

**Formative Research in Support
of Pilot Environmental Communication
Campaigns in Davao del Sur**

A Research Report

**Submitted to:
GreenCOM**

**Submitted by:
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INTRODUCTION

Decentralization was implemented in the Philippines to hasten the active involvement of local government units (LGU's) in promoting the people's quality of life. This move likewise requires unequivocal involvement of people in the course of development, a way of making effective the strategy of people empowerment.

Decentralization entailed the devolution of various national programs to the local government units such as the management of natural resources. However, it has been observed that there was a lag in the LGU's implementation of this devolved function:

Most environment projects are being implemented with a site-based, interpersonal strategy, non-governmental organizations (NGOs), government and international projects contract an outside community organizer to live in a community or communities and persuade LGUs and community members to organize around a specific issue, usually forestry or coastal management. Frequently it takes at least one year, and sometimes two, to persuade LGUs and community members to take the first step and decide to participate (Request for Proposals for Formative Research in Support of Pilot Environmental Communication Campaigns, March 5, 1996, page 5)

As its response to the above-cited problem, GreenCOM has conceptualized a communication intervention strategy to motivate the LGUs and community residents to take series of actions to make effective the mandate of the Local Government Code regarding the management of natural resources. Part and parcel to such an intervention strategy, GreenCom has expressed the need to establish basic data on environmental management as the basis for an effective program design and implementation strategies to attain the objectives of the proposed intervention; thus this study.

OBJECTIVES OF THE STUDY

Generally, the study aims to help shape the content of the communication intervention and to determine the effective communication channels through which messages can be relayed to the target beneficiaries. Specifically, it purports to :

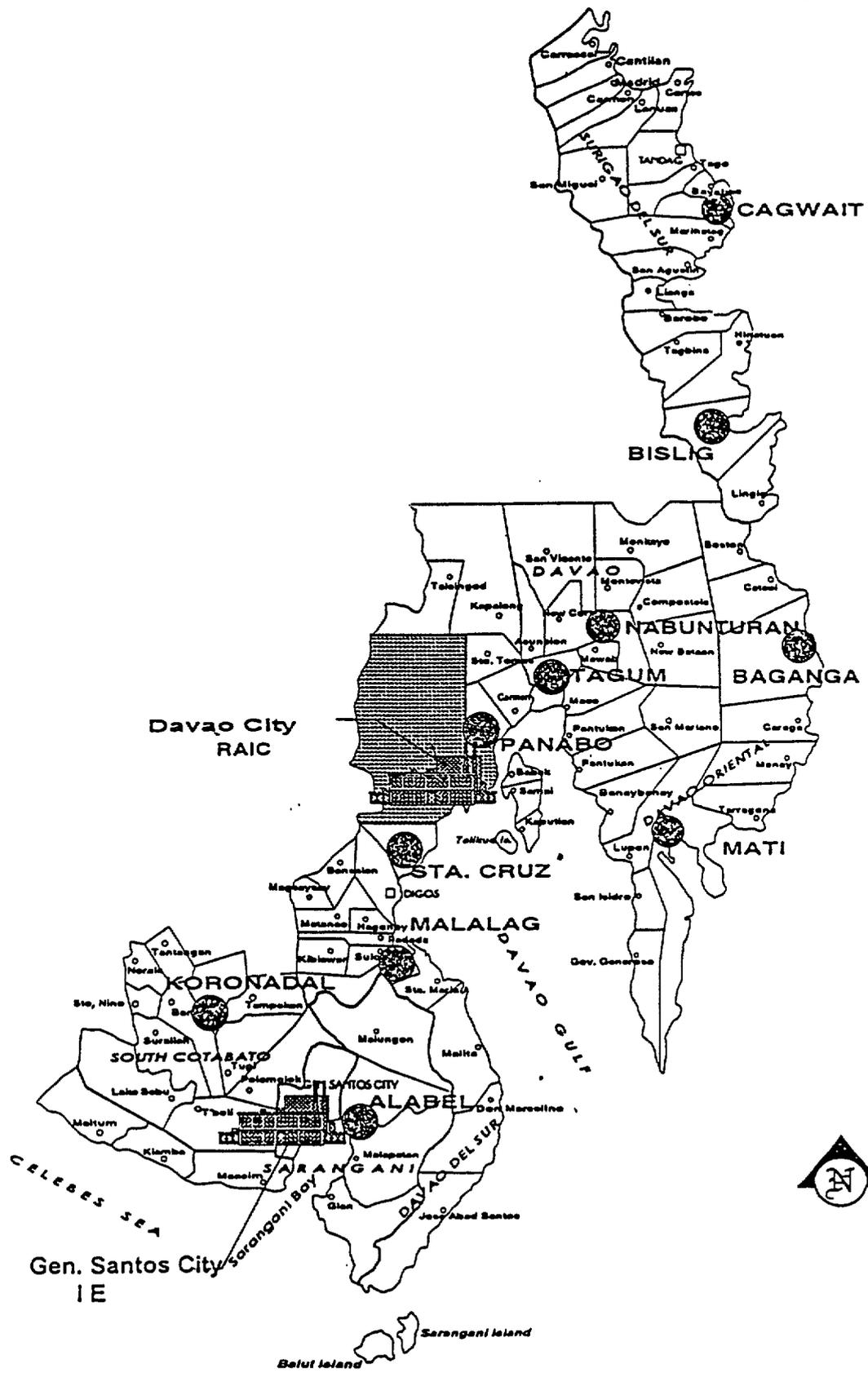
1. Identify current knowledge, belief and practices of “doers” and “non-doers” in relation to ideal behaviors;
2. Identify the factors that have influenced the adoption of the ideal behavior; and
3. Identify the most effective (trusted) and efficient (preferred and currently used) channels of communication about the environment.

THE SURVEY SITE: MALALAG, DAVAO DEL SUR

Malalag is one of the nine municipalities of the Province of Davao del Sur. It is bounded on the north by the Municipality of Sulop and Malalag Bay, on the east by the Municipality of Sta. Maria, on the west by the Municipality of Kiblawan, and on the south by the Municipality of Malungon (part of the Province of Sarangani). (See Figure 1).

It is 24 kilometers from the capital town of Davao del Sur (Digos) and approximately 80 kilometers south of Davao City. It is accessible by land transportation and vehicles plying the Davao City-Malita and Davao City-General Santos City routes.

The 1990 Census Facts and Figures (pp. 220-221) indicated that the Municipality of Malalag has a total population of 27,709 from a total households of 5,296 as of 1990, with 91.2 percent of its population speaking Cebuano.



Majority are Roman Catholics with a 91 percent literacy rate. Fishing and farming served as the major sources of livelihood for the residents, with some employed as laborers either in a local banana plantation - i.e. the Malalag Ventures Plantation, Inc. - which covers portions of the barangays of Poblacion, Bolton and Bulacan, or in the sugar plantation - i.e. the Kawayan Land Development, Inc. - situated in Barangays Bolton and Ibo.

Forest Resources. Furthermore, the Socio-Economic Profile, Book I of the Municipality of Malalag (pp. 147-149) reported that as per records of the DENR, the municipality has a sizable area classified as timberland covering approximately 6,231 hectares in the Barangays of Pitu, Ibo and Mabini, and 1,054 hectares forest reserve. Today, however, the timberland areas have been reduced to 1,424 hectares and the forest reserves are gone.

Recently, mainly as a result of the initiatives of the DENR through the "Community Reforestation Project" and the "Integrated Social Forestry", a total of 141 hectares are planted with timber trees in Barangay Pitu.

The devastation of the forest covers was largely due to the heavy logging activities in the place sometime in 1940 until 1960. Succeeding forest destruction was hastened by the influx of migrants to the logged-over areas, triggered primarily by the lack the of economic opportunities in the lowlands. Slash-and-burn farming activities are common even today causing much destruction not only to the forest covers but also to the bio-diversity of the municipality. Denudation of the forests continues to pose a grave threat to the community with the lands exposed and vulnerable to soil erosion and degradation.

This forest degradation was mitigated by the LGU's initiation of the "Agro-forestry Project" through a joint venture with the "Malalag Integrated Livelihood

Cooperative², where members of the cooperative were given loans on planting materials (mostly mangoes and timber trees), covering a total of 272 hectares. Two NGO's - the KAPWA Upliftment Foundation, Inc. and the Institute of Small Farms and Industries - likewise assisted the LGU through the introduction of integrated economic and environmental development reforms in the timberland areas of Barangays Pitu, Mabini and Ibo and the intensification of community development approaches for Barangays Ibo's upland development respectively. Institutionalization of a privately-led partner of the LGU called the Municipal Advisory Team on Environment (MATE) was likewise undertaken through the Local Development Assistance Program (LDAP).

Marine Resources. On the other hand, Malalag is likewise endowed with inland fishing grounds in New Baclayon and Upper Bagumbayan (brackish water ponds) and fresh water ponds in Barangays Caputian and Pitu. Its marine fishing ranks second to farming with regards to source of livelihood and income.

Its marine ecosystem, once typified a rich ecosystem is now ravaged by the mis-use and abuse of the very people who lived by and profited from the bounties of the sea. Where before the municipal waters of Malalag had vast areas of coral reefs with an expanse of about 1,134 hectares, in 1991, however, the Philippine Coastal, Marine and Aquatic Resource Development reported that barely 10 percent of the corral reefs remain alive.

The degradation of the marine resources was primarily caused by the prevalence of illegal fishing like the use of dynamite, toxic substances, and pressured gears like the drive-in nets (lampornas), trawl and commercial fishing. Other related factors are siltation (where volumes of soil particulates and rock debris are carried towards the bay and covers the bottom causing fractures and ruin to the corrals), pollution resulting from the indiscriminate disposal of solid waste from the households and the public

market as well as the chemical waste from the banana plantation and fishpond. Occasional oil spills from docking vessels and motorized boats are likewise noted, including the lack of public information and education on the need and importance of protecting and preserving the bio-diversity exemplified by the marine ecosystem.

In response to the problems of marine ecosystem, the LGU has launched the "Coastal Resource Management Program". It has banned pressured fishing gears, established a fish sanctuary in a 50-hectare area, planted mangroves and intensified information including the enactment of anti-littering ordinances.

METHODOLOGY

This is an exploratory research using the qualitative data collection methods particularly the in-depth interviews (IDI) and focus group discussion (FGD) approaches.

Sampling. The study was conducted in the municipality of Malalag, Davao del Sur. The inclusion of the adjacent Municipality of Sta. Maria, Davao del Sur facilitates comparison regarding ideal behavior relative to environmental management and protection activities. It is contiguous to the Municipality of Malalag, and is part of the Malalag Bay Area. Malalag has been one of the mandated GreenCOM sites in Mindanao. Based on NSO figures, it has a total projected population of 32,602 as of 1995, residing in its 15 barangays. To facilitate sampling, these were earlier classified as coastal and upland. Two of these 15 barangays were chosen as survey sites, based on their population being equal or greater than the mean population of the Municipality of Malalag (mean=2,174). The upland barangay of Mabini was purposively chosen being the only upland barangay with population equal or greater than the mean population of Malalag. The coastal barangay of Baybay was randomly chosen among the five barangays meeting the criteria on the selection. Table I presents the population per

mean pop. by
barangay?

barangay, their classification and status relative to the mean population of the Municipality of Malalag, Davao del Sur.

Table 1
Population by Barangay, their
Classification and Status Relative to
the Mean Population of Malalag, Davao del Sur

Barangays (15 total)	Classification	1995 Population	Status Relative to the Mean Population of 2,174
Poblacion	Coastal	4,419	> 2,174
Bagumbayan	Coastal	3,660	> 2,174
Baybay	Coastal	3,068	> 2,174
Bulacan	Coastal	3,795	> 2,174
New Baclayan	Coastal	3,342	> 2,174
Bolton	Upland	1,622	< 2,174
Caputian	Upland	1,641	< 2,174
Ibo	Upland	1,553	< 2,174
Kiblagon	Upland	995	< 2,174
Lapu-lapu	Upland	526	< 2,174
Mabini	Upland	2,453	> 2,174
Pitu	Upland	1,510	< 2,174
Rizal	Upland	1,143	< 2,174
San Isidro	Upland	1,451	< 2,174
Tagansule	Upland	1,424	< 2,174
Total		32,602	

Units of Analysis. The units of analysis were of three types: local government officials, community opinion leaders and community members. They were categorized as “doers” and “non-doers”. “Doers” refer to those who are currently performing the ideal behaviors relative to environmental protection and management while the “Non-doers” refer to those who are not currently performing the ideal behaviors relative to environmental protection and management.

Local Government Units. Two local government units were considered in this survey: Malalag and Sta. Maria. Malalag has been noted for its effective environmental programs while Sta. Maria still has to identify and implement environmental protection programs. The inclusion of Sta. Maria will provide comparison on the characteristics of a “doer” and a “non-doer” municipality. A total of 15 and 16 LGU officials from Malalag and Sta. Maria, respectively, were covered in the survey. Willingness and availability of these officials were used as basis in interviewing them. In-depth interviews of Malalag local officials were completed within a week while those from Sta. Maria were held within a day. The interviews in the latter were faster due to the availability of the concerned officials during a session of the Sangguniang Bayan (SB) in the morning with the Municipal Vice-Mayor facilitating the rest of the interviews after the SB session. Table 2 contains the distribution of the LGU-respondents. (Appendix A provides the list of local officials, their designation and sex.)

Table 2
Distribution of LGU-Officials
As Respondents by Survey Sites and by Sex

Sex	Survey Sites		
	<i>Malalag</i>	<i>Sta. Maria</i>	<i>Total</i>
Female	7	7	
Male	8	9	
<i>Total</i>	<i>15</i>	<i>16</i>	

Opinion Leaders. Opinion leaders were considered as playing important roles in matters affecting the affairs of community residents, thus their inclusion in this survey. The interview of opinion leaders was, however, conducted only in the Municipality of Malalag where the local government unit is active in managing and protecting their environment.

To collect a more varied responses on the survey questions, the opinion leaders were classified as urban male and female “doers”, urban male and female “non-doers”, rural male and female “doers” and rural male and female “non-doers”. A list of opinion leaders was established with the assistance of the Municipal Planning and Development Coordinator and the Municipal Administrator of the Municipality of Malalag. Others were identified using the “snowball sampling technique”, i.e. the respondents were asked to help identify the possible persons that can be interviewed as opinion leaders. A total of 17 opinion leaders were covered by the research; eight of which were “urban dwellers” while nine were “rural dwellers”. Of the eight “urban dwellers”, three were females while the rest were males. The “rural dwellers” yielded five males and four females. Table 3 provides the distribution of opinion leaders into “urban-rural” dichotomy, classified as “doers” and “non-doers” and by sex. (Appendix B

provides the list of the opinion leaders, their designation, their group affiliation and their sex.)

Table 3
Opinion Leaders Classified by
Location ("Urban" or "Rural"), by Sex and by Status
in Environmental Management and Protection ("Doer" or "Non-doer")

Sex	Urban			Rural		
	<i>Doer</i>	<i>Non-Doer</i>	<i>Total</i>	<i>Doer</i>	<i>Non-Doer</i>	<i>Total</i>
Male	3	2	5	3	2	5
Female	2	1	3	2	2	4
<i>Total</i>	<i>5</i>	<i>3</i>	<i>8</i>	<i>5</i>	<i>4</i>	<i>9</i>

Community Members. Being the target beneficiaries of development work, the ideas and opinions of community members were likewise considered. In this study, the community members were the residents of the survey sites, i.e. the coastal and upland dwellers in the Municipality of Malalag, (Barangay Baybay and Barangay Mabini, respectively). They were classified as coastal and upland female and male "doers" and coastal and upland male and female "non-doers". A total of 62 community residents were covered by the survey, 34 of which were from the coastal barangay of Baybay and 28 were from the upland barangay of Mabini. Eighteen of the coastal community resident-respondents were females while 16 were males. Those from Barangay Mabini yielded a total of 14 males and 14 females. These respondents were identified with the assistance of the barangay captains. Table 4 provides the distribution of the community resident respondents, cross-tabulated by survey sites, status relative to environmental management and protection activities and by sex. (Appendix C provides the complete list of the community residents interviewed.)

B Baybay — coastal (34 residents) 18F, 16M
 B Mabini — upland (28 residents) 14M, 14F

Table 4
Distribution of Community Residents
by Survey Sites, Cross-classified by Status Relative
to Environmental Management and Protection and By Sex

Sex	Upland Barangay (Barangay Mabini)			Coastal Barangay (Barangay Baybay)		
	<i>Doer</i>	<i>Non-Doer</i>	<i>Total</i>	<i>Doer</i>	<i>Non-Doer</i>	<i>Total</i>
Female	7	7	14	7	11	18
Male	8	6	14	8	8	16
<i>Total</i>	<i>15</i>	<i>13</i>	<i>28</i>	<i>15</i>	<i>19</i>	<i>34</i>

Survey Instruments. Two types of survey instruments were constructed in English and translated into the vernacular (Cebuano), i.e. the in-depth interview (IDI) guide and focus group discussion (FGD) guide. These survey instruments were constructed using a participatory approach, i.e. participated in by all of the contracted consultants for the research. The participatory construction of the survey instruments was done in Cebu last April 28 to May 4, 1996. These were pretested in Cebu as validity and reliability checks. The FGD instrument was pretested on at least two groups of community residents classified as “doers” and “non-doers”. The pretest results served as a basis for the final revision of the instrument. A similar process was observed for IDI guide for the local government officials and opinion leaders and/or influential individuals.

The focus of the survey instruments varied based on the type of respondents covered. On one hand, while the focus group discussion delved on:

- I. Selected Socio-demographic Characteristics
- II. Sources of Information
- III. Perceptions on Environmental Conditions and Problems
- IV. Worldview of Environment

- V. Beliefs and Practices
- VI. Knowledge of the Enforcement of Environmental Policies and Laws
- VII. Perceived Participation in Environmental Affairs
- VIII. Perceived Benefits and Barriers
- IX. Skills and Others
- X. Views on the Fish Sanctuary

On the other hand, the survey instrument for the opinion leaders focused on:

- I. Selected Socio-demographic Characteristics
- II. Perceived Environmental Conditions/Problems
- III. Enforcement of Environmental Policies and Laws
- IV. Participation in Environmental Affairs
- V. Skills and Others
- VI. Views About the Fish Sanctuary

Those for local officials, gathered information on:

- I. Selected Socio-demographic Characteristics
- II. Perceptions of Environmental Problems/Conditions
- III. Enforcement of Environmental Policies and Laws
- IV. Skills and Others
- V. Views About the Fish Sanctuary

Data Analysis. A content analysis was done for all the documents established by the IDIs and FGDs to establish the characteristics of “doer survey sites” and “non-doer survey sites”. The classification of the survey sites as “doers” and “non-doers” consciously used the various indicators outlined earlier by GreenCOM. Descriptive statistics were used to describe the socio-demographic characteristics of the respondents.

RESEARCH FINDINGS

This section of the report presents the results of the survey, particularly the selected socio-demographic characteristics, knowledge, practices and beliefs on environment, barriers in the implementation of tasks related to environment protection, and skills needed relative to environment protection. These findings were, however, classified as follows: (a) Local Government Units, (b) Opinion Leaders, and (c) Community Members.

I. LOCAL GOVERNMENT UNITS

Selected Socio-Demographic Characteristics

There were a total of 15 local government officials interviewed from the Municipality of Malalag, Davao del Sur, eight of which were males while seven were females. Their ages ranged from 30 to 64 years, with most of them married, and Catholics. The majority received a college education and have resided in the survey sites from less than a year to as long as 59 years. These officials were mostly migrants from other areas in Mindanao and have held varied positions in the local government unit

Malalag.

15 LGUs - 8M, 7F 30-64 yrs. most married Cath.
most college educated

from one to 24 years. They have been in public office from two to 36 years and belong to various organizations, i.e. from one to five community organizations.

A total of 16 respondents from the municipality of Sta. Maria were likewise covered, with seven females and nine males, with ages ranging from 32 to 59 years, married, and Catholics. They are college graduates and have resided in the municipality from 6 to 59 years. They have been working in their current position from a minimum of four months to a maximum of 10 years and have been in public office from two to 36 years. They are members in different organizations, i.e. from one to 5 community organizations.

Sta. Maria LGU

16 - 7M, 9F
32-59 yrs. old
college grad

Perception of Environmental Conditions

Assessment of the Current Situation of the Natural Environment. The respondents from both "doer" and "non-doer" municipalities perceived their marine and forest resources as deteriorating (marine resources as depleted, with damaged corral reef, 10% of live corral reef, destroyed coastal areas and destroyed fish habitat; and forest denuded, with no more trees, less forest products, and 10% remaining forest cover) or improving (more fish seen, forest is improving and beginning to have more trees).

However, while the "doer" municipality focused more on the deteriorating and improving state of their marine and forest resources, the "non-doer" municipality mostly cited the effects of the deteriorating natural environment ("low fish catch", "no more fish", "low fish supply", "unclear sea water", "no more trees", and "less forest products").

Comparing sex, the male-respondents cited both the depletion of their environment and the effects of the depleted environment while the females mostly

emphasized the effects of the deteriorating environmental conditions as “low fish catch”, “no more fish”, “unclear sea water”, “low fish supply” and “less forest products”, with some citing improvements in the condition of their marine and forest resources - “coastal is getting better”, “more fish seen”, “improving sea”, and “forest beginning to have more trees” - resulting from the actions their LGU has undertaken.

When asked about the causes of the current deteriorating condition of the environment, the following response-categories were given:

- (1) utilization activities of the coastal and upland residents (illegal fishing, removal of corral reef as roadfills, as beach resort, dynamite fishing, illegal logging, indiscriminate cutting of trees by upland farmers, and cultivation of sloping areas),
- (2) low level of knowledge (not aware of the adverse effects of their use of the natural resources, lack of information on the importance or value of environmental protection),
- (3) increasing population,
- (4) absence of local ordinances and lax implementation of laws by the LGU and DENR, respectively,
- (5) limited funds for the enforcement of local ordinances,
- (6) absence of alternative source of income
- (7) political intervention and
- (8) the effects of the degraded condition of the environment (siltation due to erosion from the forest).

Overall, the respondents perceive the improving condition of the environment as a direct effect of the activities of the LGU (establishment of fish sanctuary, strict implementation of the local fishing laws, and mangrove rehabilitation).

While both “doer” and “non-doer” municipalities mention the utilization activities of the natural resources by the residents and the low level of knowledge as causing the degraded situation of their environment, the “doer” municipality further cited the effects of further degradation of the environment, e.g. siltation due to erosion. The “non-doer” municipality, on the other hand, revealed the “laxity in the implementation of local laws” and the “limited funds for the enforcement of local laws”. Both “doer” and “non-doer” municipalities explained the improving situation of their marine environment as caused by “mangrove rehabilitation”, with the former further citing the activities of the LGU to manage their marine resources as “establishment of fish sanctuary” and “strict enforcement of fishing laws”.

Seriousness of the Situation of the Environment. Some of the LGU respondents from both “doer” and “non-doer” municipalities perceived the seriousness of their natural environmental problem by citing the calamities experienced and will be experiencing (flash floods, landslides, drained springs and rivers, vanishing river life, soil erosion), the negative effects it will have on their livelihood (less income due to low farm production, low fish catch/supply, no more fish, and farther fishing areas), the changing weather conditions (long dry spell, little rain), the depleted marine resource (siltation and destroys corral reef), and the vanishing forest and marine life (displaced forest life such as birds). It is significant to note, however, that the “doers particularly cited the adverse effects of their environmental problems on the “local economy”.

Both males and females justified the seriousness of the condition of their environment by citing natural calamities experienced or will be experiencing (flash floods, soil erosion), the long dry spell, and effect it will have on their livelihood. The females, however, mostly cited the calamities that will occur resulting from the depleted

status of the environment, with males explaining that the serious situation of the environment will affect the local economy.

Activities Undertaken by the Respondents and the LGU to Solve the Serious Condition of the Environment. Given the perceived seriousness of the condition of their natural environment, the respondents were asked about their actions taken to help solve the problem, including the LGU and other sectors in the community..

Respondents. The respondents from the ~~"doer"~~ municipality reported various activities to help solve the deteriorating situation of their natural environment, focusing on two parties concerned - the community residents and the local government officials. They have conducted information campaigns coupled with advocacy work on the importance of environmental protections programs to influence the cognitive aspect of the residents from an unsupportive individual to a supportive one. To sustain this, they had implemented projects on environmental protection such as "reforestation", "establishment of tree nurseries", "coastal resource management by mobilizing the residents", including "education on appropriate technology".

While the information campaigns and advocacy work were undertaken, some likewise started discussing the possible ordinances that should be enforced, drafted the ordinances, and passed related local ordinances. These ordinances were presented to the community residents through public hearings, which were subsequently enforced strictly. Enforcement of the local ordinances were done through coordinative and collaborative efforts by establishing partnerships with the NGOs, people's organizations (POs), military and community residents. Violators were apprehended. Monitoring of the responses of the community residents was likewise undertaken by deputized barangay officials.

While the ~~"non-doers"~~ reported similar activities (except for monitoring), it should be noted that at the time of the survey, these activities were no longer functional given the limited funds available.

Only male "doers" cited monitoring activities to help solve the environmental problems.

Local Government Units. How about the LGUs? What activities have they undertaken to help solve the problem?

