick cash through the sale of stock. The need of emergency cash is often the cause of illegal logging. Thus assisting rural folks in developing backyard livestock and poultry production could ease critical periods during the year.</p>
<p>Expenditure pattern indicate that the residents of the uplands in Cajidiocan are the poorest, those investing the most in food and the less in education. Those who are having better life standards are the residents of Magdiwang, who can effort to spend more on education and clothing as described in Sections C.2.8.1 and C.2.8.2.</p>	<p>This pattern highlights again the need for tailoring interventions according to social groups.</p>
<p>Environmental awareness (Section C.3) is generally high and respondents have a clear understanding of the importance of an intact forest cover, especially for what concerns limitation of flooding. Flush floods appear to raise a lot of concerns among residents (Section C.3.2). This is related to the fact that riverbeds lay at the bottom of narrow, deep and steep valleys where flush floods represent a serious threat to life. Considering that the riverbeds are the commonly used access ways to the mountain and to the deeper forests, increased flooding phenomena, render the access to the interior of the island extremely risky.</p>	<p>This particular concern needs to be taken up in the formulation of IEC promoting the preservation of the forest cover.</p>
<p>Sighting of wild animals is still frequent. Definitely more frequent and varied in terms of sighted species than in Mt. Isarog and Mt. Malindang where similar surveys have been carried out. There are considerable differences in sightings in the 3 municipalities as discussed in Section C.3.3. In fact Magdiwang has by far the lowest sighting rate. This is probably linked to the fact that less residents of Magdiwang walk into the forest (see Section C.2.2) for livelihood purposes.</p>	<p>This finding should be taken into consideration in planning NR management.</p>

Findings related to the universe of study	Recommendations
<p>The benchmarks of awareness in terms of the NIPAS law, the PAMB and the NIPAP are extremely low as discussed in Sections C.4.1, C.4.2 and C.4.4. There is a higher correct understanding of the term and function of "Protected Area" C.4.3. This may be linked to the self-explanatory wording of the concept.</p>	<p>These awareness indicators are extremely useful in determining the impact of IEC. They should be updated at regular intervals (e.g. 3-4 years).</p>
<p>As described in C.5.1 the majority of the respondents envisions a future development within the island's community but a worsening individual situation.</p>	<p>These apparently contradictory statements may be linked to the feeling that "development will be somebody's else affair" and that it will happen without having many positive effects for the individual. Efforts should be made by Project/Programme implementers to bridge this feeling of "lack of ownership" and "institutional distance" of the poorer share of society. Participatory approached can serve the process.</p>

Annexes

Annex 1 Expenditure in Magdiwang

Expenditure	Food		Clothing		Education		Medicine/h ealth		House repair		Recreation		Fuel & others		Other household needs	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1-5%	0	0.0	0	0.0	0	0.0	3	4.9	11	42.3	0	0.0	3	33.3	2	40.0
6-10%	0	0.0	13	24.5	6	13.0	24	39.3	12	46.2	4	80.0	6	66.7	2	40.0
11-15%	0	0.0	18	34.0	17	37.0	17	27.9	1	3.8	0	0.0	0	0.0	1	20.0
16-20%	0	0.0	17	32.1	13	28.3	12	19.7	2	7.7	0	0.0	0	0.0	0	0.0
21-25%	0	0.0	5	9.4	7	15.2	5	8.2	0	0.0	1	20.0	0	0.0	0	0.0
26-30%	0	0.0	0	0.0	3	6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
31-35%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
36-40%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
41-45%	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
46-50%	26	38.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
51-55%	12	17.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
56-60%	9	13.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
61-65%	2	3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
66-70%	10	14.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
71-75%	6	9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
76-80%	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
81-85%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
86-90%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
91-95%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
96-100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	67	100.0	53	100.0	46	100.0	61	100.0	26	100.0	5	100.0	9	100.0	5	100.0

Annex 2 Expenditure in Cajidocan

Expenditure	Food		Clothing		Education		Medicine/ health		House repair		Recreation		Fuel & others		Other household needs	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1-5%	0	0.0	30	45.5	11	47.8	14	53.8	15	39.5	21	41.2	0	0.0	1	8.3
6-10%	0	0.0	31	47.0	11	47.8	12	46.2	16	42.1	20	39.2	1	100.0	8	66.7
11-15%	0	0.0	4	6.1	0	0.0	0	0.0	5	13.2	9	17.6	0	0.0	3	25.0
16-20%	0	0.0	0	0.0	1	4.3	0	0.0	1	2.6	1	2.0	0	0.0	0	0.0
21-25%	0	0.0	1	1.5	0	0.0	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0
26-30%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
31-35%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
36-40%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
41-45%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
46-50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
51-55%	2	2.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
56-60%	3	4.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
61-65%	1	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
66-70%	17	24.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
71-75%	21	30.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
76-80%	13	18.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
81-85%	7	10.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
86-90%	5	7.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
91-95%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
96-100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	69	100.0	66	100.0	23	100.0	26	100.0	38	100.0	51	100.0	1	100.0	12	100.0

Annex 3 Expenditure in San Fernando

Expenditure	Food		Clothing		Education		Medicine/ health		House repair		Recreation		Fuel		Other household needs	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1-5%	0	0.0	9	39.1	27	40.3	16	53.3	0	0.0	30	56.6	52	85.2	3	4.6
6-10%	0	0.0	11	47.8	21	31.3	8	26.7	1	25.0	16	30.2	8	13.1	11	16.9
11-15%	0	0.0	0	0.0	9	13.4	5	16.7	1	25.0	4	7.5	1	1.6	17	26.2
16-20%	0	0.0	3	13.0	6	9.0	1	3.3	2	50.0	1	1.9	0	0.0	14	21.5
21-25%	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	9	13.8
26-30%	0	0.0	0	0.0	2	3.0	0	0.0	0	0.0	2	3.8	0	0.0	6	9.2
31-35%	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	2	3.1
36-40%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	3.1
41-45%	3	4.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5
46-50%	30	42.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
51-55%	4	5.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
56-60%	11	15.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
61-65%	5	7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
66-70%	5	7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
71-75%	12	16.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
76-80%	1	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
81-85%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
86-90%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
91-95%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
96-100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	71	100.0	23	100.0	67	100.0	30	100.0	4	100.0	53	100.0	61	100.0	65	100.0