A list of activities were presented to the respondents, asking them to confirm whether or not they have undertaken these activities. Survey results revealed that the majority of the "doers" cited the following activities as undertaken by their LGU: "hired environmental officer", "allocated budget for environmental actions", "disseminated information on environmental issues/concerns", "conducted public hearings on environmental issues/concerns", "resolved conflicts relating to environmental issues/concerns", "established environmental monitoring system/mechanisms", and "passed laws/ordinances", among others.

Most of the "non-doers" claimed that their municipality has "organized bantay dagat (sea-watch) activities", "disseminated information on environmental issues/concerns", "conducted public hearings on environmental issues/concerns", "passed laws and ordinances", "allocated budget for environmental actions", and "established environmental monitoring system/mechanisms".

Data further revealed that the two most mentioned activities undertaken by the male officials were disseminating of information on environmental protection and management and passing laws and ordinances with most females cited the "allocation of budget for environmental actions" and "dissemination of information on environmental protection and management".

Other Sectors in the Community. The respondents were further asked on activities undertaken by other groups, i.e. community residents, NGO's, PO's, civic/religious groups, private business and schools, relative to environmental protection.

The community residents were perceived by the "doers" and "non-doers" as "planting trees" and as "acting as watchdogs" of their environment. Also, the "doers" noted that the community residents, having been informed on what they were getting into, subsequently supported the activities of the LGU and obeyed the laws enforced by the LGU. Furthermore, they cited the vigilance of the community residents themselves, their participation in preparing the ordinances and their being consulted on matters affecting the environment.

The activities of "~~non-doers~~", on the other hand, were perceived as being limited to reporting any violations done by the residents and other parties to the police.

Other than those activities cited earlier, some of the male officials observed that the residents usually clean their surroundings and look for alternative sources of livelihood, while some of the females claimed that the residents have assisted the "Alay Tanim" (tree-planting) program of the LGU.

Though non-government organizations (NGOs) are non-existent in the "non-doer" municipality, they were still reported as mainly conducting education, seminars and symposia on environment in their locality. The "doers" perceived the NGOs (Kapwa Upliftment Foundation and Institute of Small Farmers, Inc.) as very active in the protection of the environment given their upland development projects, provision of continuing education to the residents, forming people's organizations as empowerment strategies, providing technical assistance and logistical supports, planting

trees, promoting environmental protection activities and discussing issues related to the environment.

The **people's organizations (POs)** were reported by the “non-doers” as concentrating more on tree planting, conducting their own meetings and supporting the activities of the LGU. They were seen as active by the “doers” as supporting environment-related projects of the LGU, forming themselves as cooperatives, providing trainings to the residents, assisting the implementation of LGU's environmental projects, planting trees and as “watchdogs” along the coast, “discussing environmental issues”, “growing trees”, “sitting in the municipal development council (MDC) and barangay development council (BDC)” and “being involved in planning, implementing and as source of feedback for the environmental projects of the LGU”.

The **religious groups**, in particular the Catholic Church, were seen as “actively contributing towards environmental protection” by both “doers” and “non-doers” as in creating awareness among the residents on the value of environmental protection and planting trees. The “non-doers” further added that the “church is monitoring the environment”. The “doers” also reported that the church “advocated for and disseminated information on environmental protection through their sermons”, “organized the community residents for tree planting”, “established a model farm in the locality”, “distributed seedlings” and “monitored the activities in the environment”.

On the other hand, **private business sector** was reported by both “doers” and “non-doers” as minimally involved in environmental protection activities. They were mainly observed by the “non-doers” as “merely providing financial assistance to buy seedlings for the nurseries” and “refusing to buy any lumber or woods offered for sale by the residents”. The “doers”, meantime, saw them as “being conscious of

environmental protection", "providing seedlings", as "resolving conflicts caused by improper drainage system", "forming themselves as association" and "planting trees".

Both ~~"doers" and "non-doers"~~ observed that the schools were generally planting trees. The "non-doers" cited the "education activities of the schools" while the "doers", specifically, noted that the schools encouraged students to plant trees, engaged in beautification and cleanliness activities and conducted researches on the environment.

Other Things that can be Done. The responses of the interviewed local officials appeared to vary between "doers" and "non-doers".

Respondents. The ~~"doers"~~ hope to be "implementors and legislators at the same time" - e.g. mobilize people in identifying areas for coastal resource management", "access people to appropriate technology", "provide technology and alternative livelihood projects, "increase the-number of hectares to be planted with timber", and to "plant bamboo along the river banks", "development of their research skills", "more discussions on the validity of the local ordinances" and "continue what they have started on environmental protection".

The ~~"non-doer"~~ respondents would like to "invite NGOs to "give their residents seminars regarding environmental protection" and "livelihood projects" and to "encourage people to report any unacceptable activities being done on their environment". For the LGU's, these respondents hope that the LGU will "actualize what they preach", "organize 'bantay dagat'", "to secure financial support", to "encourage people to plant trees" and to "attend seminars on environmental protection".

Local Government Unit. The local government unit was expected by the "doers" to "acquires skills on environmental impact assessment", "implement more

projects”, “increase and strengthen local ordinances on environment”, “acquire more skills on making sound ordinances” and “continue enforcing local ordinances”. The “non-doers”, on the other hand, suggested that their LGU should “organize a committee on environment”, “enforce local ordinances strictly”, “disseminate these local ordinances to the residents”, “support the environmental protection programs”, “acquire patrol boats”, “should develop their political will” and “should be vigilant against illegal loggers”

Both male and female respondents expressed the same actions for their LGU to take, e.g. “organize a committee”, “disseminate the local ordinances passed”, “enforce these local ordinance strictly”, “strengthen local ordinances”, “make new ordinances”, “acquire skills in making sound ordinances”, “develop their political will”, “be vigilant against illegal loggers”, and “support environmental protection programs”. Also, while most of the females stressed the “qualities that the LGU must have” (vigilance and political will), the males reported the necessity for the LGU “to acquire skills on environmental impact assessment (EIA)”. These data showed that both males and females perceive their LGU to concentrate more on ordinance-related activities.

Community Residents. The residents were seen by both ~~doers~~ and “non-doers” as regularly cleaning their premises. Also, the ~~doers~~ preferred the community residents to “plant mangrove”, “concretize their drainage system”, “cooperate with government projects on environment”, “being vigilant”, “consciously sustain the activities on environmental protection”, and “recommend solutions on how the environmental problems can be addressed”. The ~~non-doers~~ likewise suggested that the residents should “plant trees”, and should “inform themselves about their environment”, “cooperate with the LGU” and “observe local ordinances”.

Furthermore, the males and females greatly vary with their responses. The males recommended that the community residents "plant trees or mangroves", "maintain cleanliness around their premises", "concretize their drainage system", "cooperate with government projects on development" and "inform themselves about their environment". The females, on the other hand, suggested that the community residents must be vigilant and consciously sustain their activities on environment protection, plant trees, cooperate with government projects on environment and observe local ordinances.

Non-government Organizations (NGOs). Though there were no NGOs in the "non-doer" municipality, still some suggested that the "NGOs should implement environmental protection programs" and "provide financial assistance to the LGU". The "doers", on the other hand, admonished the NGOs to continue their collaborative and coordinative efforts in development work, "expand their area of coverage", "include coastal areas in their development work" and "continue monitoring and assisting the farmers in establishing market linkages".

People's Organizations (POs). For the "non-doers", PO's can do more by "following the local ordinances" and "implementing environmental protection projects". Both "doers" and "non-doers" alike believe that POs should adopt environment-friendly farming systems, "establish more coordinative development activities", continue assisting information campaigns, continue implementing environmental protection projects" and be "more nature-lovers".

Religious Groups. The church was seen by some of the "non-doers" as "disseminating information in the chapel level", "continually engaging in information dissemination", "establishing more collaborative and coordinative work", "continually advocating environmental protection through Sunday sermons", "continue

implementing environmental protection activities” and “nurturing spiritual values related to environment”.

Private Business Sector. The business sector was viewed by some of the “doers” as “possible source of financial assistance in the environment projects of the LGU”, “incorporating environment-friendly waste management in their daily activities”, “undergo a seminar on the concept of social responsibility” and “implement environmental protection programs”. Some of the “non-doers” likewise recommended that the business sector “be educated on environmental protection”.

Schools. The “doers” wished that the schools “continue teaching children the value of environmental protection”, “promote ‘tree-growing’ rather than ‘tree planting’”, “monitor the environmental-related activities of students”, “incorporate environmental protection in the curriculum” and to “discuss with students the concept of shared responsibility”.

Barriers Faced by the LGU in Addressing Environmental Problems. Despite the varied roles played by the different sectors in the survey sites in addressing environmental problems, challenges were felt as either encouraging or weakening the zealousness of the local government units to pursue their environmental protection programs. This section therefore presents the barriers faced by the LGUs as they struggle to make effective their role in protecting their environment. The barriers faced by the LGUs are indicative of the expectations necessary to install for a smooth implementation of their activities relative to environmental protection.

These barriers faced by the LGU can be generally related to the community residents and the local government officials. The supportive response of the people can be acquired when they have “good value formation”, “strong organization”, “know the benefits of their involvement”, “have alternative sources of livelihood”, “have

commitment", "if the project is within their interest", "informed about the project through their attendance in any general community assemblies", "if the dole-out system has been totally erased", "if not lazy" and "if one values cooperation".

The barriers related to local officials are mainly politics-oriented (i.e. the "lack of commitment or political will for fear of losing in the next election", "political differences (quarrels)", "conflict between vested interests and welfare of the people", "politicking"), and leadership problems, i.e. the "disunited local officials", limited skills", "uninformed local officials", "models of illegal activities", "corrupt mayor" and "lack of leadership skills". Other barriers cited were the "limited funds", "limited logistical support", "limited technology" and "limited support staff".

As a whole, both "doers" and "non-doers" agreed that the community residents "lack commitment, confidence and awareness". Those residents are perceived as "having no alternative sources of livelihood", "with negative attitudes towards the program", "poor" and "find it hard to get out of the dole-out system". Furthermore, both "doers" and "non-doers" believed that limited funds and perceived conflict between vested interests and the welfare of the people should be properly attended to for them to be effective in solving environmental problems. The "doers" further noted the community residents' "lack of value formation and initiative", "weak organization", "wait-and-see attitude", "uncertain benefits of their involvement", and "being non-resident landowners". They are unsupportive whenever their interests are affected or when projects implemented were not within their interests". Other observations that should be addressed were the "belief that the environment is for their use", "the lack of cooperation and commitment" and "political differences/opponents" among the local officials.

The ~~“non-doers”~~ further recommended that the following barriers be looked into for effective solutions to environmental problems: people-related barriers (such as “non-attendance to meetings”, “lazy people”, and “low level of education”) and politics and leadership-related barriers such as “politicking”, “political quarrels”, “limited skills”, “limited information”, “disunited officials”, “limited logistics”, “models of illegal activities”, “corrupt mayor”, “lack of leadership skills”, “limited technology” and limited support staff”.

Both male and female respondents cited the people’s “lack of cooperation”, “no alternative sources of livelihood”, “their being poor”, and “not easy to get out of the dole-out system” and local officials’ “limited funds”, “lack of political will for fear of losing in the next election”, “political differences/opponents”, and “conflict between vested interests and the welfare of the people” as blocks to their effective solution of the environmental problems.

The findings further showed that while the “doers” stressed more on people-related barriers, the “non-doers” focused more on local official-related barriers. However, both males and females identified more people-related problems than the local official-related barriers.

Individuals/Organizations Perceived by the Respondents as Most Responsible in Solving Environmental Problems. The responses of the respondents when asked about their perceptions as to who or what organization is most responsible in solving environment problems, the ~~“non-doers”~~ appeared to put their trust mainly on one organization - the local government unit - while the “doers” opted for “individuals”, “partnership between individuals (community residents) and local/barangay government units” and that solving environmental problems is but “everybody’s concern”.

Benefits that the LGU Would Gain From Solving Environmental Problems. As a justification for the activities undertaken by the LGUs in solving environmental problems, the respondents were asked on the possible benefits that the LGUs would gain from solving environmental problems. Research findings revealed benefits as LGU-centered, people-centered and those that will benefit all. The LGU-centered benefits included “gaining prestige”, “economic growth”, “lesser problems as in crimes”, “increased revenues”, “easy collection of taxes”, “less unemployment problems”, “improvement of skills in designing solutions to problems,” “improved LGU”, and “reducing the number of people queuing for assistance in the municipal hall”. The people-centered benefits were “upliftment of livelihood,” comfortable life”, “improved health status”, “easy for people to organize”, “united”, “increased income”, “stable income”, and “more fish catch”. Those benefiting all included “absence of calamities”, “abundant water supply”, “cooler place”, “more development”, “greener environment”, and “peaceful place”.

Comparing responses, the “non-doers,” appeared to identify benefits covering both the people and the LGUs (greener environment, limited calamities, peaceful place, cooler place, and more development) while the ~~“doers”~~ were more people-centered (upliftment of livelihood, comfortable life, improved health status, and easy to organize themselves), and LGU-related (improved economically, lesser unemployment problems, increased tax collection, improved skills in designing solutions to problems, and reduced number of people queuing for assistance in the municipal halls).

Supportive and Unsupportive Groups of Individuals of the LGU's Efforts in Environmental Protection and Management. Those supportive of the LGU's efforts on environmental protection according to the “doers” included “people's organizations”, “non-government organizations”, “residents”, “Municipal Advisory Team on

Environment (MATE)", "those who understood environmental protection" and "government agencies", among others. The "non-doers" received support from the "people's organizations" and the "residents", "development councils", "cooperatives", "municipal/barangay officials", "government agencies" and "religious groups/church".

The findings showed that both ~~"doers"~~ and "non-doers" similarly mentioned "people's organizations", "residents (e.g. members of the chapel-based organizations - GKK, fishermen, and farmers), and "government agencies (e.g. Bureau of Fisheries and Aquatic Resources, DENR, and Department of Health) as supporters of the LGU's efforts in environmental protection and management. Others identified by the ~~"doers"~~ were "those who understood environmental protection", "non-government organizations" and "Municipal Advisory Team on Environment", while the "non-doers" cited "development councils", "cooperatives", "municipal/barangay officials" and "religious groups/church".

On the other hand, both the ~~"doers"~~ and "non-doers" identified the following as ~~unsupportive~~ to LGU's efforts: "fishermen using illegal means of fishing", "those living on in illegal activities", "political opponents", "those with little information on environmental protection and management" and residents "not attending meetings".

While ~~"doers"~~ cited ~~"Sta. Maria municipal officials"~~, "non-doers" reported "the residents who are resistant to change", "seaweed growers who failed to pay their loans", "big time fishermen", and "unaware businessmen.

Both male and female respondents cited the following as unsupportive of the LGU's efforts in environmental protection: "fishermen using illegal means", "those with lesser information on environmental protection", and "residents

not attending meetings". The males further identified "Sta. Maria municipal officials", "those living in illegal activities", "residents who are violators and refused to understand", "residents resistant to change", "seaweeds growers who failed to pay their loans", and "big time fishermen". The females added that "political opponents", "those busy looking for money", and "unaware businessmen" pose serious difficulties for the LGU's efforts in environmental protection and management.

Environmental Projects Implemented in the Survey Sites, Implementing Agencies, its Status and Perceived Reasons for the Status. Both ~~doer~~ and ~~non-doer~~ municipalities claimed awareness of the various environment-related projects implemented in their areas. These projects were usually implemented either by the local government units and government agencies (Department of Agriculture, CENRO, Department of Environments and Natural Resources and the Bureau of Fisheries and Aquatic Resources). These projects were viewed by the respondents as either a "success" or a "failure". As explained by ~~doers~~, "success"-indicators of the projects were physical observations such as "*daghang isda ang makita sa palibot sa fish sanctuary*" (more fishes were seen around the fish sanctuary), "*maayo ang kuha sa mga mananagal*" (fishermen have a good catch), and "mango trees are fruit-bearing". Perceptions were likewise given importance such as "people were informed about the project and the benefits that they will get from the project", "provision of continued education" and "updated information regarding the status of the projects through the use of bulletin boards", "available financial support", "people's participation", "LGU support", "perceived positive effects of the projects" and the "nature of the project is progressive and sustainable". Still others noted the "regular monitoring system

installed”, the presence of local ordinances, the cases of apprehended violators and the presence of the caretaker in the fish sanctuary.

Likewise, failure of the projects were explained by the “doers” as due to the “failure of the DENR to establish smooth interpersonal relationships with the community residents”, “inappropriate information dissemination about the project”, “adequate support was not provided”, and “because of the dole-out system approach”.

It is interesting to note that only a few implemented projects were reported by the “non-doers” as successful, with most of these regarded as failures. Most of these failure projects were implemented by the LGU. The success of the projects were related by the “non-doers” to its “being newly-implemented”, as a results of the “lessons from the mistakes committed by other projects”, because the area is “typhoon-free”, “cutting of trees is banned”, and “Bantay Dagat was organized”. The failure of the projects was explained by the “non-doers” as “failure of the project implementor to check the appropriateness of the soil”, “limited funds”, “absence of monitoring system”, “the implementing NGO absconded the money”, “the farmers’ negative experiences with previous projects”, “failure to sustain the project”, “people were not informed about the project”, and “absence of an individual assume responsibility for environmental protection”.

Enforcement of Environmental Policies and Laws

This section presents the respondents’ assessment of the implementation of the local government code; knowledge on the national environmental policies relevant to the survey sites, local ordinances passed, the reception of the community residents to

these local ordinances and laws running counter to sound environmental protection; and the barriers confronting the LGUs in enforcing local environmental ordinances.

Assessment of the Implementation of the Local Government Code. The implementation of the Local Government code was positively assessed by the "doers", i.e. "80% of the provisions were implemented", and "more provisions being implemented" among others. On the Other hand, "non-doers", described its implementation as mainly "difficult to implement" i.e. either due to "limited funds", "not smoothly implemented", "needs more efforts to implement the provisions", "mandatory positions were not yet filled up", or "few provisions were implemented".

On the whole, both "doers" and "non-doers" agree that localized environmental management functions were not yet devolved - in response to which the "doer" municipality decided to hire their own environment officer under the office of the municipal agriculturist. Two "doers", however, claimed that such a provision has already been devolved.

The following environmental functions organized by the "doer" municipality included passing local ordinances in support of the coastal resource management program, i.e. the fish sanctuary, banning of illegal fishing in the municipal waters, hiring of LGU environmental officer, regulatory use of municipal waters, pollution control on anti-littering ordinance and regulation of quarries.

The "non-doer" municipality implemented activities focusing on "education on environmental protection", "coral rehabilitation", "banning illegal logging and fishing" and the "Clean and Green Project".

Knowledge on the National Environmental Policies Relevant to the LGU. Varied national environmental policies pertinent to the LGUs were likewise identified by both "doer" and "non-doer" municipalities. However, the "doer" municipality appeared to

be more varied in their knowledge on the national environmental laws applicable to their LGU vis-à-vis the “non-doer” municipality. Males were more knowledgeable about the environmental policies relevant to the LGU.

The “~~non-doers~~” basically claimed knowledge on the sea (e.g. anti-illegal fishing, establishing of a fish sanctuary and mangrove rehabilitation) and forest-related laws (anti-illegal logging laws and reforestation). The “doers”, on the other hand, cited the pollution laws, anti-littering laws, waste management laws, forestry laws, banning exportation of tropical fishes and sanitation laws.

Knowledge on the Current Local Ordinances Passed by the LGU. The level of knowledge of the respondents of locally passed ordinances is indicative of the extent the LGU has promoted transparency on its activities, the priority given to the concept of “popular participation”, the value placed on the concept of “partnership in development”, and the priority given for the welfare of the very people electing these local officials into office.

Research findings reveal differences on the knowledge of the respondents on the current local ordinances passed by their LGUs. The “doer” municipality claimed to be aware about current local ordinances passed by their LGU relative to coastal resource management (e.g. the ordinance on the establishment of fish sanctuary, illegal fishing, dumping, and proper sewerage system) forest resource management (e.g. ordinances on illegal cutting of ipil, dumping of garbage in the river, anti-littering and illegal logging), and industrial pollution control (e.g. proper waste and garbage disposal, burying of felled coconut trees, pollution and pesticide use). The “non-doer” municipality, in turn, cited current local ordinances on coastal and forest resource management, fishery laws, banned cutting of mangroves and banning of stray animals, mangrove rehabilitation and illegal logging. It is, however, interesting to note that the

respondents from the "non-doer" municipality tended to cite anti-illegal fishing and forestry laws which were functional during the early years of the implementation of the Local Government Code.

Community Attitudes Towards Local Ordinances. The respondents from the "doer" municipality unanimously reported the negative reactions of the community residents on the locally passed ordinances, citing such reasons as the "poor members of the community felt being deprived of their source of income", "their fishing area was reduced and have even become farther from the shore", and the "fear of being apprehended while fishing since the boundaries of the claimed municipal waters were not clear". Some respondents simply do not believe in the idea of a fish sanctuary. These situations were alleviated through public hearings, information dissemination on the value of the local ordinances passed, and apprehending those violating the ordinances.

The respondents from the "non-doer" municipality claimed that local residents equally accepted and resisted the local ordinances. The positive acceptance of the local ordinances was confirmed by the "non-doers", e.g. *ang mga molupyo nalipay* ("the residents were happy about it"), "just accepted it without questions", and "because the people supported it". Expectedly, those residents whose livelihoods were affected reacted against the local ordinances. They explained that these ordinances run counter to their belief that *"ang kinaiyahan gihatag sa Diyos para atong gamiton"* (the environment was given by God for our use"), and their principle of *"panginabuhì usa labaw sa tanan"* ("self-existence/survival above all").

Enforcement of Local Ordinances. The "doer" municipality appeared to be more varied in their enforcement of local ordinances than the "non-doer" municipality. The respondents from the "non-doer" municipality mainly reported coordination activities among concerned groups (e.g. police and residents; police, civilian volunteers, bantay dagat and CAFGUs; police, barangay captains and residents; and DENR and DA) and "solo-flight-enforcement approach" by the Municipal Development Council, police, local government unit, and Department of Agriculture. On the other hand, the "doer" municipality implemented varied strategies in enforcing local ordinances, specifically, 1) organizing a task force composed of the police, Municipal Advisory Team on Environment (MATE), Provincial Agriculture Office, barangay officials and people's organizations, 2) organizing a composite enforcement team participated by the police, barangay officials and the residents, 3) coordination with the police 4) coordination with the barangay officials, and 5) direct enforcement by the barangay officials with the assistance of the police and the civilian volunteers, even by the LGU itself or by the police itself.

The strategies of enforcement were considered effective by both "doer" and "non-doer" respondents. The "non-doers" cited the "number of violators apprehended" and the "limited cases reported on illegal fishing". "Doers" considered the strategies effective for "cases were filed for the apprehended violators", "many fishing gears considered illegal were confiscated", and the "banana company signed a Memorandum of Agreement regarding their proper toxic waste disposal".

The ineffectiveness of the enforcement strategies were explained by the "non-doers" as caused by the limited logistical support and the selected enforcement of

ordinances. The "~~doers~~" explained this situation by citing that there were some policemen receiving "grease" money (bribes).

Number of Respondents Rating the LGU, Community Members, NGOs, POs, Religious Groups, Private Business Sector and Schools As Active in Enforcing Local Environmental Ordinances. Since the enforcement of local ordinances appeared as not being the sole responsibility of the local government units, the respondents were made to assess the other "partners" in development, i.e. whether or not they were active in the enforcement of local ordinances. The research findings showed that while most of the "~~non-doers~~" rated the local government units, "active" in the enforcement of local ordinances, the "~~doers~~" cited a wider group (e.g. LGU, NGOs, community residents and POs) "active". The "doers" rated the private business sector and schools as the least active while the "non-doers" rated the NGOs and schools as such.

Most males considered the LGUs and community residents active in enforcing local environment ordinances, with most females citing community residents, LGU, POs, NGOs and the religious group. Both males and females, however, agree that the private business sector are the least active.

Barriers Faced by the Enforcers of Local Environmental Ordinances. The barriers encountered by the implementors of local ordinances can be categorized into those related to the residents and those related to the implementors. The barriers related to the residents included such negative traits as laziness, individualism, resistance to change, being uninformed and narrow-mindedness of the residents. Others cited the lack of alternative livelihood and the negative experiences of the people in previous projects". Those related to the implementors were politics-oriented ("political intervention"), leadership-oriented (e.g. "conflict among the local Officials", "political rivalry", "dis-united local officials", "ineffective inter-governmental relations",

“ineffective local officials”, “lack of coordination by the local officials”, “fear of being hated by the people”, “inactive local development councils”, and “lack of awareness of the local ordinances by the local officials”, and support-oriented such as “limited funds”, “laxity in the implementation of the ordinances”, and “lack of support from the chairman of the Sangguniang Bayan”.

The “doers” and “non-doers” similarly identified people-related barriers: “individualism” and “limited funds” of the implementors as barriers.

Moreover, the “~~doer~~” municipality cited other “people-related” barriers (e.g. “unenthusiastic support”, “lazy”, “hard headedness”, “lack of alternative livelihood”, “refusal to change ways”, individualism”, “violators” and being “uninformed”) and those related to implementors (e.g. “political intervention”, “conflict among the local officials”, ineffective inter-governmental relations” and “limited knowledge about the local ordinances”). The “~~non-doer~~” municipality, meanwhile, identified such “implementor-related” barriers as “laxity in the implementation of the ordinances”, “disunited local officials”, “fear of being hated by the people”, lack of awareness of the local ordinances by the local officials”, “lack of coordination by the local officials”, “inactive local development council”, “lack of support from the chairman of the Sangguniang Bayan”, “ineffective local officials and “political rivalry”) and people-related barriers as “attitude of livelihood first before anything else”, “negative experiences in previous projects” and “fear of reprisals”.

Most of the males mentioned people-related barriers while the females mainly cited implementors-related barriers. Both males and females stressed the people’s attitude of “livelihood first before anything else” and the “limited funds” of the implementors.

As reported by the "doers", the offsetting of the barriers were made through "educating the people about the local ordinances", "conducting series of dialogues", "provision of soft loans by the Department of Agriculture", "filing of cases against the violators" and "mobilization of the residents to assist in the enforcement of local ordinances". All the "non-doers" noted that no activities were undertaken to overcome the barriers encountered by the implementors.

Knowledge of Laws Running Counter to Sound Environmental Management.

While most of the respondents from the "doer" and "non-doer" municipalities claimed to have no knowledge on laws threatening sound environmental management, some "doers" cited PD 704, which provides that local ordinances related to fishing should be approved by the Bureau of Fisheries and Aquatic Resources (BFAR) before these are enforced. Although this has been claimed by the BFAR personnel as not necessary under the Local Government Code, this has been used as the basis for filing a case against the LGU by the apprehended individuals violating the local ordinance. Likewise, PD 704 has been used by the municipal judge in concluding the case in favor of the apprehended individuals. One "non-doer" noted that the law prohibiting people to cut trees is a sheer disregard of the universal law of the "Right to Live"

Skills, Technology and Support Services

Skills, technology and support services are viewed as playing an important role in understanding the effectiveness of the actors in executing their tasks. This section presents the skills perceived by the respondents as needed by the community members to become active in environmental management, including those skills needed by the local officials to effectively implement environmental policies and laws and sound environmental management decisions and practices. Other interests focused on the

technology and support services needed by the local officials and the community members to be more active in environmental protection, and the respondents' rating on the extent to which the pre-identified factors influence people to be actively involved in environmental protection and management.

Skills Perceived by the Respondents as Needed by the Community Members to Become Active in Environmental Management. Both "doers" and "non-doers" agreed that the community members must have the "ability to seek information", "technical knowledge and skills on coastal and upland management", "alternative sources of livelihood", and "planting high value crops/proper rice planting" in order to become active in environmental management. Also the "doers" primarily believed that the community members must have managing skills. Other skills needed by the community members were: "Leadership", "developing political will and efficacy", "capability building", "technology updating", "monitoring", "motivating", "environmental impact assessment", and "IEC development on the detrimental effects of depleted resources". Though the "non-doers" mainly cited that having skills on alternative sources of livelihood will make the community members active in environmental management, they also cited other skills as "follow-up", "growing trees", "organizing skills", "advocacy", "mobilizing", "environmental awareness", and "changing attitude".

Both males and females perceived that the community members will become active in environmental management if they are informed about "alternative sources of livelihood", and "technical knowledge and skills on coastal and upland management". Moreover, while the males cited other skills as "leadership", "managing skills", "technology updating", "monitoring", "motivating", "follow-up skills" and "growing trees", the females mentioned such skills as "developing political will and efficacy", "changing attitudes", "organizing skills", "follow-up", "advocacy", "capability

building", "environment impact assessment", "information technology", "IEC development on the detrimental effects of depleted resources", "mobilizing", "environmental awareness" and "growing trees".

Skills Needed by the Local Officials to Effectively Implement Environmental Policies and Laws. "Technical skills in environmental protection and management", "technical knowledge on environmental laws", "ability to seek information", "use of mass media to educate people", "making effective ordinances", "research skills", "organizing skills", and "strategic planning" were the skills most cited by "doers" and "non-doers" alike as needed by the local officials to effectively implement environmental policies and laws. The "doers" further cited "capability-building on environmental protection on management", "coordinating and collaborating skills" "management of coastal and forest resources", "developing political will and efficacy", information dissemination", "identification of hazardous chemicals" and "access to technology".

The "non-doers", on the other hand, added that the local officials needed skills on "supervising", "strengthening local ordinances" and "implementing of local ordinances".

Both males and females recommended that the local offices needed skills on "capability-building", "environmental protection and management", "technical knowledge on environmental laws", "ability to seek information", "organizing skills", "strategic planning", and "strengthening local ordinances". Furthermore the males perceive the local officials as needing skills on "making effective ordinances", "access to technology" and "information dissemination" with the females citing skills in "supervising", "developing political will and efficacy", "implementing of ordinances",

“coordinating and collaborating”, “identification of hazardous chemicals” and “proper budget allocation for environmental projects”.

Skills Needed by the Local Officials to Effectively Implement Sound Environmental Management and Practices. Both “doers” and “non-doers” identified “research skills”, “effective implementation of ordinances”, “management of coastal and upland resources” and “time management” as the skills needed by the local officials to effectively implement sound environmental management decisions and practices. Other than these skills, the “doers” added skills as “ability to seek information”, “acquisition of technical knowledge”, “environment impact assessment”, “formulating policies”, “determination of implication of local ordinances”, and “strategic planning” with the “non-doers” indicating skills on “legislating ordinances”, “supervising”, “mobilizing”, “organizing”, “value formation” and “effective decision-making”.

Both males and females agreed that the local officials needed skills in “effective implementation of ordinances”, “research skills”, management in coastal and upland resources” and “supervising skills”. While the males added on “formulating policies”, “environment impact assessment”, “ability to seek information”, “determination of implications of local ordinances”, “fund sourcing for environmental projects”, “legislating ordinances”, and “mobilizing”, the females enumerated skills on “acquisition of technical knowledge”, “strategic planning”, “organizing”, “value formation”, and “effective decision-making”.

Technology and Support Services Needed by the Local Officials and the Community Members to be More Active in Environmental Protection. Both the “doers” and “non-doers” perceived that the local officials and the community members needed “motorboats”, “financial support to environmental protection and management”, “livelihood projects” and “fund sourcing for environmental projects”. The “doer”-

respondents further cited technological services needed relative to "resource management", "waste management", "transportation and communication facilities", "farm facilities", "motivating", "communication" "monitoring", "marine protection", "road equipments", "equipments for forest guards", research facilities", and "port facilities". Support services needed were "continuing education on alternative livelihood", "more staff for the Municipal Agriculture and Environment Office", "access roads from upland communities to the town proper", "study tours", and "cross site visits". The "non-doers" also added technological services such as "program implementation", "equipments to manufacture abaca hemp", "Sloping Agricultural Land Technology", and "information dissemination", and support services as "improved roads", "access to credit facilities, and "access to marketing".

Both males and females identified support services as "financial support for the environment projects", "fund sourcing for environmental projects", "improved roads", "training on environmental protection and management" and "livelihood projects"..

Respondents' Rating on the Extent Into Which the Pre-identified Factors Influence People to Get Actively Involved in Environmental Protection and Management. Determination of the influencing factors making people active in environmental protection and management serves as a strategy in identifying possible communication messages that will motivate people to increasingly be involved in environment-related matters. This was established by asking the respondents to rate the following factors as "crucial", important", "helpful", "not relevant" and "barrier":

1. Values, beliefs and practices
2. Understanding of environmental problems
3. Existence of environmental laws/ordinances
4. Enforcement of environmental laws/ordinances

5. LGU Support
6. Access to appropriate technology
7. Access to technical support services and training
8. Access to credit
9. Personal investment in terms of money, time and materials
10. Approval/support from family and/or influential persons
11. Maintenance of smooth interpersonal relationships
12. Increased family income
13. Traditional folk beliefs

Using a 3-point scoring system (i.e. "3" for crucial; "2" for "important" and "1" for "helpful") the results showed that both "doers" and "non-doers" alike considered the existence of environment laws/ordinances crucial in influencing people to be more active in environmental protection and management. For "doers", particularly the "enforcement of environmental laws/ordinances, LGU support and personal investment in terms of time, money and materials" were likewise considered crucial. "Non-doers", on the other hand, further regarded values, beliefs and practices, understanding of environmental problems, access to appropriate technology, and access to technical support services and training to be crucial.

A comparison between males and females revealed that both sexes considered the existence of environmental laws/ordinances and LGU support as crucial factors in influencing people to be active in environmental protection and management. Interestingly, the males - in particular - cited values, beliefs and practices along with an understanding of environmental problems, while females focused on practical matters, i.e. citing personal investment in terms of time, money and materials.

Views on Fish Sanctuary

The views of the respondents on the fish sanctuary include their knowledge on the purpose for establishing the fish sanctuary, the year it was established, visits conducted, their personal opinion about the fish sanctuary, size of the fish sanctuary, those responsible for managing the fish sanctuary, agency or individual responsible for fish sanctuary and its effectiveness, presence (absence) of fishing activities in the sanctuary, ordinances passed relative to the fish sanctuary, obstacles faced by the responsible agency or individual in the fish sanctuary and individuals not supportive of the fish sanctuary.

As commonly perceived by both "~~doers~~" and "~~non-doers~~", the purpose of the fish sanctuary was the "preservation and protection of fish". Some "~~doers~~", cited such other purposes as "increasing fish supply for people to have a good catch" and "establishing fish habitat or a breeding ground". Still other "doers" described it as "a way of eliminating illegal fishing practices", including both the protection of the remaining coral reef, and the marine resources", "the restoration of the natural richness of the sea", and "the rehabilitation of the coastal areas". Among the "non-doers", while most of these respondents claimed their LGU as not having a fish sanctuary, the latter was seen as a "protection of the sea from pollution", with some describing it as a breeding area for marine resources".

Varied responses were provided by both "~~doers~~" and "~~non-doers~~" regarding the approximate period the fish sanctuary was established. The "doer" municipality mainly reported that the fish sanctuary was established between 1989 to 1993, with the "non-doer" municipality mentioning the period between 1989 to 1995. Except for one, the rest of the "doers" claimed having visited the fish sanctuary, with five "non-doers" doing so.

- Personal opinions about the fish sanctuary likewise varied for both “doers” and “non-doers”. Based on their actual visits, the ~~“doers”~~ spoke about the benefits of having the fish sanctuary i.e. increasing the available fish supply for fishermen, establishing a breeding ground, eliminating illegal fishing activities, and restoring the natural richness of the sea, among others. Should their LGU decide to establish a fish sanctuary, the “non-doers” generally believed that people will agree with such a plan “for this will be for their own welfare”, “reasonable to have a fish sanctuary in every coastal barangay rather than one big contiguous area”. A fish sanctuary is described as “one way to preserve environment”, and as a “good move to preserve fish”.

Having visited the fish sanctuary, the “doers” opined that the fish sanctuary should be supported by the people given its positive results, i.e. the increased fish supply has greatly helped the fishermen and has provided marine protection. Others are convinced that it is necessary so as to restore fish supply, with some even going further, i.e. that the success of the fish sanctuary goes to prove “that we can do something about our problems, if we have to”. On hindsight, one observation mentioned was that it “gave the people an idea that the fish sanctuary was established - not for any political reason - but for the welfare of the people themselves”.

One “non-doer” and seven “doers” reported the exact size of the fish sanctuary which covers 50 hectares. None from the male “non-doers” gave the right response.

The LGU was reported by both “doers” and “non-doers” as responsible in managing the fish sanctuary. Furthermore, the “doers” added that the Department of Agriculture, “fishery technician”, the Municipal Office of the Agriculture and Environment, and barangay officials are likewise responsible in managing the fish sanctuary. The “non-doers” mentioned the “caretaker” and “small fishermen”.

For both "doers" and "non-doers", the person or agency directly responsible for the fish sanctuary was the LGU. Some of the males mentioned the Bureau of Fishery and Aquatic Resources, with the female giving more varied responses, i.e. the Philippine National Police, barangay officials, Philippine National Police and the barangay tanod, the LGU and the Philippine National Police, Philippine National Police and the Task Force, and Office of the Mayor through the Municipal Office of the Agriculture and Environment.

Those perceived responsible for the fish sanctuary were observed to be effective in their tasks by most "doers" and the "non-doers". Specifically, the ~~doers~~ were believed in and trusted by the people for they understood the objectives behind the fish sanctuary, i.e. being convinced that "it will benefit them", having seen its positive results, and realizing the importance of the fish sanctuary. Others dwelt on its negative aspect, i.e. "cases filed against them". The responsible officials were further observed to monitor the fish sanctuary regularly and enforce the laws strictly so that "no one attempted to fish inside the fish sanctuary". The "non-doers", on the other hand, considered those responsible for fish sanctuary as effective due to proper management. There were less talk on the cases apprehended, including the use of illegal fishing methods."

When asked on the ordinances passed relative to the fish sanctuary, all "doers" - except for one - knew about the local ordinance relative to the fish sanctuary, i.e. Local Ordinance #21 which bans fishing inside the fish sanctuary, and Local Ordinance # 27 which provides for the establishment of fish sanctuary.

The "doers" generally observed that people were no longer fishing inside the fish sanctuary. Instead, they now "fish 100 meters away from the fish sanctuary", realizing both the positive effects of the fish sanctuary and the consequences of any violation of

the ordinance. Others mentioned that a security guard or caretaker oversees the fish sanctuary and that people are generally aware that fishing is not allowed inside the fish sanctuary. Some of the "non-doers" provided their own explanations for the non-fishing stance of the people, i.e. "the fear of being apprehended" and their own awareness "that fishing inside the fish sanctuary is banned".

The obstacles faced by those responsible for the fish sanctuary as claimed by the "doers" were the length of time people will have to wait in the absence of alternative sources of livelihood. Others reported that fishermen using illegal means were questioning the legality of the fishing ordinance, including the perceived inconsistency of the local ordinances with the national laws, consequently, criticisms were lodged by the political opponents on the enactment of the local ordinances, with local legislators accused of acting as direct implementors themselves. Still, others claimed such obstacles as the "unclear boundaries of the municipal waters". For some of the "non-doers", the obstacles seen included the absence of alternative sources of livelihood and the lack of coordination with the nearby municipality.

All the respondents agreed that "increased fish supply" will greatly benefit the people. While the "doers" projected "increased incomes for the people due to increase fish catch", the "non-doers" focused on the "fish-preservation dimension. In terms of time-frames, the "non-doers" believe that these benefits will be experienced by the people within two to five years. The "doers", however, appear to be more varies in their responses with some being very optimistic, e.g. "in a few months", or "already starting". Still, others are more conservative, i.e. "within two to 5 years more" or even remarking "*dugay pa kaayo*" (a very long period).

Knowledge on the Proposed Development Plans

This section establishes the respondents knowledge on any proposed development plans that will be implemented in their locality, whether they agree (or disagree) with it, and the perceived impact of these proposed development plans in the environment and the fish sanctuary.

All the respondents knew of the development plans to be implemented in their locality, with the "doers" mentioning the "coco oil mill in Bulacan", "industrial zones", "industrial development", "oil refining and coco oil mills", "port development", "fruit processing plant", and "agro-industrial plant". Furthermore, they are generally aware that Malalag is a Provincial Agro-Industrial Center. The "non-doers", on the other hand, cited only three - the "dry dock development", "industrialization" and "ice plant".

Both "doers" and "non-doers" agreed with the development plans because these are perceived to generate employment and provides additional revenues for the LGU.

Most of the "non-doers" projected income increases for the people from these proposed development plans. The "doers" agreed to the proposed development plans for "it will spur development in their locality" and "help improve the livelihood of the people". Some of the "doers", however, expressed some reservations on these plans, e.g. whether the proposed development plans are "environment-friendly". Some of the "non-doers" likewise cited certain conditions for their agreement with the development plans, e.g. that the area of industrialization should not be within the residential areas, and that these do not affect the sea.

For both "doers" and "non-doers", the perceived impact that these proposed development plans will bring to the environment in general was pollution. Of interest, the "non-doers", though who outrightly saw pollution as an immediate impact of these

proposed development plans to the environment were just as quick in identifying the preconditions that will make pollution possible. These included the absence of any strict implementation of environmental protection program, the lack of knowledge on environmental impact assessment or the lack of regulatory measures and any contingency plans. Some of the "doers" further claimed that there will be lesser impact on the environment provided investors are required to submit environmental protection plans, pass the standards set by the Environment Impact Assessment, i.e. comply with the environmental protection regulations as an initial requirement to operate".

Will these proposed development plans have any impact (if any) on the fish sanctuary? Both "doers" and "non-doers" agreed that the immediate impact these proposed development plans on the fish sanctuary will be pollution. Some "doers" particularly believed that the sanctuary will die naturally due to pollution or that it might be destroyed since the proposed industrial site is near the sanctuary site. To reduce such negative impacts, some "doers" recommended that the proposed industrial site be located farther, that proper waste disposal be installed, and that pollution be properly regulated". The "non-doers" appear more resigned to the possible problems of pollution, i.e. merely stating that "the fish will be gone" or that "the fish will die".

Information that the Respondents Would Like to Acquire For Decision-Making on Area Development Plans. The respondents provided a wide range of information that they would like to acquire in making decisions about development plans in their area. For the "doers", they wished to be informed on the gains and losses of such development plans on the LGU, community and residents, cost-benefit analysis, environmental impact assessment (EIA), pollution-control technology, i.e. proper waste disposal and drainage system, technical knowledge of solid waste management.

“environmental impact assessment (EIA)” and “type of proposed development plans”. Others cited the need for information on the zoning ordinance of the survey sites, (including the exact site of the proposed industrial zone), detailed environmental protection plans of the proposed development plans, the necessary research skills relative to these proposed development plans, social acceptability of these plans, not to mention the health hazards these proposed development plans will bring to the workers and community residents.

The “non-doers” likewise identified the need for the following information: areas for industrial development, skills in “planning” and “data collection” (including those on investment-promotion), the “effects of oil spills on the marine environment”, “proper procedures to prevent such spills”, “environmental laws”, “the development plans of the survey sites” (including the hazards of such plans), “advantages of LGU’s acceptance of the proposed development plans”, and the “profile of Sta. Maria”. A related interest was to check whether these development plans respond to the need of the people.

Trusted Organizations That Would Provide the Respondents the Information Desired to Acquire. Government Agencies, notably the Department of Environment and Natural Resources (DENR), the Department of Trade and Industry (DTI), the Department of Health (DOH), the Department of Agriculture (DA), the National Economic and Development Authority (NEDA), the Department of Interior and Local Government (DILG) and the Bureau of Fisheries and Aquatics Resources (BFAR) were identified by both the “doer” and “non-doer” municipalities as possible sources of information relative to making decisions on the proposed development plans. The LGUs were likewise mentioned, with some “doers” and “non-doers” identifying GreenCOM and NGOs.

II. OPINION LEADERS

The seventeen (17) opinion leaders covered for the study played varied roles in community affairs. Most of them belong to community organizations, whose opinions were often solicited on local governance and community affairs. These opinion leaders were residents of the “doer” municipality (Malalag, Davao del Sur) and were further classified as “doers” and “non-doers” relative to environmental protection and management programs.

The data collected from the opinion leaders included selected socio-demographic characteristics, perceived environmental conditions of the “doer” municipality, enforcement of environmental policies and laws, participation in environmental affairs, skills and other supports, including their views on fish sanctuary.

Selected Socio-Demographic Characteristics

Among the 17 opinion leaders interviewed, 10 were described as “doers” with seven (7) “non-doers”. There were a total of 10 male-respondents compared to females (7). (See Appendix E)

The “doers” ages ranged from 27 to 66 years; were mostly married, and completed college. Being migrants from the Visayas, they have resided in the survey sites from 25 years and over. Most of them have served in their current position from one to five years, have been engaged in development work from one to 15 years and from one to 36 years in environmental work. They belong to at least two community organizations and as many six and generally rated their participation “active”.

The “non-doers”, on the other hand, were generally older, ranging from 35 to 66 years, mostly married, and are college graduates. All of them were migrants

particularly from the Visayas. Most of them have been working in their current position from less than a year to as long as 10 years and have been engaged in development work from one to six years. They belong to various community organizations, mostly describing their participation in such organizations as "active". One "non-doer", however, described herself as "inactive".

The males appeared to be more highly educated than the females. Seven males (relative to three females) are college graduates. Female-respondents tend to have been involved longer in development and environmental work than the males. On the other hand, more males tend to join community organizations than the females.

Perceived Environmental Conditions

This section presents the respondents'

- 1) assessment of the coastal and forestry resources relative to the following
- 2) factors prompting their assessment; the seriousness of their assessment;
- 3) activities undertaken by the LGU, community residents, non-government organization (NGOs), peoples' organizations (POs), religious groups, private business sector and schools in solving environmental problems;
- 4) other activities that can be undertaken by LGU, community residents, non-government organizations, people's organizations, religious groups, private business sector and schools in solving environmental problems;

- 5) the responsible individuals or agencies in solving environmental problems;
- 6) supportive/unsupportive individuals and/or groups in the respondent's organization's efforts in environmental protection and management;
- 7) barriers faced by the respondent's group in solving environmental problems; and
- 8) environmental projects implemented in their areas.

Assessment of the Coastal and Forestry Resources. Both the "doers" and "non-doers" perceived their coastal resources as "depleted" and "deteriorated". Depletion and deterioration of the coastal resources were related by both "doers" and "non-doers" to the limited supply of fish seen and the reduced number of coral reefs and mangroves.

Furthermore, while the "doers" saw the coastal resources as improving, none from the "non-doers" presented similar observations.

Males vary with the females in describing their concept of "deterioration". The females described "deterioration" of coastal resources as "having less fish supply", while the males related it to "the reduced number of coral reefs and mangrove areas". The latter further attributed the reduction of the mangrove areas to the expansion of fishpond-areas.

The forestry resources were perceived by both "doers" and "non-doers" as "upaw" (denuded) and getting better, describing the denudation of the forestry resources as "only 10% forest cover". The "doers" further observed the absence of the huge trees in the forest resulting in the "hot weather". "Non-doers", on the other

hand, remarked that "only secondary trees are left in the mountains" and noted its "infertile soil".

While both males and females cited the remaining "10% forest cover", the male-respondents' assessment of the forest focused more on the denudation of the forestry resources while the females cited "the adverse effects of the vanishing trees in the mountains", i.e. "hot weather" and the "infertile soil".

On a positive note, amidst all these observations, the improving situation in the mountains was attributed by "doers" and "non-doers" alike to the reforestation programs implemented in the uplands by the people.

Overall, the "doers" and "non-doers" saw the environment as "deteriorating" on one hand and "improving" on the other. However, it should be noted that males and females vary in their perceptions of "deterioration" and "depletion".

Perceived Causes of the Environmental Situation. As perceived by the respondents, the causes of the changing environment varied. The "doers" believed that the changes in their coastal resources were brought about by the illegal use of trawls and drive-in nets ("lampornas"), indiscriminate fishing activities, the limited alternative sources of livelihood, siltation, pollution from chemicals used by the banana and sugar plantations, along with the cellophane garbage from the former and even human wastes. Others mentioned the "influx of settlers in the coastal areas" (and with it, the increasing number of fishermen), "the limited technological knowledge", "lack of awareness of the adverse effects of their activities in the environment", and its long-term effects on the next generation, and "cellophane litters from the banana plantations".

The "non-doers", on the other hand, cited such causes as the people's own neglect in understanding environmental issues and concerns, illegal fishing activities,

the chemicals used by the banana plantation, the absence of alternative sources of livelihood and a sustained program on environmental protection and management - including poverty.

While both males and females noted the pollution coming from the banana plantation and the lack of alternative livelihoods, they likewise cited varying causes. The males identified such factors as siltation, influx of settlers, and the lack of concern about future generations. Still, others cited the lack of awareness on the adverse effects of their activities in the environment, the absence of sustained programs on environmental protection and management and indiscriminate fishing. The females, however, observed the "increasing number of fishermen", "poverty", and "neglect among the people in understanding environmental issues and concerns".

For the forestry resources, the "doers" attributed the denudation in the mountains to the people's need for firewood, and houses, likewise due to illegal and indiscriminate logging activities and the absence of any replanting programs. Other causes mentioned were the limited alternative livelihoods, the limited technological knowledge, the lack of planning for future generations, and soil erosion.

The "non-doers", likewise, cited "the absence of alternative livelihood-activities and a sustained program on environmental protection and management, the lack of education on forest management, "kaingin" (slash-and-burn farming) practices and the indiscriminate cutting of trees.

Both males and females agree that logging operations and the indiscriminate cutting of trees by the people were the major causes for the depleted forestry resources - with some causes varying between the two. Males particularly cited the "kaingin" practices, the absence of alternative sources of livelihood, and a sustained program on environmental protection and management, the lack of education on forest

management, increasing upland population, the limited technological knowledge and erosion. Females, on the other hand, cited the use of trees for firewood and for house construction, and the lack of any replanting programs.

Overall, the varying causes of the deteriorating environment can be categorized as follows:

"Cognitive-related" - "lack of awareness of the adverse effects of their activities in the environment", "limited technological knowledge" and "absence of knowledge on environmental issues and concerns"

"Attitude-related" - "failure to consider the next generation"

"Needs-related" - "no alternative sources of livelihood", "as firewood", "as materials for house construction" and the "poverty situation (economic) of the residents".

"Utilization-related causes" - "illegal fishing", "use of illegal fishing methods or gears" (e.g. cyanide); "chemicals coming from the banana and sugar plantations and fishponds", "indiscriminate cutting of trees", "cellophane litters from the banana plantation", "illegal cutting of trees without replanting" and "kaingin" (slash-and-burn farming).

"Population movement causes" - "increasing influx of settlers in the upland and coastal areas" and "increasing number of fishermen".

"Other factors" - "absence of sustained programs on environmental protection and management".

The categorization of the causes further revealed that the present environmental problems were mainly man-made, i.e. due to the activities of the people themselves. Likewise, internal factors as "needs-related", "cognitive-related" and "attitudes" may have contributed to the problems. On the other hand, "population movement causes"

and the "absence of sustained programs on environmental protection and management" imply the LGU's role in down playing the barriers.

Seriousness of the Environmental Situation. In this section, the respondents were asked to assess their environmental problems, i.e. whether it was "serious" or otherwise. Most of the "doers" and "non-doers" perceived their environment - whether coastal or forestry resources - as serious. Others, though, believed their environment problem was not serious given the reforestation program in the upland, e.g. the presence of many trees in the mountains and the increasing supply of fish seen as a result of the sanctuary project of the LGU.

The "doers" considered their environmental situation as serious mainly because of the low incomes due to the limited fish supply, the low farm production as a result of the poor soil quality caused by erosion and the destruction of the fish breeding sites. On a wider scale, related fears were expressed relative to the future concern, and the possibilities of massive soil erosion and siltation of the rivers due to deforestation. One fear mentioned was their past experience with the typhoon Titang which caused flash floods and resulted in the death of one person.

The "non-doers", likewise, expressed the possible adverse effects the deteriorating environment may bring. As of now, only a few fish can be caught which means that the time will come when people will lose their only source of income. Such dire prospects will expectedly cause the prices of basic commodities to increase significantly.

Though both males and females agreed that the serious condition of the environment will affect their livelihood, most females were concerned about the effects these will have on prices of basic commodities. Males, however, expressed their fears on the possible calamities the deteriorating environment may bring to the people, i.e.

possible massive soil erosion and siltation of the rivers due to deforestation, including the possibility of flash floods as experienced during a typhoon.

On the whole, the respondents considered their environmental conditions serious in the bases of its adverse effects on their livelihood and the calamities that might occur in the future unless these are corrected.

Activities Undertaken by the Respondents and their Organizations. Since the respondents viewed their environmental situation serious, they were likewise asked on activities undertaken to help solve the situation. The “doers” claimed to have “helped plant mangroves, fruit and other trees”, “organized beautification and sanitation program in the barangay” (including those related to environmental protection), and “provided social credit as an alternative source of income. Others reported that they apprehended violators of the local ordinances, “reactivated the Municipal Advisory Team on Environment (MATE)”, “conducted information drives on the need for environmental protection and management activities” and other capability-building activities, “conducted advocacy campaigns relative to the need to protect the environment”. Specifically, some “used the legally accepted fishing gears as hook and line” and engaged in “seedling-dispersal activities in the forest areas”.

On the other hand, the “non-doers” conducted educational campaign, such as the importance of environmental protection and management, reported any violations of the local ordinances to the authorities, provided social credit to members as alternative sources of income, organized women to clean the market, and filed a case against the LGU at the Office of the Ombudsman on the legality of the local fishery laws.

Both males and females reported that social credit was provided to members as alternative income sources. Women particularly, tended to focus on social-related activities, i.e. as in organizing the community residents on beautification and sanitation

activities, conducting education campaign on environmental protection, reporting illegal activities to the authorities, and planting trees. The males appeared to undertake various activities - from information drive, planting trees, organizing communities to protect environment, conducting advocacy campaigns, reactivating the Municipal Advisory Team on Environment, persuading the LGU to conduct public hearing, apprehending violators of local ordinances and filing a case against the LGU at the office of the OMBUDSMAN about the strict enforcement of local fishery laws perceived as illegal, among others.

In sum, while “doers” and “non-doers” greatly differ in their activities to help remedy the deteriorating environment, they both claimed to have provided social credit to members as alternative income sources, planted trees and disseminated information on environmental protection.

Activities Undertaken by the LGU, Community Residents, Non-Government Organization (NGOs), People's Organizations (POs), Religious Groups, Private Business Sector and Schools in Solving Environmental Problems. As residents and opinion leaders of the community, the respondents were asked about the activities undertaken by the various groups in their community in solving environmental problems.

Local Government Unit. The respondents were asked to confirm on whether or nor their LGU had conducted the pre-identified activities it ought to do as the lead agency in the development of its community. The results are as follows:

Doers (n=10)	Non-doers (n=7)
Disseminated information (10)	Passed laws/ordinances (7)
Allocated budget (9)	Disseminated information (6)
Established monitoring systems (9)	Established monitoring systems (6)
Passed laws/ordinances (9)	Resolved conflicts (5)
Conducted public hearings (8)	Organized Bantay Dagat (4)
Hired environmental officers (7)	Hired environmental officers (4)
Organized Bantay Dagat (6)	Allocated budget (4)
Resolved conflicts (6)	Conducted public hearings (4)
Organized forest guards (4)	Organized forest guards (2)

Comparing sex, the following results were produced:

Males (n=10)	Females (n=7)
Disseminated information (10)	Disseminated information (6)
Passed laws/ordinances (10)	Established monitoring systems (6)
Established monitoring systems (9)	Passed laws/ordinances (6)
Resolved conflicts (7)	Hired environmental officers (6)
Allocated budget (7)	Allocated budget (6)
Conducted public hearings (7)	Conducted public hearings (5)
Hired environmental officers (7)	Resolved conflicts (4)
Organized Bantay Dagat (5)	Organized Bantay Dagat (3)
Organized forest guards (3)	Organized forest guards (3)

The data showed that all the “doers” were familiar with the information dissemination activities of the LGU on environmental issues/concerns. The other activities cited most by the “doers” included the budget allocation activities of the LGU on environmental actions, the establishment of monitoring systems and mechanisms and the passing of laws and ordinances. The LGU’s activities relative to passing laws and ordinances were familiar to all the “non-doers”, with information dissemination of environmental issues and concerns and establishment of monitoring systems and mechanisms as the second most mentioned activities of the LGU. To solve environmental problems, LGU’s mainly focused on:

- 1) the dissemination of information on environmental issues and concerns,
- 2) the passing of laws and ordinances, and
- 3) establishment of monitoring systems and mechanisms.

All the males claimed knowing about LGU’s activities relative to disseminating information on environmental issues and concerns and passing of laws/ordinances. The majority of the females, on the other hand, claimed being familiar with the establishment of monitoring systems/mechanisms, the passing of laws and ordinances and the budget allocation support to cover its environmental activities.

Aside from the pre-identified activities that the LGU must undertake, additional other activities done by the LGU were cited by the respondents. The “doers” reported that the LGU had established a fish sanctuary, enforced ordinances, planted mangroves, monitored proper garbage disposal, prepared plans for waste management system and forged partnerships with the NGOs and POs on environmental-related activities. Also, while LGU’s were observed to strictly enforce ordinances and plant trees, the “non-doers” mentioned such other activities as calling the attention of the management of one banana plantation (i.e. LAFANDAY) on aerial spraying, arresting fishermen using illegal fishing gears and implementing projects on the environment.

The Community Residents were observed by most “doers” as having planted trees, participated in tree planting and other barangay activities, provided labor to the construction of seawall, used organic fertilizers, protected the mangroves, observed proper garbage disposal, and “reprimanded violators of local ordinances. The “non-doers”, on the other hand, mentioned that the community residents participated in education campaigns, protested the pesticide aerial spraying of a banana plantation, participated in tree-planting, observed local ordinances, and reported violators to local authorities.

Taken together, both “doers” and “non-doers” generally agreed that the community residents participated in barangay activities and in tree-planting projects.

The Municipality of Malalag takes pride in being a beneficiary of the programs and projects of two *Non-Government Organizations (NGOs)*, i.e. KAPWA Upliftment Foundation, Inc. and the Integrated Services for Small Farms and Industries (ISFI), which are currently implementing environment-related activities in selected upland communities. To establish their levels of awareness about these NGOs, they were asked to identify the activities done by these groups to help solve environmental problems.

Findings show that all “doers” know about the existence of the NGOs in their municipality, along with some “non-doers”. As reported by some “doers”, the NGOs were active in environment protection and community organizing activities and have provided technical assistance and training on appropriate technology, specifically contour farming and the Sloping Agricultural Land Technology (SALT). They have likewise encouraged community residents to plant commercial crops (e.g. mangoes) and industrial trees (e.g. mahogany), planted trees, helped in education and advocacy campaigns and supported the environmental protection programs. The “doers” further reported that these NGOs were members of the barangay development councils.

Some of the “non-doers” cited the “livestock program” and the assistance of NGOs in the education campaigns.

The males observed the NGOs as being involved in “community organizing activities”, “provided technical assistance and training”, “planted commercial and industrial trees”, “introduced livestock program”, “engaged in advocacy campaigns” and “supported the environmental protection program of the LGU”. The females, however, had limited knowledge about the NGOs, i.e. simply describing the NGOs as “active”, “being members of the barangay development councils”, and “helping in the education campaigns” and “tree-planting activities”.

The data showed that the “doers” were more diverse in describing the activities undertaken by the NGOs in helping solve environmental problems relative to the “non-doers”. Likewise, the activities cited by the “doers” were not familiar to the “non-doers”. Similar trends can be gleaned from the responses of the males and females, i.e. the former being familiar with NGOs than the latter.

Survey results showed that some “doers” and “non-doers” are not aware of the activities of the *People's Organizations (POs)* relative to solving environmental

problems. Those "doers" familiar with POs mentioned such activities as organizing seminars for the members, inviting resource persons for seminars and training, planting trees and mangroves, supporting reforestation and distributing seedlings to community residents.

The "non-doers" cited a limited number of activities of the POs, i.e. mainly organizing training on sustainable agriculture and coordinating activities on saving the environment with the NGOs and the LGUs.

Comparing the male-female responses, the males cited the training-related activities of the POs (e.g. organizing training on sustainable agriculture), coordinating activities (e.g. specifically with the LGUs on environment-related activities), distribution activities (e.g. seed-dispersal programs), community-participation activities (e.g. tree-planting and in planting mangroves). The females, on the other hand, mentioned only two PO-activities i.e. - tree-planting and supporting reforestation.

Relative to the "non-doers" and female-respondents, the data revealed that "doers" and the males cited more varied PO-activities in helping solve environmental problems. At one point, however, both "doers" and "non-doers" observed that the POs were providing training on sustainable agriculture among its members, while both males and females agreed that the POs planted trees.

Despite the nature of their works, some of the respondents believed that the *Religious Groups* were not limited to undertaking solely religion-related matters, but were concerned about temporal matters as well. In terms of its contribution to solving environmental problems, the "doers" observed that the religious groups likewise helped in tree-planting activities, planted mangroves and encouraged cleanliness of the environment. The "non-doers" similarly reported the religious groups being involved

in tree planting needs and in encouraging people to protect the environment through their Sunday homilies.

The males indicated that the religious groups not only assisted in solving environmental problems (as in helping in tree-planting activities and conducting advocacy campaigns) but likewise actually helped solved environmental problems (as in planting trees). The females mainly cited such assistance as helping in tree-planting and cleanliness campaigns, and the environment issues raised during church services.

Generally, a common denominator for both "doers" and "non-doers" and both males and females was the observation that religious groups helped in tree-planting activities.

Relative to the different groups described earlier, the respondents have very limited knowledge on the activities undertaken by the *Private Business Sector* with regards to environmental protection. While "non-doers" mainly reported that private business sector as planted trees in their own farms, some "doers" observed more varied activities undertaken by the private business sector, i.e. that they planted trees, provided social credit on seedlings, provided seedlings, lent vehicles to the LGU when needed, gave unused drums as garbage receptacles and encouraged tree-planting activities by distributing mahogany seeds.

The males indicated that the private business sector assisted in environmental protection programs, as when Lapanday - the owner of the Malalag Ventures Plantation, Inc. (a banana plantation) - distributed seedlings of trees", "provision of unused drums as garbage cans" and "campaigning for tree planting by distributing mahogany seeds". Other than the facilitative role played by the private business sector, as in lending vehicles when needed and providing social credit for seedlings, the females cited actual tree-planting activities of the business sector.

Only a few of the respondents were familiar with the activities of the *Schools*. Some "doers" reported that they (the schools) engaged in tree planting programs, information dissemination, beautification drives, and helped in planting mangroves. The "non-doers" mentioned two activities - the "cleanliness drive" and the planting of trees along the national highway.

While some females saw the schools participating solely in "tree planting" campaigns, the males cited their involvement in tree planting, information dissemination, beautification and cleanliness drives, planting trees along the national road, and planting mangroves.

As revealed in the findings, the "doers" and the male respondents have wider knowledge about such activities compared to "non-doers" and the female respondents. However, both males and females commonly cited the tree-planting activities of local schools..

Other Activities that can be Undertaken. Other than those activities cited earlier as undertaken by the various sectors in the community, the respondents further mentioned that these sectors can still do more for the solution of environmental problems.

The "doers" recommended that the **Local Government Unit** engage in intensive fruit and industrial tree planting, improve pollution control system, build much bigger garbage disposal area, coordinate with the DENR on environment protection programs, continue the coordinative and collaborative efforts on environmental protection and related activities, synchronize their activities, forge partnership with NGOs on environmental programs, provide alternative livelihood programs to its citizens, and enforce the local ordinances strictly. The "non-doers", on the other hand, proposed that the LGU prepare a plan for waste management, making

laws on proper waste disposal, conduct consultation with the people before drafting local ordinances, collect hard data on people's needs necessary for designing effective environmental protection programs, strict enforcement of local ordinances, and maintain the fish sanctuary.

Among the male-respondents, their suggestions for the LGU included, collection of hard data on the needs of the people, conducting consultation before drafting local ordinances, making laws on proper waste disposal, coordination with the DENR, continuation of the coordinative and collaborative efforts on the protection of the environment, partnership with the NGOs, enforcing the local ordinances strictly, and provision of alternative livelihood. The females recommended that the LGU should have proper waste management, improved pollution systems, build a much bigger disposal area, maintain the fish sanctuary, have intensive fruit and industrial tree planting, and synchronize their activities.

For the **Community Residents**, the "doers" identified their need for training on environmental management and their continued support for environmental programs. "Non-doers" suggested that the community residents maintain the cleanliness of their surroundings, learn to grow trees, use plastic garbage receptacles, refrain from throwing their garbage at sea, continue tree-planting and protecting trees and to commit and participate in environmental concerns..

The males recommended that the community residents continue tree planting and protecting trees, "commit and participate", "learn to grow trees", "use plastic garbage receptacles" and "observe proper garbage disposal. The females, on the other hand, hoped that the community residents will maintain the cleanliness of the surroundings, undergo training on environmental management and maintain their support to environment protection programs.

"Doers" (all females) suggested that the **Non-government Organizations** continue providing assistance in the community even after the termination of their project in the area. The "non-doers" particularly hoped that they continue assisting the LGU.

On the part of **People's Organizations**, the "doers" recommended that they continue their membership both in the **Barangay Advisory Team on Environment (BATE)** and in the **Municipal Advisory Team on Environment (MATE)**, hold seminars, meetings and symposia to educate people on environmental protection. "Non-doers" encouraged their continued assistance to the LGU.

The **Religious Groups** were perceived by some "doers" as "acting as role-models in environment protection activities", with some "non-doers" hoping that they continue assisting the LGU. All these were observations shared by the female-respondents.

The "doers" recommended that the **Private Business Sector** provide financial assistance and spend more time in environment activities. They further encouraged **Schools** to plant and grow trees and "to cooperate, educate and campaign for tree-planting programs".

Overall, the activities suggested by the "doers" were more directed to the LGU, with the "non-doers" addressing both LGU and community residents. Furthermore, the males concentrated on activities to be undertaken by the LGU and community residents, while females, suggested activities for all the sectors pre-identified in this study.

Individuals/Agencies Perceived as Responsible in Solving Environmental Problems . The "doers" gave varied responses on the responsible person(s) or organization(s) to help solve environmental problems, i.e. mentioning six types relative to "non-doers" indicating two. The "doers" revealed the following trends:

*“solo-flight responsibility” of the Local Government Unit,
DENR Collection Officer and community residents,
“coordinative efforts of the POs” (all POs),
“ccordinative efforts of the LGU and NGOs” (LGU-NGOs),
“collaborative efforts of the LGU-NGOs-POs-residents” and
“everybody’s concern”.*

“Non-doers likewise mentioned that solving environmental problems is either the sole responsibility of the LGU or “everybody’s concern”.

The males appeared to be more oriented towards “corporate responsibility” in identifying individuals or agencies responsible for solving environmental problems, i.e. through LGU-NGO coordination and collaboration between the LGU-NGOs-FOs-residents - including everybody else. Females mentioned both the LGUs and Residents as being mainly responsible, along with “corporate responsibility (everybody’s concern and all POs).

In sum, the “doers” preferred that solving of environmental problems should promote the corporate responsibility concept of problem-solving, with the “non-doers” opting for the “solo-flight-responsibility” approach. They both believed that solutions to environmental problems are not the sole concern of any single sector in the community but all the sectors in the community.

Supportive/Unsupportive Individuals and/or Groups in the Respondent’s Organization’s Efforts in Environmental Protection and Management . It cannot be denied that as one initiate activities believed to be beneficial to the community, others may support or stand pat against the success of such activities. Along such lines of interests, the respondents were asked to identify the supportive (and unsupportive) individuals or groups of individuals to their efforts and their organization’s efforts in

environmental protection and management. The "doers" indicated that the following individuals or groups were supportive of their efforts on environmental protection: farmers, people's organizations, barangay councils, barangay officials, people's organizations which are members of the Municipal Development Council, and the Municipal Advisory Team on Environment. The Department of Environment and Natural Resources, KAPWA Upliftment Foundation, Inc., Barangay Captain, Catholic Women's League, Legion of Mary and Parish Youth were also identified by the "non-doers" as supportive of their organization's efforts in environmental protection and management.

Some "doers" and "non-doers" described the barangay officials as supporting their organizations' efforts to protect the environment, while males and females mentioned people's organizations.

The unsupportive individuals or groups appeared to be more varied among the "doers" (9 types) than the "non-doers" (3 types). The "doers" find it challenging to win the support of the following individuals or groups in environment protection: "those who are aware but refused to take the responsibility", "the landowners", "people without interest", "Muslim residents who are big fishing-capitalist", "those with personal grudges against local officials", "defeated barangay officials", "political opponents", "owners of trawlers" and "politicians supporting illegal fishing gears". For the "non-doers", the "passive members of the community" and "those who continue practicing illegal fishing activities" served as stumbling blocks to their organization's efforts.

Barriers Faced by the Respondent's Group in Solving Environmental Problems.

Other than identifying the unsupportive individuals or groups hampering the respondents' group's efforts in environmental protection and management, the

respondents were further made to identify the barriers their groups faced in solving environmental problems. The barriers identified by the groups of the respondents included:

“Organization-related” - (limited funds, lack of access to technology, and limited training on environmental protection and management)

“Community-residents-related” - (uneducated people, low education resulting in low absorption of knowledge, lack of concern about their environment, no vision for the future, distrust for KAPWA which was perceived as a communist front, lack of responsibility and education, low income, smart-alecks, landless residents, negative attitude, not easy for people to get out of the dole-out system, lack of volunteerism, poor people, no alternative livelihood and inadequate information drive); and

“LGU-related” - (LGU failed to organize Bantay Dagat, LGU as not open to criticisms, laxity in the Sangguniang Bayan and incompetent members of the Sangguniang Bayan)

More of the barriers identified by the “doers” were related to the community residents, with some citing organizational-related barriers (i.e. limited funds and limited training on environmental protection) and LGU-related ones (i.e. LGU failed to organize Bantay Dagat, laxity in the Sangguniang Bayan and incompetent members of the Sangguniang Bayan). Some of the “non-doers” cited all types of barriers: organizational-related such as “limited funds” and “limited access to technology”; LGU-related such as “the LGU not being open to criticisms”; and community-related such as “uneducated people”, “low income” and “smart-alecks”.

Most males and females cited community-related barriers.

Environmental Projects Implemented in the Survey Sites, Implementing Agencies, its Status, Perceive Reasons for the Project Status and its Effects to the Day-to-Day Living of Community Members. The projects enumerated by the respondents included both those implemented before the implementation of the Local Government Code in 1991 and those implemented during the implementation of the Code.

The projects that were implemented before the Local Government Code included the artificial reef projects in 1989, "the tree planting in 1980" and the "seaweed project in 1980". All the rest of the projects cited by the respondents were implemented during the implementation of the Local Government Code, attested by the "on-going" status of these projects.

The "doers" cited a wide variety of projects implemented in their community, to wit: fruit tree growing, tree planting, establishment of barangay nurseries, reforestation, contract reforestation, contour farming, Sloping Agricultural Land Technology, fish sanctuary, mangrove planting, artificial reef, social credit, livelihood, animal dispersal, seaweeds culture, fish cage, and campaign against illegal fishing.

The "non-doers" cited the tree planting, Agro-forestry, and reforestation activities - including the fish sanctuary, and the artificial reef project.

Both males and females reported the following projects implemented in their area: tree planting, fish sanctuary, contour farming and artificial reef. Also, while the males identified projects on mangrove planting, reforestation, contract reforestation, seaweeds culture, fish cage, seaweed project, establishment of barangay nurseries, and Agro-forestry, the females had reported on fruit tree growing, social credit, campaign against illegal fishing, Sloping Agricultural Land Technology, livelihood and animal dispersal.

Most of these projects were implemented by the LGU as reported by the “doers” while the “non-doers” citing a more varied project implementors such as the “Department of Education, Culture and Sports” (DECS), “Local Government Unit” (LGU), “Department of Agriculture” (DA), “Department of Environment and Natural Resources” (DENR) and “Bureau of Agricultural Extension” (BAEx).

As identified by the “doers”, the environmental projects implemented by the LGU consisted of fruit tree growing, tree planting, Agro-forestry, establishment of barangay nurseries, reforestation, fish sanctuary, mangrove planting, seaweeds culture, fish cage, and campaign against illegal fishing. The Department of Agriculture implemented “social credit” projects, while the Department of Environment and Natural Resources promoted “contract reforestation”. The KAPWA Upliftment Foundation, Inc. Focused on “contour farming”, “Sloping Agricultural Land Technology” (SALT), “livelihood” and “animal dispersal”. For the “non-doers”, all the projects were believed to have been implemented by the Local Government Unit, specifically the fish sanctuary, - along with tree planting, agro-forestry and reforestation activities.

Successful Projects. A total of 13 projects were considered successful by the “doers” e.g. “fruit tree growing”, “tree planting by the LGU”, “reforestation”, “establishment of barangay nurseries”, “tree planting by KAPWA”, “contour farming, SALT livelihood”, “animal dispersal”, “fish sanctuary”, “mangrove planting”, “Seaweeds Culture”, “fish cage”, and “campaign against illegal fishing”.

As perceived by the respondents, these environmental projects were viewed successful because of the regular monitoring, coordination and collaboration between the LGU, NGO and residents, the presence of more trees and the improving weather conditions, the increasing fish supply, the confiscation of trawlers and “lampornas”

(drive-in nets), community participation, people recognize its importance, LGU support, and people being informed about the ordinances through "pulong-pulong" (assemblies). Interestingly, one success indicator was the non-involvement of politicians.

For the "non-doers", projects such as tree planting under the Girl Scout program and LGU, Agro-forestry and the reforestation of the DENR were considered successful because of the presence of more trees in the forest and the cooler weather.

Failure Projects. On the other hand, those projects that failed as cited by the "doers" included the social credit program of the Department of Agriculture", "the Contract Reforestation by the DENR", "Artificial reef by the Department of Agriculture", "Seaweed Culture Project by the Department of Agriculture" and the "Reforestation by the DENR". The "non-doers" were mum about the projects that failed.

The failure of the environmental projects as reported by the "doers" were due to the "lack of management skills", the "low repayment rates", the "poor financial system", the "high financial subsidizes given by the DENR", the "ordinances being approved only in 1993", the "lack of supervision and technology", "people not being informed", "lack of supervision and control", "entrusted to people without interest", "lack of personnel and lack of coordination with the LGU".

Effects to Day-to-Day Living. These projects were perceived by most of the "doers" and "non-doers" as positively affecting their daily lives: "increasing farm production due to the use of organic fertilizers", "weather is beginning to be cooler", and "learning other sources of livelihood as peddling fish". Some others reported the negative effects these environmental projects brought to the lives of the people (low catch, low income given the establishment of the fish sanctuary).

Enforcement of Environmental Policies and Laws

This section presents the respondents' assessment of the Local Government Code, the primary roles of the LGU, community residents, NGOs, POs, religious groups, private business sector and school in environmental protection and management; the enforcement of local ordinances; number of respondents rating these pre-identified groups "active" in enforcing local ordinances; barriers faced by the respondents' groups in the enforcement of the local ordinances - including the benefits the community can gain when the LGU, NGOs, POs and private business sector are active in the enforcement of local environmental ordinances.

Assessment of the Implementation of the Local Government Code. Both the "doers" and "non-doers" assessed the implementation of the Local Government Code positive e.g. - even as they noted that local environmental functions have not been devolved in their municipality. Despite this, the LGU was keen in pursuing specific environmental functions for the public welfare and the development of the local environment. The specific environmental functions installed by the LGU as reported by the "doers" included the monitoring of natural resources, the drafting and passing of local environmental ordinances, the organization of the Municipal Advisory Team on Environment (MATE) and the enforcement of local ordinances banning illegal fishing activities.

Some "non-doers" reported such activities as the monitoring of the forest programs, making ordinances on anti-illegal fishing and enforcement of environmental laws.

The female-respondents reported that the LGU had installed such environmental functions as monitoring the situation of the natural resources, drafting and passing local environmental ordinances and making local ordinances on anti-illegal fishing. The

males, meanwhile, cited the organization of the Municipal Advisory Team on Environment (MATE), the drafting and passing of ordinances on illegal fishing, the monitoring of forest programs and the enforcement of local environmental ordinances.

Furthermore, the "doers" observed that the NGOs and FOs were properly involved in policy-making and implementation of government programs. The two NGOs (i.e. KAPWA and ISFI) and FOs participate actively in the monthly meetings of the Municipal Development Council and the Barangay Development Council (BDC)". They were likewise noted to participate during multi-sectoral dialogues and as members of the Municipal Advisory Team on Environment (MATE).

Some of the "non-doers" further revealed that the heads of the People's Organizations are automatic members of the MDC".

Primary Roles of the LGU, Community Residents, NGOs, POs, Religious Groups, Private Business Sector and Schools in Environmental Protection and Management. Given the possible overlapping of functions, the respondents were asked about the primary roles that each actor ought to perform relative to environmental protection and management.

Local Government Unit. As perceived by "doers", the primary roles of the LGU include that of a "policy-making body", "making policies", "legislating ordinances to protect the environment", "making ordinances", "planning and implementing", "planning", "implementing", "continue monitoring" and "evaluating environmental projects", "ensuring LGU-NGO partnership", "encouraging NGOs and FOs to participate", "consulting people", "conducting consultation with the community residents", "legislate and implement local ordinances", "implementing the policies", "implementing their projects", "enforcing laws", "play a lead role in community development", "facilitate efficient information campaigns on environmental

protection”, “provide a sanitary inspector”, “imposing cleanliness drive”, “fund sourcing and appropriation in environmental activities”, “monitoring”, “assessing” and “creating a committee on agriculture”

The “non-doers”, on the other hand, reported “implementation of laws and ordinances”, “implementing and monitoring assistance to people on their concerns”, “legislating laws and ordinances”, “organizing a team responsible for environmental protection” and “active in informing people on whatever development there are in the environment”.

Comparing the male and female responses, males perceived the LGU mainly as a “policy making body”, i.e. playing the lead role in the development of the community”, “making policies and implementing policies”, “legislating and implementing laws and ordinances”, “making local ordinances”, implementing laws and ordinances”, “implementing environmental projects”, “informing people”, “monitoring and evaluating environmental projects”, “ensuring LGU-NGO partnership”, “organizing a team responsible for environmental protection activities”, “providing sanity inspector”, “imposing cleanliness drive”, “fund sourcing and appropriation”, “planning and implementing”, and “consulting people”.

The females viewed the LGU as “encouraging NGOs and FOs to participate”, “consulting the residents”, “looking for strategies that will motivate people to act”, “being active and cooperative”, “implementing projects”, “implementing local ordinances strictly”, “implementing laws and ordinances”, “monitoring and assessing the effectiveness of the ordinances implemented”, “creating a committee on agriculture” and “enforcing laws”.

The Community Members were perceived by the “doers” as mainly “following the programs implemented by the LGU”, “participating in decision and

policy-making of the LGU", "respecting and being conscious of the rights of other people in terms of environmental protection activities", "cooperating", "supporting the LGUs programs in environmental protection", "monitoring", "serving as watchdogs", "reporting any violations observed", "implementing", "caring of and maintaining trees aside from planting", "taking actions", taking risks", "being informed", "helping explain to other community members", "must claim ownership of responsibility of the environmental protection activities implemented in their locality" and "reprimanding".

For "non-doers", the community residents are mainly perceived to "accept the LGU's environment-related projects", "to follow the rules and regulations imposed by the LGU", "to take part in the programs related to environmental protection", "to cooperate, plan, commit and support the programs of the LGU in environment" and "to conduct monitoring activities".

Males, generally believed that community residents should "participate in the decision and policy-making needs", "to respect and be conscious of the rights of others in terms of environmental protection", "to care and nurture the trees (aside from planting)", "to help other community members understand the environmental projects", "planning", "cooperating", "participating", "supporting", "to reprimand violators", "serving as watchdogs", and "monitoring" as the primary roles of the community members.

The females, on the other hand, expected community members to simply accept, commit, support, follow, implement, and cooperate with the enforcement of local ordinances - including "monitoring", "taking risk", and "being informed".

Taking all the perceived primary roles of community members together as identified by the opinion leaders, these may be further categorized into:

1. *"Attitude-changing roles"* - refer to all those activities that the community members should be doing to achieve the desired perception or behavior relative to environmental protection and management. In this study, it is more related to "being informed" and "helping explain the environment-related activities to other community members".
2. *"Passive roles"* - refer to those behaviors that do not demand any strenuous work on the part of the community members. These include following the rules and regulations, respecting the rights of other peoples in terms of environmental protection, being conscious of the rights of others in environmental protection, cooperating, supporting activities relative to environmental protection, accepting and committing.
3. *"Active roles"* - These demand investment of time and physical strength in executing a task such as "to implement", "to monitor", "to participate in the decision and policy making" and "caring of and maintaining trees planted".
4. *"Risk-taking roles"* - These refer to those activities that the community members were doing relative to environmental protection and management despite fear of being insulted or ridiculed. Those that fall under this category are "reprimanding violators", "serving as watchdogs" and "reporting any observed violations on the local ordinances". /

Based on these categories, the "doers" appeared to indicate that the community members should be playing all the four categories of roles, whereas "non-doers" focusing on two - i.e. the "passive" and "active" roles. Both males and females saw the four role-categories as the community residents' primary roles in environmental protection.

In terms of concentration, while the "doers" stressed the "active" roles of the community members (e.g. "to implement", "to monitor", "to participate in decision and policy making of the LGUs" and "caring of and maintaining planted trees"), the "non-doers" citing the "passive" roles, (e.g. "to commit", "to accept", "to follow rules and regulations", "to cooperate" and "to support").

Both males and females, however, emphasized the "active" roles of the community residents relative to environmental protection.

Non-Government Organizations (NGOs). The NGOs were reported by the "doers" as primarily playing the following roles relative to environmental protection: "to follow the environment-related programs of the LGU", "to coordinate with the LGU on environment-related activities", "to augment the limited capabilities of the LGU in terms of finance and technical know-how", "to implement environmental protection programs", "to cooperate", "to advocate", "to educate", and "to train people to acquire skills in promoting ecological balance".

The "non-doers", on the other hand, saw the NGOs as "co-implementor of environmental projects", "to take part in the environment-related programs", "to provide support services", "to coordinate", "to cooperate" "to organize training for the community residents" and "to show to the community residents that they are really doing activities relative to environmental protection".

While the males cited that the NGOs should "augment the limited capabilities of the LGU in terms of finance and technical know-how", "to cooperate", "to coordinate", "to take part in environment-related programs", "to provide support services", "to coordinate", "to cooperate", "to be co-implementor", "to educate", "to show to the community residents that they are really doing activities relative to environmental protection", "to organize meetings", "to advocate", and to implement".

Generally, the primary roles of the NGOs in environmental protection and management should be "supportive" (i.e. "to follow the environment-related programs of the LGU" and "to cooperate"), and "coordinative" ("to coordinate with the LGU on environment-related activities", "as co-implementor" and "to take part in environment-related programs"). Likewise, they were seen by the respondents as playing "complementary roles" (as in "augmenting the limited capabilities of the LGU in terms of finance and technical know-how" and "to provide support services"), "organizing roles" (such as "to educate", "to advocate", "to train people to acquire skills in promoting ecological balance" and "organizing training for the community members"), "implementing roles" (as in "monitoring" and "implementing environment-related projects") and "demonstration roles" (showing to the community resident as really doing activities relative to environmental protection).

For the "doers", the NGOs primary roles should be "supportive", "coordinative", "implementing", "complementary" and "organizing". The "non-doers", on the other hand, cited the "supportive", "coordinative", "complementary", "organizing" and "demonstration" roles of the NGOs, with the "non-doers" failing to mention the "implementing roles" of the NGOs.

Furthermore, the males cited the "supportive", "coordinative", "complementary", "organizing" and "demonstrating" roles of the NGOs, with the females mentioning their "supportive", "coordinative", "implementing" and "organizing" roles.

The three most common primary roles of the NGOs for the "doers" and "non-doers" (including males and females) alike were the "supportive", "coordinative" and "organizing" roles.

In terms of concentration, while the “doers” emphasized the “organizing” roles of the NGOs, the “non-doers” mostly cited the “coordinative” roles. Similar trends were observed for the males and females respectively, i.e. the “organizing roles of the NGOs” and the “coordinative roles of the NGOs”..

The **People’s Organizations (POs)** were expected “to follow the environmental programs of the LGU”, “to inform people on environmental protection and management”, “to educate people on environmental protection and management”, “to organize their members to be active in environmental protection and management”, “to coordinate”, “to implement”, “to cooperate in the enforcement of local policies of the LGU on environmental protection and management”, “to participate”, “to implement their gender-sensitive vision, mission and goals on environmental protection and management” and “to advocate”..

On the other hand, the “non-doers” viewed the POs as “co-implementors”, “to take part in community environmental protection activities”, “to coordinate”, “to participate actively”, “to support the LGU’s efforts in environmental protection and management”, “to give training” and “to provide loans/credit for tree planting and agricultural-related activities”.

The males perceived the POs “to coordinate”, “to inform people on environmental protection and management”, “to educate people on environmental protection and management”, “to organize their members to be active in environmental protection and management”, “to cooperate in the enforcement of local policies of the LGU on environmental protection and management”, “to participate”, “to take part in community environmental protection activities”, “to support LGU’s efforts in environmental protection and management” and “to advocate”. The females, on the other hand, expected the POs as “to follow the environmental programs of the LGU”,

“to participate active”, “to coordinate”, “as co-implementor of environment-related projects”, “to implement their gender-sensitive vision, mission and goals on environmental protection and management”, and “to give training”.

Religious Groups. For the “doers”, the primary roles of the religious groups focused on “coordinating”, “cooperating with other groups in advocating for environmental protection and management”, “helping people to understand the activities of the LGU”, “implementing environment-related activities”, “participating actively”, “implementing gender-sensitive vision, mission and goals in environmental protection”, “as models on values relative to environmental protection and management”, and “sitting as NGOs’ representative in the Municipal Development Council”.

Aside from citing the “cooperating” roles of the religious groups, the “non-doers” added that these groups should be “taking part in environmental projects”, “supporting whatever environmental-related activities the LGU may have”, “making programs of actions together with the other groups in the community on environmental protection and management” and “continuing religious education on environmental protection”.

The males perceived the religious groups as being mainly involved in “participating actively”, “taking part in environmental projects”, “coordinating”, “cooperating with other groups in advocating for environmental protection and management”, “helping people to understand the activities of the LGU”, “sitting as NGOs’ representative in the Municipal Development Council”, “making programs of actions together with the other groups in the community on environmental protection and management”, “providing moral values”, “as models on values relative to

environmental protection and management”, and “continuing religious education on environmental protection”.

The females cited the NGOs as “participating actively”, “supporting whatever environment-related activities the LGUs may have”, “coordinating and implementing environment-related activities”, and “implementing their gender-sensitive vision, mission and goals in environmental protection and management”.

The “doers” expected the **Private Business Sector** as primarily “participating”, “implementing”, “providing financial assistance”, “coordinating”, “cooperating with the environmental projects of the LGU” and “campaigning for environmental protection to their group”. For the “non-doers”, the private business sector was perceived “to provide land”, “to take part in community environmental protection activities”, “to support the LGU’s efforts on environmental protection and management”, “to cooperate with the projects of the LGU on the environment”, and “to initiate waste disposal management for the community”.

The male-respondents suggested that the private business sector mainly “take part in community environmental protection activities”, “cooperate with the projects of the LGU on the environment”, “support LGU’s efforts on environmental protection and management”, “initiate waste disposal management for the community”, “provide financial assistance”, and “campaign for environmental protection to their group”. On the other hand, the females, expected the private business sector “to provide land”, “participate”, “implement”, “coordinate”, and “cooperate with the projects of the LGU on the environment”.

Schools. The schools were likewise reported by some “doers” as playing various roles in environmental protection and management, primarily in “teaching

children to plant and grow trees”, “protect and manage the environment”, “monitor pupils in tree planting and growing”, and “conduct information dissemination”.

Enforcement of Local Environmental Ordinances. The enforcement of local environmental ordinances were observed by the “doers” as done through the “pulong-pulong sa barangay” (community assemblies) organized by the barangay officials, and “barangay captains provided information through general assemblies and calling Philippine National Police when problems arise”. Still, some “doers” cited the multi-sectoral approach in the enforcement of the local ordinances such as the “coordinative efforts of the “LGU and the PNP”, “PNP and local officials”, “PNP and community residents as direct monitors”, “LGU-NGOs-Church”, and NGOs-POs-LGU” - including “the municipal councilors acting as implementors at the same time” and “the Mayor giving the PNP the authority to apprehend violators with the knowledge of the barangay officials”.

The “non-doers” observed the enforcement of local ordinances, as “stiff penalties as enforced by the Local Government Unit”. Others reported the participation of the Municipal Development Council, people-consultations and when Barangay officials initiate the implementation of the laws through the “pulong-pulong”.

The males reported the enforcement of local ordinances through the “coordinative efforts of the PNP and local officials”, the “PNP and community residents as direct monitors”, “LGU-NGO-Church and NGOs-POs-LGUs”, “barangays captains providing information through general assemblies and calling the PNP when problems arise”, “the Mayor giving the PNP authority to apprehend violators with the knowledge of the barangay officials”, “enforced through MDC”, “informing people through consultation” and “barangay officials initiating the implementation of the laws through pulong-pulong”.

The females, on the other hand, reported enforcement of local ordinances through "pulong-pulong sa barangay", "coordinative efforts of the LGU and PNP", "through barangay official", "strict implementation of penalties" and "through the LGU".

In terms of the agencies with enforcement responsibilities, the following were cited by the "doers": "barangay officials", "barangay captains with the assistance of the PNP", "coordinative efforts of the LGU and PNP, PNP and local officials, PNP and community residents, LGU-NGO-Church and NGOs-POs-LGU", "municipal councilors" and "the Mayor with the assistance of the PNP". The "non-doers", likewise cited the "LGU", "MDC" and "barangay officials".

The males reported the "coordinative efforts of the PNP and local officials, PNP and community residents, LGU-NGO-Church and NGOs-POs-LGUs", "barangay captains with the assistance of the PNP", the Mayor with the assistance of the PNP", "the Municipal Development Council" and "barangay officials". The females, on the other hand, reported enforcement of local ordinances as done by the "barangay officials", "the LGU", and the "coordinative efforts of the LGU and PNP".

These agencies were cited by most "doers" as effective because of the observed effects of their strict enforcement such as "people acting as monitors", "many fishermen practicing illegal ways of fishing were apprehended", "fish swimming inside and around the fish sanctuary are increasing", "families of apprehended violators are filing a case against the LGU", "fewer fishermen are observed to be using illegal means of fishing" and "community residents are conscious in reprimanding violators of the local ordinances". However, some "doers" indicated that to be more effective in their enforcement roles, the agencies need to address the "uncooperative attitude of some community member", "to forge coordinative and collaborative relations with all the

agencies or groups in the community” and “to spend more time in the enforcement of the local ordinances”.

But it is interesting to note that all the “non-doers” viewed the enforcing agencies as effective for they were “very strict in the implementation of the local ordinances”, “because of fear of the PNP”, “people were informed about the local ordinances”, “because the people supported the local ordinances”, and “because people do catch fish around the sanctuary although small in volume”.

The effectiveness of the enforcing agencies was related by most males to the following observations: “violators were apprehended”, “people were informed”, “people participated” and “people followed the local ordinances”. The females, meanwhile, identified the following factors: “people followed the local ordinances”, “enforcers were very strict in their penalties”, “because of fear of the PNP”, and “people do catch fish around the sanctuary although small in volume”.

Number of Respondents Rating the LGU, Community Residents, NGOs, POs, Religious Groups, Private Business Sector and Schools as Active in Enforcing Local Ordinances. When the opinion leaders were asked to indicate whether or not the LGU, community residents, NGOs, POs, religious groups, private business sectors and schools are active in enforcing local ordinances, the findings were as follows:

	“Doers” (10)	“Non-doers” (7)	“Males” (10)	“Females” (7)
Local Government Unit	7	6	7	6
Community Residents	6	5	7	4
Non-Government Organizations	6	4	6	4
People’s Organizations	7	3	6	4
Religious groups	6	4	6	4
Private Business Sector	2	2	2	2
Schools	3	2	2	3

The above-cited figures indicate that, for the “doers”, the “LGU” and “POs” were perceived as more active in the enforcement of the local ordinances, with the “LGU”

similarly cited by most "non-doers". Also, more males, considered the "LGU" and the community residents as the most active groups, with most females similarly citing the "LGU".

The findings therefore showed that the "Local Government Unit" was viewed by most "doers" and "non-doers" and both males and females as the most active groups in enforcing local ordinances.

Furthermore, only a few "doers" and "non-doers" rated the "private business sector" and "schools" as active, with the "FOs" further cited by some "non-doers" as active. Moreover, less males and females rated the "private business sector" and "schools" as active in the enforcement of local ordinances.

These findings showed that, overall, the "private business sector" and "schools" were perceived by "doers" and "non-doers" and both males and females as less active in the enforcement of local ordinances.

Barriers Faced by the Respondents' Groups in the Enforcement of the Local Ordinances. The "doers" cited the following barriers in their group's enforcement of local ordinances, namely, "poverty of the people", "migrant-residents", "lack of information dissemination", "lack of knowledge on environmental protection and management of policies", "lack of encouragement from the LGU", "contents of the local ordinances were not clearly discussed with the people", "uncooperative attitude of people", "lack of cooperation from the people", "local officials not readily accepted by the residents given their unsystematic implementation of the local ordinances", "political intervention, i.e. if someone is caught violating the ordinances, some of the government officials will intervene", "unclear delineation of functions such as legislators as implementors", "lax enforcement of local ordinances by the LGU" and "continued illegal fishing activities of the Muslim-residents".

The “non-doers”, on the other hand, cited such barriers as “non-receptive community members”, “indifferent community residents”, “uncaring community members”, “LGU not open to the business groups so we tend to withhold our cooperation”, “lacking information dissemination on local ordinances”, “some of the local ordinances did not undergo public hearing”, and “NGOs are not permanent here”.

For the male-respondents, the barriers included the “non-receptive community residents”, “migrant-residents”, “lack of information dissemination”, “lack of knowledge on environmental protection and management”, “lacking information dissemination on local ordinances”, “content of the local ordinances were not clearly discussed”, “some of the local ordinances did not undergo public hearing”, “lack of encouragement from the LGU”, “LGU not open to the business group so we tend to withhold our cooperation”, “uncooperative attitude of people”, “continued illegal fishing activities of the Muslim-residents”, “lack of cooperation from the people”, “political intervention, i.e. if someone is caught violating ordinances, some government officials will intervene”, “lax implementation of local ordinances by the LGU” and “unclear delineation of functions such as legislators acting as implementors”.

The “poverty of the people”, “uncooperative attitude of people”, “indifference of some of the community residents”, “uncaring community residents” and “local officials were not readily accepted by the residents given their unsystematic implementation of the local ordinances” were the reported bottlenecks experienced by the females in enforcing local ordinances.

Benefits the Community Can Gain When the LGU, NGOs, POs and Private Business Sector will be Active in Local Enforcement of Environmental Ordinances. The value of an activity can be determined by establishing the perceived benefits one gains from being active in said activity. In this section, the respondents were asked about the perceived possible benefits gained by the community if the LGU, NGOs, POs and the private business sector are active in environmental protection and management.

The perceived benefits identified by the respondents were subsequently classified as follows:

"Economic Gains". This can further be categorized into:

- a. Peopled-related such as "economic advantage for the people", "increasing sources of livelihood", "comfortable life for the people", "people will have more opportunities to earn a living", "help improve the life of the people", "additional sources of income for the people" and "increase income for the families".
- b. community-related such as "economic recovery for the community", "an economically well-off community" and "develop the community economically".
- c. LGU-related such as "increased revenue of the LGU" and "more improved services of the LGU".

"Environment-related Gains" such as "comfortable weather", "cooler weather", "regular rain", "minimized destruction of the corral reefs" and "environmental programs will prosper".

"Behavior-related Gains" such as "less complaints from the people for they will be contented with the services of the LGU", "people's mind will be at peace given their clean environment", "motivates people to participate in the environmental

protection activities”, “a happy community” and “no more idle individuals for they will all be busy protecting the environment”.

“Other Gains” such as “the vision of developing Malalag economically will be realized”, “gives better quality of life to the people”, “influx of foreign investors given the abundance of resources” and “LGU will be more transparent”.

Based on the findings, both “doers” and “non-doers” similarly reported “people-related economic gains” (e.g. “increasing sources of livelihood”, “comfortable life for the people” and “increase income of the people”) and environment-related gains, specifically “the cooler weather”. The other benefits cited by the “doers” were “economic advantages for the people” (people-related economic gains), “increased revenue for the LGU” (LGU-related gains); behavioral gains as “less complaints from the people for they will be contented with the services of the LGU”, people’s minds will be at peace given their clean environment” and “motivated people to participate in environmental protection activities”; and environment-related gains such as “comfortable weather”, “regular rain” and “minimized destruction of the corral reefs”; and “other gains” such as “the vision of developing Malalag economically will be realized”. The “non-doers”, further cited people-related economic gains as “many opportunities for people to earn additional income”, “can fish though in small volume” and “comfortable life for the people”; LGU-related economic gains as in “economic recovery”; behavior-related gains as in “happy community” and “no more idle people for they will all be busy in protecting the environment”; environment-related gains such as “cooler weather”; and “others” such as “gives a better quality of life to the people”.

Some males and females agreed that the benefits that the community will gain were people-related economic gains (e.g. “additional sources of income for the

people”, “comfortable living for the people” and “many opportunities to earn a living”). They likewise cited the environment-related gains as “cooler weather”.

More “doers” and “non-doers” enumerated “economic gains”. Similar trend can likewise be said for the males and females, i.e. “additional sources of income from the people”, “comfortable living for the people”, and “many opportunities to earn a living”.

Participation in Environmental Affairs

The participation of the respondents in environmental programs focuses on the following variables:

- 1) criteria used by the opinion leaders in classifying the people as active in environmental protection and management;
- 2) whether or not the LGU is active in environmental protection and management;
- 3) criteria used in considering the community as active in environmental protection and management;
- 4) criteria used in classifying themselves as active in environmental protection and management;
- 5) individuals who encouraged the respondents to become active in environmental protection and management;
- 6) manners in which the identified individuals encourage the respondents to become active in environmental protection and management;
- 7) ideal behaviors of the LGU, community, non-government organizations, peoples’ organizations and individual in environmental protection;
- 8) individuals and/or institutions considered by the respondents as highly

credible and influential in promoting environmental protection and management;

- 9) perception on the national and local celebrities serving as spokesperson for environmental protection and management; and
- 10) national and/or local celebrities perceived as credible spokespersons for environmental protection and management.

Criteria Used in Classifying People as Active in Environmental Protection and Management. Both “doers” and “non-doers” cited such indicators as “attending meetings/general assemblies”, “following local ordinances/policies” and “participating in all activities on environmental protection and management such as tree planting, education campaigns and attending rallies” as basis in classifying people as active (or inactive) in environmental protection and management. Furthermore, the “doers” enumerated the following indicators: “active in environmental projects”, “planting and growing trees”, “participation in information dissemination”, “planting trees”, “having their own waste-management system”, “implementation of environmental project because they are aware of the adverse effects of deteriorating environment”, “active participation in decision-making”, “giving comments/criticisms”, “being aware”, “has concern expressed as *‘Ayaw kana buhata kay dautan para sa kinaiyahan’*” (Do not do that for it is not good for the environment)”, “if he/she is really the one doing the activities relative to environmental protection and management”, “not only being a good listener but also a follower”, “taking concrete actions”, “90% are attending meetings regularly”, “reprimanding fishermen using illegal means of fishing”, “being aware of their roles in environmental protection programs”, “participative”, “informed”, “has interest” and “supportive of the local ordinances and projects”.

The "non-doers" also cited such activities as "reporting fishermen using illegal means of fishing", "showed interest", "cooperative (taking part in the program)", "if he/she is contented with his/her life", and "initiates environmental projects" and "following the local policies".

Both males and females commonly cited "attendance at meetings" and "having interest" as criteria in classifying people as active in environmental protection and amngement. Furthermore, the males considered the following criteria: "planting trees", "presence of a local waste disposal system", "implementation of environmental projects because they are aware", "actively participating in decision-making", "giving comments/criticisms", "aware", "has concern expressed as 'ayaw kana buhata kay makadaut sa kinaiyahan' (do not do that for it will have an adverse effect to the environment)", "if he/she will be the one to do activities regarding environmental projects", "not only a listener but also a follower", "taking concrete actions", "90 percent attend meetings regularly", "reprimand illegal practices", "aware of his environment" , "vocal", "support", "participate", "informed", "give comments", "follow local policies of the LGU", "show interests", "cooperative", "taking part in environmental projects", "if he/she is contented with his/her life", and "initiates an environmental projects".

Also, the females shared the following as indicators of active people in environmental protection and management: "participates in all activities on environmental protection and management e.g. tree planting, education campaign, attend rallies, etc.", "doing what they preached", "supportive of the local ordinances and projects", "if they will report fishermen using illegal fishing activities", "active in environmental projects", "planting and growing trees" and "participation in information dissemination".

The criteria presented by the respondents in considering people as active in environmental protection and management can further be categorized as "cognitive-related" "attitude-related" and "action-related".

The "cognitive-related criteria" refer to those activities done or participated by the people to develop the necessary attitude relative to environmental protection and management such as "being informed" to "create the necessary awareness", "through attendance at meetings" and "participating in information dissemination activities".

The attitude-related criteria refer to the dispositions developed by the respondents given their cognitive-related activities. This is expressed through the verbatim responses of the respondents, such as "has concern", "has interest", "aware of their roles in environmental protection and management" and "supportive of environmental protection projects and local ordinances and laws".

The "action-related criteria" include the actual activities undertaken by the respondents involving their time, money, materials and physical strength such as "active in environmental projects", "planting and growing trees", "planting trees", "established own waste management system", "participated in decision-making", "giving comments and criticisms", "doing activities relative to environmental protection and management", "followed local ordinances", "taking concrete actions", "reprimand violators of local ordinances" and "being vocal". The other criteria include "90 percent attended meetings regularly".

Based on these categories, it can be said that the criteria used by the both "doers" and "non-doers" and both males and females in classifying people as active (or inactive) in environmental protection and management were mostly action-related criteria.

These categories further show that the respondents were more apt in using tangible measures in establishing indicators of active people in environmental protection and management.

Whether or not the Local Government Unit Was Perceived by the Respondents as Active in Environmental Protection and Management. After establishing the criteria used in classifying people as active in environmental protection and management, they were likewise asked to rate whether or not the LGU is active in environmental protection and management. Research findings show that, except for one (a "doer" female), the rest of the respondents (both "doers" and "non-doers") reported the LGU as active. For the "doers", the LGU was rated active for it "has filed cases against fishermen using illegal fishing means", "being transparent", "conducted information dissemination", "prepared a barangay development plans which were presented to the residents through a general assembly", "enforced local ordinances", "supported people through livelihood projects", "made known to the people their responsibilities", "active administration", "provision of good and medicines in the last flood", "more active compared to other municipalities nearby", "though with limited budget, they organized the Municipal Advisory Team on Environment (MATE)" and "supportive to NGOs/POs work on environmental protection and management". The lone "doer" claiming the LGU as "not so active" justified such by citing that they "are not always seen visiting the uplands".

The "non-doers" added to these responses by enumerating that the LGU was "very active because the mayor is also very active towards the implementation of local laws and ordinances for the protection of the environment", "the mayor sees to it that the penalties are really imposed to violators", "many residents understood the purpose of local ordinances", "regular monitoring of the people", "active in attending

community general assemblies”, “they inform the people of their local ordinances and laws”, “they are consistent”, “regularly disseminating information” and “has clearer programs on environment such as fish sanctuary”.

While the male-respondents revealed the following basis in classifying the LGU as active in environmental protection and management such as “being transparent”, “conducted information dissemination”, “prepared a barangay development plan which were presented to the residents in a community general assembly”, “enforced local laws and ordinances”, “supported the people by providing livelihoods projects”, “made known to people their responsibilities”, “provision of food and medicines in the last flood”, “more active compared to other municipalities”, “though with limited funds, they organized the Municipal Advisory Team on Environment (MATE)”, “supportive to NGOs, POs work on environmental protection and management”, “many understood the purpose of the local laws and ordinances”, “regular monitoring of the people”, “they are consistent”, “regular dissemination of information” and “they have clearer programs on environment such as fish sanctuary”, the females cited the following: “because the mayor is very active towards the implementation of local laws and ordinances for the protection of the environment”, “the mayor sees to it that the penalties are imposed to violators”, “active administration”, “active in attending community general assemblies”, “they inform the residents of their local ordinances and laws”, and “filed cases against fishermen using illegal mean of fishing.

Overall, the responses of the “doers” and “non-doers”, both males and females appeared not to be duplicated in any groups. This shows the variety of activities the LGU had undertaken relative to environmental protection and management. Furthermore, the justifications enumerated by the respondents in claiming the LGU as active in environmental protection and management can be further categorized as

"changing the attitudes of the people", e.g. having "conducted information dissemination", "made known to the community residents their responsibilities in the protection and management of the environment", "active attendance to community general assemblies", "informed people of the ordinances" and "regular information dissemination"; **"reinforcing change in the attitude of people"**, e.g. "enforcement of local ordinances; **"LGU's strategies in making their political will and efficacy effective"** e.g. "filing cases against fishermen using illegal means of fishing", "prepared barangay development plans" and "organized the Municipal Advisory Team on Environment (MATE)"; **"behavior-related (being transparent), "supportive actions"** (supported people through livelihood projects, and supportive to the NGOs/POs work in the protection of the environment), **"role modeling activities"** (active mayor), **"monitoring"** (regular monitoring of the activities of the people on their environment, and **"others"** (active administration, provision of food and medicines during the recent flood", and "being more active compared to other municipalities nearby".

Basis in Considering A Community Active in Environmental Protection and Management. Aside from asking the respondents their basis in classifying the people and LGU as active, they were likewise asked to enumerate their indicators for claiming a community active in the protection and management of the environment. "Doers" cited the "high level of awareness of the community activities in the protection and management of the environment" and "being concerned about the situation of the environment" as crucial in describing a community active in environmental protection and management. They likewise added that "smooth interpersonal relationships" and the "land tenure status" (landowners) should be considered. They further cited the following activities as measures in considering a community active in environmental

protection and management: "participating in the consultation and deliberation", "participating in community projects and planning", "active in making local policies and enforcing it", "sharing experiences to others" and "monitoring and reporting any destruction the other community members were doing in the environment". Other conditions were further cited by the "doers" such as "the tangible results of their environmental protection projects", and "whenever 60-90 percent of the community residents have undertaken environmental protection projects consistently".

For the "non-doers", it is important that a community should be "participating in community dialogues" and relatedly, "people's acceptance of environmental protection projects". These two were perceived by "non-doers" as necessary for the effective participation of a community, i.e. "for all have participated in the environmental activities of the community". Also, the "non-doers" believed that an active community means "being united against some activities which has caused the degradation of the environment" and "being consistently involved in environmental protection and management".

The responses show that none of the criteria cited by the "doers" were likewise cited by the "non-doers", but in terms of sex, both males and females cited the same criterion, i.e. "when all the community members are participating in all community activities on environmental protection and management".

Using these criteria, the respondents were further asked on whether they considered the community residents active in environmental protection and management.

Among the "doers", four reported that the community residents were active, on having observed that the community has "participated in community projects on environmental protection", "involved in the consultation and deliberation of

environmental issues", "shared experiences to others", and "showed concern for the cleanliness of their surroundings". The other three "doers" reported that only "some were active", with the three others giving "non-responses".

Five out of the seven "non-doers" viewed the community residents as active, with the other two failed to say so. For some of the "non-doers", the community residents were active based on their "attendance to community dialogues", "participation in whatever activities the community has organized relative to environmental protection", "observance of the ordinances", "acceptance of the fish sanctuary" and "increased community participation in environmental protection and management activities".

Furthermore, five males and five females reported the community residents active given their "concern about the environment", and "participation in environmental activities", among others.

Perception of the Respondents on Whether or Not They Themselves are Active in Environmental Protection and Management. Except for one "doer" who claimed to be inactive, (since he easily gets frustrated whenever community activities are not implemented on time), the rest described themselves as "active". Rated themselves so on the basis of "being aware" and given their "ability to articulate their thoughts" (I am aware of environmental issues and can articulate my thoughts about it), their acquired qualities (I am an agriculturist, I am an Ilocano, my being a teacher and playing a role model), influence of the family of orientation (all the members of my family are active in environmental protection activities), actual activities (participation in all the activities of the community on environmental protection and management, conscious efforts in apprehending violators of local ordinances, undertaking activities as planting trees and distribution of seedlings of trees), part of employment (It is my work), and their concern

for the next generation (for the next generation that is why I am involved with mangrove rehabilitation and sanitation programs).

Four out of seven “non-doers” claimed being active in environmental protection and management activities, with the rest claiming otherwise, with one preferring that “it is for the people to judge me, it is very self-serving if I may say so”. The active “non-doers” justified their claims by focusing on what they were actually doing such as “participate in tree planting under the Girl Scout of the Philippines”, help in community activities, “attend community general assemblies” and “plant trees”, “file a case against the LGU given the perceived problems on the legality of the local ordinances enforced”, and “convince the LGU to address the problem on the aerial spraying of the banana company”.

Most of the males (7 out 10) and females (6 out of 7) claimed being active in environmental protection and management, with one male and one female reporting their being inactive in this activity. Those claiming to be inactive blamed such behavior on frustration felt whenever community activities are not implemented on time and the inappropriateness rating of one’s self as “active”. The active males and females cited similar responses as those enumerated earlier by the “doers” and “non-doers”.

Individuals Who Encouraged Respondents to Become Active in Environmental Protection and Management. Their desire to become active in environmental protection and management was mainly due to their interpersonal relationships with community members. Some “doers” identified the local officials being “members of the barangay council” and as “municipal officials”, with the members of the barangay councils serving as a mentor when the respondent was a youth leader and the municipal officials as “source of financial assistance for a livelihood project, fishing”. The other persons cited by the “doers” were “their own family who suffered from low farm production

due to massive use of inorganic fertilizer", "peasants whose farm production was reduced due to the deterioration of the forestry resources", "victims of the natural calamities", and the "fears expressed by some of the community residents for the next generation unless the environment conditions improve". Another "doer" expressed "fears about the adverse effects of the deterioration of the environment as a result of training and other sources of information". Still, another "doer" cited his being "an agriculture graduate, a son of a farmer, and the support that his wife and children has given him" on his activities in protecting the environment.

The "non-doers", on the other hand, likewise identified the local government officials (barangay captain and municipal officials) as encouraging them to be active in environment-related activities. The barangay captain was particularly reported "insistent in convincing the respondents to become active", with municipal officials "always inviting the respondents during discussions of environmental issues including its solutions". One "non-doer" reported that her being active in environment-related activities was due to her desire to be a role model for the girl scouts under her care regarding their tree planting program.

The "barangay officials" were likewise cited by some males and females as motivating them to become active in environmental protection activities. The males added the following influential individuals e.g. family and community residents, with the females citing the victims of natural calamities, municipal officials and peasants.

The findings show that for some "doers" and "non-doers", the "barangay and municipal officials were described as influential to their decisions to become active in environment-related activities. Also, these persons developed the personal interest of the "doers" and "non-doers" to help in the protection and management of the

environment, and thus assuming responsibility in promoting the welfare of their co-community residents.

Perceived Ideal Environmental Behaviors of an LGU, a Community, an NGO, a PO and an Individual. The respondents were made to identify the traits or characteristics or ideal behavior that a Local Government Unit, a Community, a Non-Government Organization, a People Organization and an Individual must have in environmental protection and management.

Though some “doers” and “non-doers” agreed that the LGU must be able to “strictly implement local ordinances”, the former identified more varied traits compared to the latter. The “doers” perceived the LGU to be a “planner”, “programmer”, “has a vision”, “legislating laws”, “implementor of projects on environmental and management and local ordinances”, “enforcers of local laws/ordinances”, “strong in the implementation of local ordinances”, “informing people”, conducting community diagnosis as basis for planning, implementation, monitoring and evaluation”, “monitoring”, “responsive to people’s needs”, “cooperating with the community residents”, “supporting community organizations with environmental protection and management projects”, “committed”, “really taking actions”, “supporting agencies implementing environmental projects in the area”, “honest”, “campaigning for environmental protection and management” and “undertaking actions”.

The “non-doers” hope that the local government unit be able to “sustain programs on environmental protection and management”, “lead the people”, “have the interest to protect the environment”, “be open to consultations”, “be active, “consistent” and “facilitate actions”.

Some "doers" and "non-doers" expected as being self-reliant", "participative in community projects" and "cooperative in LGU projects in environmental protection and management activities".

The "doers" particularly cited the following characteristics for a community to have, i.e. "be aware", "plan", "volunteer", "help the LGU to implement local ordinances", "be active in participating in environmental protection and management", "contribute", "sustain environmental projects", "be sensitive to environmental issues", "have a vision and mission", "implement community environmental projects", and "monitor evaluate".

The "non-doers" further mentioned such traits as "caring for the environment", "being supportive", "non-dependent on the dole-out system", "being united" and "have commitment".

Both "doers" and "non-doers" expressed the need for NGOs to be "cooperative" and "coordinative". Added to these, the "doers" cited such traits as "being committed to help", "coordinating in solving environmental issues", "complementing the activities of the LGU on environment", "implementing the project as planned" "being service-oriented" (rather than money-oriented), "being responsive to the needs of the people", "be humble", "have a genuine development agenda", and "be dedicated in their work".

Such traits as "being able to give trainings", "role-modeling", "supporting", "initiating", "being active", "united", "committed", "having a vision and a mission", "planning", "implementing", "monitoring" and "evaluating" were likewise contributed by the "non-doers".

For People's Organizations (FOs), some "doers" and "non-doers" believed that these groups must "be coordinative", "committed" and "cooperative". Other

characteristics offered by the “doers” included “planning skills”, “suggest to the LGU on what to do with the environmental issues”, “complement the activities of the LGU in environment”, “help LGU in the implementation of local ordinances”, “follow their vision, missions and goals”, “inform”, “educate members”, and “monitor their programs”. The “non-doers” also noted that FOs must “give trainings”, “coordinate with the LGU”, “support the LGU’s projects on the environment”, “have initiative” and “be united”.

As perceived by the “doers”, an individual must “have a vision”, “plans”, “implement projects on environmental protection and management”, “suggest to the LGU on what to do about the environmental issues”, “informed”, “participate in the barangay/municipal activities on environmental protection”, “help the LGU in the implementation of the local ordinances”, “support projects on environmental protection”, “cooperate on environmental projects”, “conscious on the adverse effects of deteriorating environment”, “has an altruistic attitude”, “participates in the implementation of environmental projects and “values responsibility”.

Such traits as “being informed through ‘attendance of seminars’”, “being conscious about his role in environmental protection for the general welfare of the people”, “law-abiding”, “committed”, “active”, “aware”, and observe local ordinances” were added by the “non-doers”.

Individuals and/or Institutions Perceived as Highly Credible and Influential in Promoting Environmental Protection and Management from the LGU, Community Members, “NGOs”, “POs”, “Religious Groups” and “Private Business Sector”.

Information can be readily accessed from various sources. However, while these sources may be readily available it may not be credible and effective in creating the necessary awareness and in motivating people to take the necessary actions for their

own welfare. It is at this instance that the respondents' opinions were solicited in the identification of highly credible and influential individuals in pre-identified sectors for the promotion of environmental protection and management.

From the LGU, five officials (i.e. the Mayor, Municipal Administrator, Municipal Planning and Development Coordinator and two Barangay Captains) and one institution (Department of Agriculture) were identified by some "doers" and "non-doers" as highly credible and influential in promoting environmental protection and management. Some "doers" furthermore cited one private individual as (Mr. Noel Coronado) and other barangay councilors along with one institution (Department of Social Welfare and Development). "Non-doers", for their part, mentioned the "Chairman of the Sangguniang Bayan", "Municipal Councilors" and "Chairman of the Committee on Agriculture" - including such institutions as "Department of Agrarian Reform" and "Department of Environment and Natural Resources".

For both "doers" and "non-doers" alike, the findings reflect the high level of trust of the people, towards the LGU in promoting environmental protection and management. This could perhaps be due to the zealous efforts the LGU has put into such development concerns.

Some "doers" and "non-doers" commonly identified the "barangay captain" and the President of the Rural Improvement Club (RIC) of Barangay IBO (Ms. Narcesa Espinosa) as being highly credible and influential community members in promoting the environmental projects. Still, other "doers" identified the "purok leaders", "the head of the Fishery School" (Mr. Hasan), "barangay councilors", "purok healer" (Mr. Severino Canebano), "teachers", one rich individual (Mr. Segundino Empacis) and one community member (Mr. Fasawa) to represent the rural poor. "Non-doers" likewise

enumerated other “active members of the community” (Ms. Ading Talaver and Ms. Nina Digna), prominent individuals” and the President of the cooperatives.

While some “doers” and “non-doers” failed to identify the individuals involved with NGOs and other institutions, the rest of the “doers” and “non-doers” were commonly mentioning the “KAPWA Upliftment Foundation, Inc.,” and “ISFI” to be highly credible and influential in promoting environmental protection and management. Still some “non-doers” mentioned one individual (Mr. Ernie Peñalosa).

The trust that the respondents placed on KAPWA Upliftment Foundation, Inc., and ISFI could perhaps be explained by the strong presence of these NGOs in the Municipality of Malalag, as the solely existing NGOs in the municipality at the time of the survey. These NGOs were, however, mainly concentrating their activities on the development of selected upland communities..

Leaders of both POs and cooperatives (e.g. the Bulacan Coop, Bolton Coop and Malalag Bay Service Coop) were perceived by some “doers” and “non-doers” as being credible and influential in promoting environmental protection and management. While some “doers” added the “Bantay Dagat” as being likewise credible, some other individuals cited by the “non-doers” included senior citizens, pedicab drivers, “veterans” (pensioners) and the chairman of the cooperatives.

Most of the “doers” cited such associations as the Kapunungan sa Kasakit, Municipal Advisory Team on Environment, the Provincial Environment Monitoring Advisory Board, the Barangay Advisory Team on Environment, Upper Mabini Farmers Association and the Market Vendors Association to be similarly credible.

The data discussed above revealed the importance “doers” placed on community organizations as key players in promoting environmental protection and management vis-à-vis “non-doers” trusting individuals more than associations. Such

information somehow reflect the value the respondents placed on the concept of "coordinative and collaborative social responsibility". This concept has been clearly stressed in the responses of the "doers" (with "non-doers" emphasizing "individual responsibility").

From the religious sector, the "priest/church ministers", "Fr. Nestor Lisondra of the Catholic Rectory" and the "Gagmay'ng Kristohanong Katilingban" (a community chapel-based organization) were considered by some "doers" and "non-doers" as likewise being effective in promoting environmental protection and management. Other individuals cited by the doers" were Mr. Robert Alegarbes (a church spokesperson) and the leader of the Islam religion. The "*Pangulo sa Liturhiya*" (President of the Liturgy) and the Catholic Women's League (CWL) were likewise mentioned by the "non-doers".

From the Private Business Sector, some "doers" identified the "personnel managers of the companies" and "landowners". Private individuals (e.g. Mr. David Apale, Mr. Boy Nono, and the Chairman of the Market Vendors Association), organizations (e.g. Malalag Ventures Plantation, Inc.) and big cooperatives were further mentioned by the "non-doers". It is interesting to note that only two out of ten "doers" and five out of seven "non-doers" were able to respond to this question appropriately.

Feelings About National and Local Celebrities Acting as Spokesperson for Environmental Protection and Management. Other than asking the respondents to identify the individuals and institutions they perceived as being highly credible and influential in promoting environmental protection and management, their attitudes were likewise established towards celebrities acting as spokespersons for environmental protection and management. The respondents mainly gave ambivalent responses. Among the "doers", the following responses were given:

"I will agree because they will be attracting attention."

"It is okay if they know the real situation of our environment."

"It is acceptable to me if it will be a sport celebrity."

"Maybe it will be good if they can do something about the environmental issues."

"I am not sure for I see them as not having any knowledge on environmental protection and management."

"I do not agree for the movie entertainers are not even aware of their own environment."

"I do not agree."

"It is not acceptable for they are not fit as models for environmental protection and management."

The responses of the "non-doers" on the other hand, were:

"People will not believe them for they are only good for advertising".

"It is not good for they do not know the real situation in our place."

"It is okay."

"It is okay for movie entertainers to be spokespersons."

"They might be very effective for they are known to many."

"It is good for they can help in the dissemination of information given their popularity."

"The responses of the respondents seems to imply that national and local celebrities are more preferred by the "non-doers" than the "doers".

National/Local Celebrities Perceived as Credible Spokesperson for Environmental Protection and Management. Those reacting favorably to national/local celebrities as were further asked to identify their preferred celebrities. The “doers” recommended “Mr. Gary Valenciano (a popular singer), “Mr. John Abarrientos” (a popular basketball player), three popular local radio commentators - “Mr. Juan Forras Pala, Jr. (DXDC)”, Mr. Jun Baring (BOMBO Radyo)”, “Mr. Lino Trinidad” (DXDC), “Mr. Ernie Baron” (weather forecaster of the ABS-CBN), “Dr. Juan Flavier” (popular Senator), “the Secretary of Agriculture” and “the Secretary of the Department of Health”.

The “non-doers”, on the other hand, considered one well-known movie personality (Ms. Sharon Cuneta), three talk-show television hosts (Ms. Tessie Tomas, Ms. Mel Tiangco and Mr. Jay Sonza), a television commentator (Mr. Noli de Castro), one sports celebrity (Mr. Robert Jaworski) and two local radio commentators (Mr. Juan Forras Pala, Jr. of DXDC radio station and Mr. Tony Vergara of DXDC radio station).

Skills and Other Traits

This section on skills and others qualities discusses those perceived needed by community members to enable them to become active in environmental protection and management; skills needed by the local government officials to enable them to effectively implement sound environmental decisions and practices including effective enforcement of local environment laws and ordinance; and the rating of the respondents on the extent into which the pre-identified factors influence people to get effectively involved in environmental protection and management .

Perceived Skills Needed by Community Members. The “doers” believed that community members should have the “communication skills” such as “explaining issues or anything about the environment”, and those necessary for their advocacy and

campaign works relative to environmental protection and management - along with organizing skills. The “doers” further suggested “good leadership skills”, “establishing rapport” and “alternative livelihood skills”. They must have such environment-related skills as “coastal management”, “waste management” and “environmental protection and management”, not to mention skills on “values education” and “time management”.

Only a few “non-doers” mentioned other perceived skills, e.g. “communication skills” (i.e. being articulate and spontaneous), good fishing skills, skills on effective service delivery, alternative livelihood skills and skills on environmental protection and management.

The findings show that some “doers” and “non-doers” perceived that the community members need skills on alternative livelihood and environmental protection and management.

Skills Needed by the Local Government Officials to Enable Them to Effectively Implement Sound Environmental Decisions and Practices Including Effective Enforcement of Local Environmental Laws and Ordinances. The LGU Officials were perceived by the “doers” to acquire good communication skills, good personal relations, advocacy skills and organizing skills. Skills on education were likewise reported by “doers” as in skills on information dissemination and values education. Some pointed out the need for local officials to have skills related to legislation such as making environmental laws, effective legislation, and skills on effective enforcement of local ordinances. As regards skills related to the environment, “doers” believed that officials must acquire skills focusing on effective environmental management, systematic project implementation, time management, planning, environmental protection and management effective decision-making. On top of all these, the “doers” recommended that local officials must have good leadership skills.

For the "non-doers", the LGU must have "effective communication skills", "skills on monitoring and follow-up", "skills on forestry and coastal resources management", "supervisory skills" and "effective environmental management skills".

The data revealed that some "doers" and "non-doers" perceived that local government officials need good leadership skills and effective environmental management skills.

Respondents' Rating on the Extent To which the Pre-identified Factors Influence People to Get Actively Involved in Environmental Protection and Management. Two factors appeared to be crucial for "doers" - the understanding of environmental problems" and "LGU support - with the first likewise applicable for "non-doers".

While the females did not indicate any pre-identified factors as crucial, the males mentioned three - specifically, on "understanding of environmental problems", "consistent enforcement of environmental laws/ordinances", and "LGU support".

Survey responses of both "doers" and "non-doers", suggest that the desired action on environmental protection and management will not be possible in ensuring people's involvement without an initial "understanding of environmental problems". Such awareness are believed to consequently develop among the people the need to do something about the environment. Actions then will be based on the principle of "informed decisions". For the "doers", the "understanding of the environmental problems" should be complimented with "LGU support", being the agency in the community highly perceived by the people to have the power and authority to promote their welfare.

It is also interesting to note that none of the pre-identified factors were rated as crucial by the females, with the males citing similar crucial factors identified by the

“doers”, - in addition to one factor focusing on “consistent enforcement of environmental laws/ordinances”.

VIEWS ABOUT THE FISH SANCTUARY

The Municipality of Malalag has been recognized for its efforts in environmental protection and management projects, notably the fish sanctuary, launched in 1993 under the Local Ordinance Number 21. Thus, this section establishes the respondents views about the sanctuary, specifically, covering the following variables:

- 1) on what they heard about the fish sanctuary;
- 2) specific laws or ordinances passed by the local government unit regarding the fish sanctuary;
- 3) actual visit of the fish sanctuary;
- 4) personal opinions on the fish sanctuary;
- 5) responsible individuals/groups in enforcing local laws/ordinances and their effectiveness;
- 6) perceived benefits/advantages do people get from the fish sanctuary;
- 7) difficulties encountered by the people since the establishment of the fish sanctuary;
- 8) unsupportive individuals/groups to the fish sanctuary;
- 9) activities done by the LGU , NGOs/FOs, and community members to make people accept the fish sanctuary;
- 10) other activities that can be done by the LGU, NGOs/FOs, and community members to make people accept the fish sanctuary;
- 11) barriers to people’s support/participation in preserving the fish sanctuary, including perceived solutions to these barriers and the individuals or organizations who can best resolve these barriers;
- 12) development plans known by the respondents, their agreement to the development plans, its impact to the environment in general and the fish sanctuary;

- 13) preferred development that should be undertaken in the Municipality of Malalag;
- 14) kind of information needed by the respondents before a decision on development be made; and
- 15) individuals or organizations trusted by the respondents to provide the needed information.

Information About the Fish Sanctuary. The information related to the fish sanctuary consisted of what the respondents have heard about the fish sanctuary, the year it was established, its size and the barangays it covered - including the local terms used for fish sanctuary. The views on the sanctuary were solicited from both "doers" and "non-doers" inasmuch as they were residents of a "doer" municipality. The inclusion of the "non-doers" serves as a measure of establishing the extent into which the communication of the LGU spread out beyond the "doers" themselves.

When the respondents were asked on the information heard about the fish sanctuary, six out of ten "doers" and two out of seven "non-doers" gave various responses. Some of the "doers" focused on the objectives for establishing the fish sanctuary. *"gihimo alang sa kaayuhan sa tanan"* (For everybody's welfare), *"silbing breeding ground sa mga isda"* (To serve as a breeding ground for fish), *"feeding ground para sa isda aron modaghan"* (Feeding ground for the fish so as to increase in number), *"tungod kay wala nay mangrove nga kasilungan sa mga isda"* (since mangroves are already gone which used to serve as fish habitat), *"para mobalik ang coral reef ug mga isda"* (To restore the coral reefs), *"para modaghan ang isda"* (To increase fish supply), and *"guardia sa mga isda"* (To protect the fish). Others expressed their support for the fish sanctuary, i.e. *"gamay lang ang area sa fish sanctuary, kulang pa"* (the area for fish sanctuary is small . . . too limited) and *"dapat dako ang area sa fish sanctuary"* (the area of the fish sanctuary should be

big). One "doer" honestly claimed that he has "no idea about the fish sanctuary for he is from the upland".

The non-doers" explained that the "creation of the sanctuary was in response to the need to preserve the 10 percent existing coral reef before it is too late" and that "it is one way of experimenting if it is effective in increasing the fish supply".

Relative to the year the fish sanctuary was implemented, "doers" and "non-doers" gave varying responses, e.g. 1991, 1992, 1993 and 1994 for "doers" and 1990 and 1992 for "non-doers". (Based on the Local Ordinance Number 21, the fish sanctuary was established in 1993.)

Most (5 out of 6 reporting on what they have heard about the fish sanctuary) of the "doers" reported that the fish sanctuary has an area of 50 hectares, covering "Barangay Baybay and part of Barangay Bulacan", "Barangay Bulacan only", Barangays Baybay and Foblacion", "Barangays Baybay and Bulacan and sitio Babak of Barangay Foblacion" and "Purok 7 of Barangay Baybay and Barangay Foblacion". The two "non-doers" reported "48 hectares" and "20-50 hectares as the size of the fish sanctuary", covering "Barangays Baybay and Bagumbayan" and "two barangays".

The data above showed the extent to which the Local Government of the Municipality of Malalag has disseminated information on the fish sanctuary to its citizens. The "doers" appeared to be well-informed on the nature of the fish sanctuary itself but need accurate information on the actual area coverage and the date the sanctuary was established. Likewise, it showed the type of information that the LGU has disseminated to the people.

Local Terms for Fish Sanctuary. The respondents provided varied local terms for "fish sanctuary". Some "doers" translated it into "*itloganan sa isda*" or "*pugaran sa isda*" (a hatching ground for fish), "*pahulayan sa isda*" (a resting place

for fish), "*lugar nga naa sa dagat nga gi-preserve para sa mga isda aron kahulipan ang atong kinaiyahan sa dagat*" (a place in the sea reserved for fish for the coastal environment to regenerate) and "*kapanibaan sa isda*" (a breeding ground for fish). Others related the term to "fish cage" and "*gikoral ang isda*" (the fish are fenced) with some using the terms "fish sanctuary" itself. For the "non-doers", the term was translated into "*pinuy-anan sa isda*" (home for the fish) or "*itlogan sa isda*" (a hatching ground for fish), with one "non-doer" simply using the term "fish sanctuary".

Specific Laws or Ordinances Passed Regarding the Fish Sanctuary Known to the Respondents. Among the "doers", only two were knowledgeable about the specific laws or ordinances passed regarding the fish sanctuary. They mentioned specific information as: "*dili pasudlan og mananagat*" (fishermen are not allowed to enter the fish sanctuary) and "*dili pasudlan og mga tao 50 meters palibot sa fish sanctuary og sa sulod sa fish sanctuary*" (people are not allowed to enter within the 50-meter radius from the fish sanctuary and within the sanctuary itself. Two "non-doers" described specific laws and ordinances, to wit: "fishermen are not allowed to fish within 300 meters away from the fish sanctuary, anybody caught violating this law will be fined P200.00" and "fishermen are prohibited to fish around the fish sanctuary".

Actual Visit of the Fish Sanctuary and Personal Opinions on it. Eight out of the 10 "doers" and one out of the seven "non-doers" claimed to have actually visited the fish sanctuary. Such visits somehow resulted in certain opinions being formed on the fish sanctuary, e.g. "*dapat ipadayon kay daghan ang nalipay niini*" (the fish sanctuary should be continued for many were happy about it, "*kulang pa ang area, dapat padakuan kay maayo ang resulta*" (the area is too small, it should be increased in size given its positive results), "*naay coral raef ug isda nga makita*" (corral reef

and fish can be seen), *“kon mas dako ang area, makatabang sa mga residente, makapadaghan samot sa isda”* (if the area is bigger, it will help the community residents and the supply of fish will further increase), *“maayo kay makatabang sa mga tao kay nahibalik na ang natural nga kinaiyahan”* (it is good for it can help the people since the natural situation of the marine resources is beginning to be restored), *“maayo kay naay daghang isda nga wala gyud nako nakita sa una”* (it is good because there are many fish that I have not seen before), *“maayo kay daghan na ang isda”* (it is good because there are more fish) and *“na-preserve ang itloganan sa isda”* (the hatching ground for fish was preserved).

The lone “non-doer” who claimed actually visiting the fish sanctuary opined that *“maayo unta pero ang mga opisyal lamang ang makapamasol pero ang mga residente dili makapamasol”* (it seems to be good, but only the officials are able to fish while the residents cannot).

Responsible Individuals/Groups in Enforcing the Ordinances/Laws on Fish Sanctuary. This section includes the responsible individuals/groups in enforcing the ordinances on fish sanctuary, including the observance of the ordinances and the presence of continued fishing activities in the sanctuary.

The responsibility of enforcing the ordinances on the fish sanctuary appears to be the “sole” responsibility of the “Local Government Unit of Malalag” - as mentioned by most “doers”. The “Bantay Dagat” and “Department of Agriculture” were likewise identified along with the collaborative efforts of the “Philippine National Police and the Barangay Officials”, “Mayor, Philippine National Police and Barangay Officials with police powers”.

The LGU was similarly perceived by most "non-doers" as to be responsible in enforcing ordinances on the fish sanctuary, with others citing the "chairman on the Coastal Management in the Sangguniang Bayan" and "the LGU and Barangay Tanod".

These individuals/groups were reported by the "doers" as effective law-enforcers "ordinances were followed", "*napugngan ang pagpadayon nga pagkaguba sa kadagatan gumikan sa paggamit og mga gibawal nga mga paagi sa pagpanagat*" (the continued deterioration of the marine resources caused by the use of banned fishing gears was minimized), "*ang mga residente sa daplin sa dagat, nagatuman sa mga balaod bahin sa fish sanctuary, pero ang problema ang mga taga bukid*" (coastal residents follow the ordinances, except for the residents of the upland barangays), "*dili kasulod ang mga tao tungod kay naay mga bantay*" (People cannot enter the fish sanctuary because there are guards), and given the "strict implementation of the ordinances on the fish sanctuary". The "non-doers" equated the effectiveness of the law-enforcers based on such observations as the "people strictly obeyed the laws because of the penalties", "arrests of people using illegal fishing gears", "fear of being reprimanded" and "because of the presence of the guards in the fish sanctuary".

For the "doers", the people obeyed the ordinances on the fish sanctuary because they are "aware of the purpose of the fish sanctuary", "they are beginning to experience the benefits of the fish sanctuary (e.g. they can now catch fish around the sanctuary), they have "seen that there are already big fish swimming around the sanctuary" and "there are guards". Some "non-doers" mentioned the "penalties involved in being arrested", "the fear of being arrested" and the "presence of the guard in the fish sanctuary" as factors making people follow the ordinances.

Generally, the “doers” noted that people do not fish inside the fish sanctuary, except in some cases where reports on *“kawat--kawat panagsa kay dako ang kita”* (sometimes, there are cases of individuals sneaking inside the fish sanctuary given the expected high income) which was observed by the “doers” as activities of the “new residents”, “upland residents”, “those forced to do it given the lack of other income sources, *ang uban nga gahi gyod og ulo*” (stubborn), and “those who failed to understand the purpose of the fish sanctuary” (*sudlan gihapon sa mga tao nga wala nakasabot sa tumong sa fish sanctuary*). Some of the “non-doers” claimed that people were not seen fishing inside the sanctuary because they “knew that it is prohibited”, “there are guards around”, and the “fear of being arrested”.

Benefits or Advantages Gained from Having a Fish Sanctuary in the Municipality. To further establish the value of the fish sanctuary for the respondents, they were asked about the benefits or advantages to be derived by the community residents from the fish sanctuary.

The “doers” enumerated the following responses:

“Kon modako na ang mga isda, molangoy sila ngadto sa lawod para maapil sa mga mapanagatan sa mga tao.” (If the fish will get big, they will swim to the sea for the people to fish.)

“Nidaghan ang isda” (Supply of fish has increased.)

“Na-preserved and itloganan sa isda ug nidaghan na ang isda.” (The hatching ground for fish was preserved, and the supply of fish has increased.)

"Daghan isda, Daghan kita." (More fish, more catch.)
Moabot ang panahon nga mobalik na ang maayong
pagpangisda." (The time till come that good fishing will
happen.)

Except of three "non-doers", the rest failed to indicate the benefits to be gained from the fish sanctuary. Those who did revealed the following benefits: "the marine resources were preserved", "protects the fish and increases its number so fishermen catch more fish" and "*maayo kay molambo ang dagat ug mauli-ulian na kini*" (It is good for the marine resources will improve and will return to its natural state.). One "non-doer" appeared uncertain about his reply: "*maayo man daw na, pero ambot lang*" (It seems good, but I don't know).

These benefits were already realized (*sa pagkakaron*) as reported by some of the "doers". Others indicated that these benefits will be realized by the community residents "3-5 years from now"; "5 years from now", "3 years from now" and "4 years from now". In terms of the "non-doers", one reported that the benefits were realized by the community residents "*sugod karon*" (starting today), with the rest giving uncertain responses such as "but in a long term" or "I don't know".

Difficulties Encountered by the People Since the Establishment of the Fish Sanctuary. Having established the perceived benefits that the community members will be receiving from the fish sanctuary, the respondents were asked about the difficulties encountered by the people as they support the fish sanctuary and the length of time they will be experiencing such constraints. Research findings show that the "doers" had offered the following:

"Dili sila kapangisda og tarong pero dili magdugay
kay naay alternative nga livelihood nga gihatag." (They

cannot fish very well, but it will not take them that long for they were given alternative livelihoods.)

“Dili na kapanagat ang mga tao...sa gamay lang nga panahon” (People cannot fish anymore . . . but only for a limited time).

“Nabag-ohan kay wala na silay kakuhaan og isda... mga 3-5 years.” (They found it inconvenient for they have no other place to fish and will be experiencing this for 3-5 years.)

“Nabawasan ang ilang kakuhaan og mga isda . . . 5 years.” (Their source of fish was reduced and this will be experienced within the next 5 years.)

“Adunay mga tao nga dili na kapangisda kay gamay na lang ang isda unya daghan ang mga mananagat ... dili magdugay” (Some people will not be able to fish given the limited fish supply. It will not take them that long to experience these inconveniences.)

“Nakuhaan ang ilang panginabuhian . . 5 years” (Their source of livelihood was affected and this will be for 5 years.)

“Nabawasan ang area nga ilang mapanagatan . . 4 years.” (Their fishing area was reduced and they will experience this for at least 5 years.)

For the “non-doer”, the difficulties that the community residents experienced were:

“Gamay nga kapanagatan, gamay nga kita para sa mga gagmay nga mangingisda ug sa tan-aw nako kini magpadayon hangtod anaa pa ang fish sanctuary” (Limited fishing area means limited income for small fishermen and I think this will continue as long as the fish sanctuary is around)

“Pagkawala sa panginabuhian hangtod nga dili pa masulbad ang kaso nga gipadangat ngadto sa Korte para sa mga LGU” (Loss of livelihood, until the case filed against the LGU will be resolved in court.)

“Dili kapangisda duol sa fish sanctuary kay bawal daw.” (They cannot fish near the fish sanctuary, for it is prohibited.)

Unsupportive Individuals to the Presence of the Fish Sanctuary in the Municipality and the Perceived Reasons for the Unsupportive Stance. The responses of the respondents were varied when asked about those individuals unsupportive of the presence of the fish sanctuary. The “doer” indicated that *“ang mga dayuhan sa area dili mosugot kay wala sila naapil sa information dissemination bahin niin”* (new residents disagreed (with the sanctuary) since they were not informed about it, *“kadtong naay interest sa area”* (those who have vested interests in the area), *“big fishermen kay wala nay kakuhaan og isda”* (big fishermen since they have no other place for fishing), *“none, so far”*, *“politiko nga adunay kakulang sa pagsabot”* (some politicians who failed to understand the fish sanctuary), *“mga wala naga-attend*

sa meetings" (those who are not attending meetings), *"taga-upland"* (those residing in the upland communities), *"fishermen using illegal means"* (those fishermen using illegal methods fishing) and *"ang mga dili motuman sa balaod kay ang ordinances wala gi-aprobahan sa itaas* (local residents who refused to follow the local ordinances since these not have been approved by the national government). For the "non-doers", those who objected to the fish sanctuary were "the small fishermen who only think of their personal needs since limiting the fishing area means limited catch", "the fishermen themselves since they cannot fish anymore around the fish sanctuary", *"mananagat nga nawad-an og panginabuhian, tungod kay panginabuhi na ang nawala"* (fishermen who lost their source of income), *"mananagat nga wala tagai og importansya"* (fishermen who were ignored) and *"ambot kay wala kaayo nadunggan nga mga protesta"* (Don't know since I have not heard of any protest.).

Activities Undertaken by the Local Government Unit, Non-Government Organizations/People's Organizations and Community Members to Make More People Accept the Fish Sanctuary. Though the respondents reported that some individuals opposed the fish sanctuary, the study likewise asked the respondents to enumerate what the LGU, NGOs/POs and the community members have done to increase local acceptance of the fish sanctuary. The "doers" reported that the LGU has influenced the people's decision to accept the fish sanctuary through such education strategies as information campaigns, "barangay level" general assemblies, information drives, consultations and continuing education (the content of which include the benefits one can get from the fish sanctuary).

To make effective changes in the mindset through the education strategies, the "doers" reported the LGU as "looking for alternative livelihoods for the people" and "enforcing ordinances", including the "strict implementation of the ordinances".

"Non-doers" similarly cited the education strategies in making more people accept the fish sanctuary. They added that the LGU has "organized alternative livelihood projects for the people" by coordinating with the "Bureau of Fisheries" regarding the "artificial reef" and "seaweeds culture" projects.

The NGOs and FOs were likewise reported by most "doers" and "non-doers" as educating the people about the fish sanctuary. One "doer" added that the NGOs and FOs even "provided labor assistance in establishing the fish sanctuary", with one "non-doer" stressing that the education activities focused on the "importance of having the sanctuary".

The respondents reported that the community residents concentrated in education-related activities to make other community residents accept the fish sanctuary. The "doers" indicated that the community members were involved in "informing those who still do not know about the fish sanctuary", "explaining the fish sanctuary particularly in the areas where the fish sanctuary is located" and "personally explaining the fish sanctuary to others". The education strategy was again noted by the "non-doers" such as "letting the people understand the importance of the fish sanctuary" and "barangay level information dissemination". Other "non-doers" noted that community residents acted as role-models for other community residents by "abiding with the rules and regulations imposed by the LGU on fish sanctuary" and by "supporting the fish sanctuary".

The above-findings they suggest that both "doers" and "non-doers" recognized the significant role of education in changing the attitudes of people towards the changes introduced. However, this should be complimented with concrete activities to sustain the positive support that people have developed as a result of the education strategy.

Such approaches likewise suggest that for people to accept change, they should initially be informed on the nature of the change itself. This can be interpreted as an "empowerment strategy", - specifically a non-coercive one, as clearly specified by the Local Government Code of 1991. This is also a recognition that one has to rid himself of the uncertainties brought about by the unfamiliarity of the change before the desired decisions can be expressed.

Other Activities That Can Be Done by the Local Government Unit, Non-Government Organizations/People's Organizations and Community Members to Make More People Accept the Fish Sanctuary. Aside from enumerating the activities undertaken by the LGU, NGO's and PO's and community members, the respondents were likewise asked to indicate other activities that these sectors can do to increase acceptance of the fish sanctuary. The "doers" reported that the LGU should "initiate more alternative livelihoods for the people", "expand the area coverage of the fish sanctuary", "continue education campaign", "organize visits to the fish sanctuary by the community residents", "disseminate information about the fish sanctuary in the upland communities" and "sustain the strict implementation of the local ordinances". One "non-doer" cited the "provision of alternative livelihood" as an added activity for the LGU.

"Doers" recommended that the NGO's and POs "continue their information dissemination", "help upgrade the fish sanctuary" and "conduct more information dissemination focusing on varied aspects of the fish sanctuary". The "non-doers" added that these groups "continue their education program on fish sanctuary" and "mobilize their members to participate in the dissemination of information about the fish sanctuary".

Barriers to People's Support in Preserving the Fish Sanctuary and the Individuals or Organizations Perceived by the Respondents that Can best Reduce or Solve These Barriers. The barriers identified by the "doers" include:

"Ang kapobrehon sa mga tao" (The poverty of the people.)

"Kakulangan sa laing kapanginabuhian" (lack of alternative livelihood)

"Ang nagdumala ang nanag-una sa pagkuha og isda sa fish sanctuary, naglagot ang mga tao" (The caretaker was seen fishing in the sanctuary to the consternation of the residents.)

"Ang mga naobserbahan nga pagpadayon sa mga illegal fishing" (The continuing illegal fishing activities.)

"Adunay nagpaluyo nga political opponent sa pagsamok-samok sa kahapsay sa pagpadagan sa fish sanctuary" (A political opponent is believed to be causing the problems relative to the fish sanctuary.)

The non-doers", likewise, cited that the barriers to people's support to the fish sanctuary were caused by:

"Bahala na attitude ug mga kinaraan nga tinuohan sa mga tao" ("Bahala na" attitude and some traditional beliefs of the people.)

"Walay lain nga kapanginabuhian" (No alternative livelihood)

*“Tungod adunay mga tao nga nagpakawala pagsabot
bisan nakasabot (Refusal of people to understand.)*

*“Mga tao nga wala nakasabot sa tumong sa
sanctuary”. (People who do not understand the purpose of the
fish sanctuary.)*

Such barriers notwithstanding both the “doers” and “non-doers” believed that these can be resolved, with the “doers” recommended the following: “provision of alternative sources of livelihood” and “access the people to technological services” to reduce the “lack of alternative livelihood” and “poverty” which can best be done by the Local Government Unit. No specific recommendations were given by the “doers” for the other barriers mentioned earlier i.e. for the caretaker who was seen catching fish in the sanctuary, the continued illegal fishing activities and the political opponent causing the problems relative to the fish sanctuary. Nonetheless, they believed that the LGU can do something about these.

The barriers cited by the “non-doers” can be resolved by the LGU, particularly those dealing on the “Bahala na” attitude and the traditional beliefs of the people” the “refusal of people to understand” and those people who do not understand the purpose of the fish sanctuary. The lack of alternative livelihoods can be resolved through the collaborative efforts of the LGU and private institutions.

The above-cited information showed the heavy reliance placed by the respondents on the LGU in terms of solving the barriers faced by people relative to supporting the fish sanctuary. It could have been better if the people themselves find solutions to their own problems - as a genuine step towards making effective the strategy of people empowerment outlined in “Philippines 2000.”

Development Plans in the Municipality Known by the Respondents and Their Approval of These Development Plans. The development plans known by the "doers" in their locality were the "establishment of the fruit-processing plant", "the establishment of the desalination system", "oil mills", "industrial development", "the mango-processing plant", "mini-park" and "forest rehabilitation", with the "non-doers" enumerating the following plans namely, "the coco oil mill", "the industrialize zone", "the establishment of an oil company" and "the fruit processing plant".

All the "doers" and "non-doers" approved of these development plans. For some "doers" their support for the development plans was due to the possible "employment generation it will bring the people and the municipality". Some "doers" agreed with these development plans provided the following conditions were met: "the installation of a proper waste disposal system", "the jobs available are matched with skills of the community residents", "availability of an environmental protection plan" and "a pollution regulatory or control system".

Some "non-doers" such plans because it is "for the development of the town". Conditional agreements were likewise shared by some "non-doers" e.g. "if it will help the people", "if it has a proper waste disposal system" and "agree na lang kon mouyon ang atong LGU" (Agree if the LGU will agree).

Perceived Impacts of the Development Plans to the Environment in General and the Fish Sanctuary. All the "doers" and "non-doers" indicated that these development plans will have some impact on the environment and the fish sanctuary. The impact on the environment as reported by the "doers" and "non-doers" focused more on the pollution it will bring to the environment. For the "doers", the impact on the environment in general were gleaned from the following statements: "if there will be no proper waste system, it will destroy the environment", "if they do not have a proper

waste-dumping area”, *“dako ang maguba sa ecosystem kon wala silay environmental protection program”* (there will be massive destruction of the ecosystem if they do not have an environmental protection program), and “if they do not have pollution regulation program”. The “non-doers” warned about the possible dangers that these development plans will bring to the environment: “if its waste disposal system will not be managed very well”, “if they do not have a proper waste disposal system”, “trees will be cut”, “if they do not have proper pollution control system” and “for oils spill cannot be controlled”.

Its possible impact on the fish sanctuary were likewise identified by the “doers” e.g. “toxic waste”, “water-pollution in the absence of any pollution control system” and “waste will be thrown to the sea for the industrial site is nearer the sea”. Such scenario led the “doers” to recommend that these development plans be located “2 kilometers away from the fish sanctuary”, “ideally it should not be near the sea”, “5 kilometers away from the fish sanctuary”, *“dapat naa sa inland”* (it should be established in inland areas), “20 to 30 kilometers away from the fish sanctuary” and “3 kilometers away from the fish sanctuary”.

The “non-doers”, on the other hand, revealed that the impact these development plans will have on the fish sanctuary will include “the destruction of the fish sanctuary because the oil spills cannot be controlled”, (as stressed by two “non-doers”); “no pollution control” and “no proper waste disposal system will be installed”. One “non-doer” believed that the fish sanctuary will not be affected for he sees that the “coco mill will be established in the mountain”, and “10 kilometers away from the fish sanctuary”. Those concerned about the possible destruction these development plans will bring to the fish sanctuary recommended that these plans should be “away from the fish

sanctuary" and "10 kilometers away from the fish sanctuary". Others failed to give specific locations of the development plans from the fish sanctuary.

Preferred Development That Should be Undertaken in the Municipality and Justifications Made about the Preferred Development. Other than their knowledge on the development plans that will be implemented in their locality, the respondents were asked their preferred development to be undertaken in their locality. The "doers" selected the following development activities:

"Fish manufacturing and port development so that there will be more work opportunities available for the residents".

"Agro-industrial development, and agri-development for this municipality is basically an agricultural area."

"Industrial plants kay maoy makaasenso sa tao ug sa munisipyo ug daghan ang ma-employo". (Industrial plants for it can improve the lives of the people and the municipality and increase employment.)

"Sustainable development on fishing and agriculture for the Municipality of Malalag has only two major economic sources of income - the coastal resource and agricultural resources.)

"Water development for the people in the uplands often have problems on sources of drinking water. The sources are very far from their houses." and ,

"Livelihood projects for women".

The “non-doers”, on the other hand, preferred the following:

“Farm-to-market roads because sugarcane farmers have difficulty in transporting their produce, resulting to low incomes”.

“Industrial development for it will increase job opportunities for the people”.

“Livelihood projects that will increase the income of the people”, and

“Development plans that will not dislocate the people.”

Kind of Information that the Respondents Desired to Acquire Before Making a Decision on Development and the Preferred Individuals or Organizations as Source of These Desired Information. Establishing their knowledge on the possible development plans that will be implemented in their locality and their preferred development plans indicates their attitudes towards development activities. However, it appeared that enumerating these development plans may not suffice to establish their tendencies to practice informed decisions. Thus, this question focusing on the desired information relative to development activities will provide data on how the respondents tend to inform themselves in order to arrive at informed decisions. Likewise, the preferred individuals and organizations enumerated by the respondents as sources of information dissemination suggest the credibility and trust accorded by the respondents on these persons and organizations. The LGU was viewed by the “doers” as credible in informing them about “fish manufacturing and port development”, “baseline surveys on the situation of the agriculture”, “technical capacity to undertake agro-development”, “the effects of the development plans on the environment and the economic opportunities it will bring to the people”, “agricultural development “ and “farm development”.

GreenCOM was likewise preferred by some "doers" to provide information on "research skills in making effective local ordinances", "industrialization plans", "Environmental Impact Assessment", "sustainable development on fishing and agriculture", "how to ensure that the LGU's plans are the people's plans, "pollution control system" and "monitoring skills". The "feasibility studies", as opined by one "doer" can be provided by "anybody with expertise outside the LGU".

The LGU and government agencies were mostly cited by the "non-doers" as the preferred sources of their desired information on development activities. The LGU was likewise preferred to inform the "non-doers" on the "possible participation that the community residents will have in the industrialization plans" and "development plans that will not dislocate people".

"Non-doers" trusted the "LGU together with the Department of Education, Culture and Sports (DECS)" as sources of information relative to the "benefits the development plans can bring to the people", "how the people can adapt to these development plans", and "how well the people in-charge of the development plans manage the plans". Government agencies (e.g. Department of Environment and Natural Resources, National Economic and Development Authority and Department of Trade and Industry) and Non-Government Organizations and Religious Groups were credible for the "non-doers" to provide information on "industrial development". For others information on the "impact/effects of the development plans on the environment" and "research skills on the repercussions of these development plans to people" should be given by the "LGU and the investors", with the "LGU and the Barangay officials" as sources of information on the livelihood projects.

III. COMMUNITY RESIDENTS

This section presents the results of the focus group discussions conducted among the "doers" and "non-doers" (males and females) from the coastal and upland barangays of Malalag, Davao del Sur. It includes information on selected socio-demographic characteristics, sources of information, environmental conditions and problems, worldview of the environment, beliefs and practices, knowledge of enforcement of policies and laws, perceived participation in environmental affairs, perceived benefits and barriers, skills and other support services, and views on the fish sanctuary.

Selected Socio-Demographic Characteristics

Both "doer and "non-doer" respondents were in their early 40's, with the former being relatively older (43 years) than the latter (41 years). The respondents from the coastal barangay appeared to be relatively older (mean age of 43 years) than their counterparts in the upland barangay (mean age of 40 years). Across the two barangays, the females appeared to be younger (mean of 38 years) than the males (46 years). (See Appendix F).

The majority of both "doers" and "non-doers" were married, Roman Catholics, and have completed at least primary education.

In terms of residency, the "doers" and "non-doers" have been living in the survey sites for approximately 27 and 26 years, respectively, with the female "non-doers" having stayed longer (33 years) than the male "non-doers" (19 years). The coastal residents have been in the area longer (29 year) than the upland dwellers (23

years). Overall, the male-respondents have a shorter period of residency (23 years) than females (30 years).

Most of the "doers" and "non-doers" were migrants - even among the upland dwellers - while most coastal residents were natives of the place (i.e. being born in the survey sites). Most of the males were migrants from the Visayas, with the females being native-born.

"Doers" and "non-doers" have fairly the same moderate family sizes, i.e. with the average number of children at 3.8 for "doers" and 3.7 for "non-doers". The upland respondents have an average of 3.9 children while the coastal respondents, 3.4. The male respondents indicated a relatively larger average number of children (3.9) than the females (3.5).

"Doers" are primarily engaged in farming and fishing activities while "non-doers" are in "fish peddling/vending". Upland-residents are in farming while coastal-dwellers engage in fishing. The male respondents are mainly farmers and fishermen while the females are "fish peddlers/vendors". The spouses of the upland respondents were mostly farmers while those from the coastal survey site were either military personnel or fisherfolks. They indicated an average of two working members per household.

The majority belong to various community organizations and describe themselves as "active" members of such organizations..

When asked to enumerate the problems currently facing their community, the "doers" believed that the three most mentioned problems currently faced by their community were "poverty", "poor roads" and "farther source of water", and "limited capital" - in declining importance. The "non-doers", on the other hand, mentioned the same problems, i.e. "poverty", "limited capital" and "poor roads".

The environment-related problems mentioned by the “doers” as faced by their community were: “long drought”, “flood”, “denuded forests”, “low farm production”, “infertile soil”, “Lapanday toxic waste”, “illegal fishing”, “poor drainage”, and “limited fish catch”. Environment-related problems such as “low farm production”, “farther source of water”, “infertile soil”, and “limited fish catch” were also cited by the “non-doers”.

The environment-related problems cited by the upland-dwellers were the “long drought”, “flood”, “denuded forest”, “low farm production”, “farther source of water”, and “infertile soil”, with the coastal residents citing “no toilet/proper sanitation”, “toxic waste from a banana company”, “illegal logging”, “poor drainage”, “limited fish catch”, and “limited water”.

Comparing sex, it is interesting to note that the problems mostly cited by the males were related to income: “poverty”, “no stable source of income”, “limited fish catch”, and “no money to send children to school”, while those mostly mentioned by female were: “limited capital”, “no toilet/poor sanitation”, “farther source of water”, “limited supply of medicine”, and “limited supply of water”.

Sources of Information

The usual sources of information of the respondents were the radio and television, with some suggesting newspapers, seminars, barangay assemblies, KAPWA (an NGO working in upland development), and “radyo baktas” - literally “radio walkathon” i.e. refers to news gathered by community residents who happened to visit the town-proper and relay information upon their return. The “doers” tend to source their information not only from the broadcast media (i.e. radio and television), but also from the print media (newspaper), informal sources (e.g. radio “baktas” and the usual

rumor-mills), "seminars", "barangay assemblies", and one NGO (KAPWA). "Non-doers" indicate similar sources.

Coastal participants mostly cited radio and television, while upland dwellers mentioned the radio and KAPWA (with nobody mentioning the television). Broadcast (radio and television) and print media (national dailies such as "Tempo" and "Inquirer") were the usual sources of information for both males and females. Interestingly, the females relied on informal sources (i.e. rumor mills and "radyo baktas") for other information vis-à-vis the males who cited "seminars", "barangay assemblies" and their relations with KAPWA.

These findings suggest that while broadcast and print media may be the usual sources of information, other communication channels may still be utilized through which information are channeled to the respondents.

For the radio, the participants were listeners of daily newscasts from DXDC, DXOW, and Bombo Radyo, with some others listening to drama. News reports and drama were usually listened to by the both "doers" and "non-doers". News reports ("Hoy Gising", "Radyo ng Bayan" and "Vigilantes", among others) during the early morning hours (from 4:00 AM to 7:00 AM) and later in the day (from 5:00 p.m. to 8:00 p.m.) from various radio stations (e.g. DXDC, DXUM, DXOW, Bombo Radyo, DXRH and DXRP) were familiar to some "doers" and "non-doers". Mr. Juan Porras Pala, Jr., a former radio commentator from DXOW and now working with the DXDC, appeared to be the popular among the radio-listener respondents. Other radio commentators known to both "doers" and "non-doers" were "Mr. Freddie Vergara of the DXDC", "Mr. Jun Baring of Bombo Radyo", and "Mr. Nelson Canete of DXUM". Both upland and coastal respondents likewise listened to dramas.

By sex, both males and females listened to news reports, with the females particularly mentioning the dramas.

For television, survey results showed that public affair programs such as the ABS-CBN's daily programs of "Hoy Gising", "TV Patrol", the Saturday public affairs program of "Magandang Gabi Bayan" and the Sunday presentation of "Lupang Pangako" were popular among the "doers" and "non-doers". Mr. Noli de Castro of the "Magandang Gabi Bayan" is most likewise popular among them, with both "doers" and "non-doers" mentioning Ms. Mel Tiangco, with Mr. Ernie Baron of ABS-CBN's weather bureau forecasts, Mr. Francisco Evangelista and Ms. Loren Legarda of the ABS-CBN's news program entitled "World Tonight". It is interesting to note that TV viewing is only applicable for the coastal-based respondents. Males and females indicated similar responses.

Perception on Environmental Conditions

In this section, the participants were asked their understanding of "kinaiyahan"(environment)"; their assessment of the conditions of the coastal and forestry resources, its causes and extent of environmental destruction; activities undertaken by the Community Residents, LGU, NGO's/PO's, religious groups, the private business sector and schools to solve environmental problems; other activities that may be pursued by community residents, LGU, NGOs, POs, religious groups, private business sector and schools to solve environmental problems; individuals or organizations perceived as most responsible in solving environmental problems; and environmental projects implemented in their areas, including the initiators and the effects these had on the daily lives of local residents.

Understanding of the Term Kinaiyahan. Asked about their understanding of the term "Kinaiyahan", both "doers" and "non-doers" had difficulty in finding another term for it. Most "doers" and "non-doers" understood it as "*batasan*" (character trait) or "*nagkalain-lain nga kinaiya sa tao* (varied character traits of people). Some of the "doers" related the concept to "*kainit sa panahon*" (warm climate), "*walay kahoy*" (absence of trees), "*kanang gikan sa natural sama sa dagat nga diha nato makuha ang isda, sa yuta diin makakuha ta og kahoy ug tanum*" (that which comes from nature itself such as the sea where we get our fish and the land where we get wood and plants). Some "non-doers" related it to "*kinaiyahan sa dagat ug sa kalasangan*" (environment of the sea and forest). The males perceived it as referring to nature or to the environment (rather than to "character traits"), with the females relating it both to "batasan" and "kinaiyahan".

However, after some probing, they finally agreed "kinaiyahan" to mean "environment".

Assessment of the Current Condition of the Coastal and Forestry Resources, Its Causes and Seriousness. In assessing the conditions of their environment, the responses of the participants were divided into "coastal" and "forestry" resources. The coastal resources were assessed by both "doers" and "non-doers" as "polluted", i.e. described as "full of litters such as 'cellophane', 'plastics', and 'banana stems'". Furthermore, the "doers" described it as "*menos ang isda tungod sa pollution* (less fish catch due to pollution), "*anam-anam ang pagkawala sa isda*" (the fish are gradually vanishing), and "*menos na ang isda ikomparar kaniadto*" (less fish supply today compared to the past). Some "doers" further expressed that "only 10 percent of the corral cover reef is alive". The same observations were shared by "non-doers".

The forest resources, on the other hand, were described by “doers” as “*upaw na ang bukid*” (forest is denuded), “*walay kahoy*” (no trees), “*dagol na ang yuta*” (infertile soil), and “*nagusbat na ang kinaiyahan....sa una, dako pa kaayo ang kakahuyan, karon wala na...sa una nindot kaayo tan-awon ang kabukiran kay daghan ang mga kahoy, karon wala na*” (the mountains have deteriorated...before, the forest cover was large, now its gone...before, the forest was beautiful to look at because of its many trees, but now its gone). The “non-doers” likewise described the forest as “*nahurot na ang dagkong kahoy*” (the big trees are gone) and “*upaw na ang kabukiran*” (the forest is denuded).

The respondents’ description of their environment was focused more on the deteriorating situation of such. None cited their environment as improving.

Perceived Causes of the Situation of Their Environment. When asked about the perceived causes of the deteriorating environment, varied responses were provided by the respondents. Some “doers” and “non-doers” explained that their environmental problems were caused by the toxic wastes from the banana plantation and the fishponds:

Medisina nga ginagamit sa plantasyon sa sagingan ug sa mga punong nga mangaanod ngadto sa dagat panahon sa ting-ulan (Pesticides, weedicides and fungicides used by the banana plantations and those used by fishpond-owners which are carried out to the sea during rainy day.)

Paggamit og trawl nga modaro sa kalapukan sa ilalom sa dagat nga makapayhag sa mga itlog sa mga isda (fish trawls raking the sea bed and disturbing fish eggs)

Other causes of the depletion of marine resources as claimed by the "doers" included dynamite fishing and other ways of fishing that adversely affected the marine resources, the increasing number of fishermen and the absence of alternative sources of livelihood other than the sea. "Non-doers", further cited the erosions from the mountains as causing floods in the lowlands and the increasing number of people residing in the coastal areas.

The deteriorating situation of the forest was observed by both "doers" and "non-doers" as due to the "indiscriminate cutting of trees by the residents". Some "doers" reported that the denudation of the forest was further caused by the "illegal logging from 1959 to 1964", "slash-and-burn" farming practices, "abuse of the residents of the forestry resources" and "people's lack of appreciation of the importance of trees". The "non-doers", on the other hand, cited the "farmers' cultivation of the sloping areas" contributing to the fast soil erosion in the mountains, including "influx of settlers to the upland", thus contributing to the fast erosion of the soil given their cutting of trees for firewood and house materials.

The depletion of the forestry resources was reported by some "doers" as caused by the "logging activities from 1959 to 1964", coupled with the "indiscriminate cutting of trees by the upland dwellers", including the "cultivation of the sloping areas". Some "non-doers" cited the influx of people in the uplands to farm and to build their houses contributory factors for the degradation of the forestry resources. These were viewed by some "doers" and "non-doers" as serious inasmuch as the "climate has become warmer", "the water sources are now farther", "it has reduced farm production" and "the birds have no more areas to live in".

In describing their environment, the respondents mainly focused on the deteriorating and depleting coastal and forestry resources. Nobody cited the improving

situation of their environment (as earlier done by the government officials and opinion leaders).

In addition, most of the causes of the deteriorating environment cited by the respondents were focused on the “signs and symptoms” of the depleted environment.

Do They Perceive The Situation of Their Environment as “Serious”?

Research findings showed that the polluted and depleted conditions of the marine resources were considered by the respondents serious considering that fishing was the major source of income for the coastal residents and farming for the upland residents. Furthermore, some “doers” added that:

Dako kaayo nga problema kini kay panginabuhi man gayud sa mga tao ang panagat dinhi. (This is a big problem, for fishing is the major source of income of the people.)

Krisis na gayud kay usahay naay adlaw nga wala na gayud mi og makuhang isda. Sa una, naay usa o duha ka adlaw nga walay makuha nga isda pero karon mas daghan ang adlaw nga walay makuha nga isda. (Its really a crisis for there are days that we cannot catch fish at all. Before, we only experienced one to two days without any fish catch, but today, there are more days without catching anything.)

Some “doers” and “non-doers” reported that:

Sa una duol lang manakop og isda, karon sa lawod na . . . kaniadto maayo ang pamuyò sa mga tao kung tig-buwan sa isda pero karon nagalisud na ang mga tao sa pagpanakop og isda . . . krisis gyod karon tungod kaniadto kasagaran makakuha man mi ug tuló ka kilo sa isda sa usa ka adlaw. (Before, we can catch

fish along the shores, but now we catch them further out to sea... Before, people have comfortable lives during the fish peak seasons but now people experienced difficulties in catching fish. Today we are in a crisis because in the past we can get at least three kilos of fish a day)

Kaniadtong panahon daghan og mga isda dinhi sa daplin, karon wala na dyod, panagsa na lang kakita (Before there were so many fishes close to the shorelines, now, we seldom see them.)

This situation was further stressed by “non-doers”, thus:

Dako ang kausaban sa dagat karon kaysa unang panahon. Ang waste sa sagingan moadto sa dagat... . Mao na, hugaw na ang dagat... busá nagkahinay-hinay na pod nagkalumpag ang mga pinuy-anan sa isda (There is a big difference in the conditions of the sea today relative to the past. The waste coming from the banana plantations are washed out to sea, polluting the waters and gradually destroying the fish breeding-sites.)

Aside from the direct effects of the depleted marine resources on the fishermen, the “non-doers” identified the trickle-down effects that the limited fish supply had with the consumers:

Para sa amod nga mamaligyay og isda, kaniadto ang mismong mananagat ang mohatod sa isda pero karon didto na mi mamalit sa comprador busa nagmahal ang among ginabaligya;

paliton sa comprador og P30.00 kada kilo, ibaligya sa amo og P50.00, unya amo pod patungan og P5.00 ngadto sa P10.00 kada kilo, maó na mamahalan ang mga mamalitay (In our case, as fish vendors, the fishermen themselves would deliver their fish catch directly to us; but now, we buy our fish from the "comprador" (local traders) who buy their fish from the fishermen for P30.00 a kilo, sell it to us for P30.00 a kilo, on top of which we add P5.00 to P10.00 a kilo - making it more expensive for the consumers.)

To make matters worse, the depleted marine resources, may lead one to consider participating in unlawful activities in order to feed their starving families as one "non-doer" shared:

Usahay makahuna-huna og dautan sama sa pag-dawat na lang sa naga-recruit para miembro sa Abu Sayyaf kay naay Diyes Mil kada bulan (Sometimes we think about illegal means as in accepting the offer to join the Abu Sayyaf - a notorious kidnap-for-ransom gang - and receive P10,000.00 a month.

Furthermore, the deterioration of the environment was considered serious primarily because of the adverse effects it brought on the livelihoods of the respondents.

Activities Undertaken by the Community Residents, LGU, NGO's, PO's, Religious Groups, the Private Business Sector and Schools to Solve Environmental Problems. As residents of the survey sites and having described their environment as deteriorating and considering this situation as serious, the respondents were asked on

the activities undertaken by the various sectors in their community to help solve these environmental problems. Some "doers" and "non-doers" reported that the community residents have planted trees, mangroves and mangoes. The "doers" particularly cited the physically-strenuous activities undertaken by local residents as in providing labor in the construction of the seawall and drainage. Some "non-doers", meanwhile, focused on the residents' community-organizing work such as the formation of the Muslims and Christians associations - a recognition that development work transcends any tribal boundaries, for social responsibility is not a lopsided thing but a concern of all members of society.

Issues which affected the residents and the actions taken thereafter to solve their situation were also discussed. The female "doers" noted that:

Pagkahuman namo og hisgot, among gibisitahan ang tag-iya sa yuta og gisultihan sila nga gusto namo magbuhat og kasilyas alang sa pag-limpyo sa among palibot, dili mahugawan ang dagat, ug para mamenos ang mga sakit sa mga bata . . . pero wala gihapon nahitabo. . . . at least naningkamot mi (After our discussion, we visited the landowners and told them we wanted to construct toilets to clean our surroundings so as not, to pollute the sea, and to minimize illnesses among the children . . . but nothing happened . . . but at least we tried to do something about it.)

Other actions taken by the coastal community residents included planting mangroves, reprimanding neighbors who were throwing their garbage anywhere . . . including those using fishing gears that are adversely affecting the marine resources.

Still others cited having “reported to the barangay captain anybody seen cutting big trees”.

The “non-doers” claimed that the community residents “reprimanded neighbors who were throwing their garbage anywhere” and those “using fishing gears that are adversely affecting the marine resources”. They were also observed to be vocal about their comments, and planted trees within their backyards.

Some “doers” and “non-doers” reported that the Local Government Unit “apprehended violators of the local ordinance that bans the use of prohibited fishing gears”, “established a fish sanctuary”, “implemented such projects as tree planting, artificial reef, and passed an ordinance that bans the cutting of big trees. The “doers” likewise claimed that the LGU has “legislated local ordinances”, “organized the Barangay Advisory Team on Environment”, and “arrested violators of local ordinances”. Some “non-doers” observed that the LGU has “conducted information dissemination on the ordinance that bans the cutting of big trees”.

The coastal-based respondents focused more on the reactionary - type of activities, i.e. “reprimanding” and “apprehending” violators of local fishery ordinances, while the upland dweller-respondents emphasized the proactive (preventive) projects, e.g. the “tree planting” activities of the LGU.

Both males and females reported that the LGU has established the fish sanctuary, and apprehended violators of local ordinances.

On the other hand, some “doers” and “non-doers” have observed that the non-government organizations (NGOs) have planted trees and taught residents about contour-farming. Some “doers” further cited that the NGOs were involved in reforestation, planting of mangroves, organizing the people to reforest, and providing alternative livelihoods such as goat dispersal. Some “non-doers” claimed that NGOs’

regularly monitor their recipients, provide seminars or trainings on organic farming to restore soil fertility and encourage people to replant trees.

Some coastal- and upland-respondents mentioned such activities as planting trees and providing alternative livelihood projects as "goat dispersal" in the upland communities.

The females reported that the NGOs have taught the residents contour-farming, conducted tree-planting activities, planted mangroves, organized community residents to plant mangrove, and have provided alternative livelihood as "goat dispersal". Some males mentioned such activities as "regularly monitoring their program recipients", "encouraging people to replant trees", and "introducing organic fertilizer" (as one strategy to restore the fertility of the soil).

The **People's Organizations (POs)** were reported by some "doers" mainly planted trees, with some "non-doers" citing their seed-distribution activities among the upland dwellers.

The schools, were reported by some "doers" and "non-doers" as having "planted trees", with some "doers" particularly mentioning their distribution of toilet bowls to coastal dwellers. (This was undertaken by the SHIELD Project of the Davao Medical School Foundation but failed given the sandy type of soil along the coastal areas.)

The **religious and private business** sectors were generally described by both "doers" and "non-doers" as being inactive in environmental problems.

Other Activities That Can Be Done. Other than asking the respondents on what the various sectors in the community have undertaken to solve environment problems, they were further asked about other activities these sectors can undertake to help solve the environmental problems. Based on FGD-results, some "doers"

recommended that community residents “stop using chemicals (lanit) in fishing”, “to really reprimand violators of local ordinances”, “plant trees in their surroundings”, “replant ipil trees” and to “have their own backyard gardens”. Some “non-doers” reported that the community residents should “continue to be aware of the situation of their environment so that immediate actions can be done” and “to give their time to environment-related activities”.

On the part of the LGU, some “doers” and “non-doers” suggested that more alternative livelihood be provided. Some “doers” further cited that the LGU should “zealously apprehend violators of local ordinance”, while some “non-doers” believed that the LGU should “regularly conduct surveillance of the coastal areas until such time that illegal fishing activities will totally stop” and “provide soft loans for livelihood projects”.

For NGOs, some “doers” perceived that they should “establish demonstration farms in the upland communities”, and “continuously promote organic farming”. Some “non-doers” meanwhile proposed that NGOs continue their activities in the upland communities.

No activities were, however, proposed by the respondents for the People’s Organizations (POs), religious groups and the private business sector.

Perceived Barriers/Obstacles in Solving Environmental Problems. The activities cited earlier by the respondents suggest the need for various sectors in the community to help solve the environmental problems. However, it is also important to understand the pressures that these sectors encountered as they help improve environmental conditions. This portion of the research therefore presents the perceived barriers in addressing environmental problems. Overall, varied obstacles were cited by the participants in solving environmental problems. Some “doers” and “non-doers”

identified those as the “people’s lack of understanding of the local ordinances”, their “lack of awareness about the adverse effects of indiscriminate cutting of trees”, “being landless as farm-tenants”, and “not-owning their house lots - including their “stubbornness”, and “laziness”. Some “doers” further claimed the community members would stop reprimanding violators of local ordinances whenever they are “influential” such as the owners of big fishponds, the “absence of monitoring by the barangay officials”, “laxity in the implementation of local laws”, “limited logistics such as finances”, “limited knowledge of the community residents about the project”, “fear of reprisals”, “reprimanding activities land on deaf ears”, “busy in their livelihood”, “lack of motivation to act given their non-ownership of the house lots”, “palakasan”, “issuance of permit to fish by the Municipality of Sta. Maria”, “unsupportive members due to their being not informed”, “unclear boundaries of the municipal water”, and “people continue doing illegal fishing but outside the perceived boundaries of municipal waters and the jurisdiction of the barangay captain.

The “non-doers”, on the other hand, reported the laxity in the implementation of the ordinance because of “*pakikisama*” - “*hugot unta ang pagpatuman pero kay panagsa makalusot kay tagaan man ug kilawon o pang-inom*” (Enforcement of local laws appeared to be strict, but violators sometimes avoid being arrested because the concerned authorities are given fish for “kinilaw” (local version of Japanese “sashimi”) for appetizer and liquor) - and people were not informed. The local enforcers are viewed negatively, i.e. “*gi-initan sa mga tao*” (becoming enemies of violators) thereby discouraging them from strictly enforcing the ordinances. Thus, “violators continue their illegal fishing activities even if caught”.

The common barriers perceived by the coastal- and upland-based respondents were the people “being busy with their livelihood”, “their being stubborn” (*gahi og*

ulo), the "laxity of the LGU in implementing local ordinances", and the "landlessness" of the people (being tenants and not-owning their house lots)..

Both males and females reported the people's "laziness", their "not being informed" and their "being busy with their livelihood".

The barriers enumerated by the respondents can be categorized as "respondent-related", "community members-related", and "LGU-related". The "community-related barriers" include the absence of knowledge of the environmental projects implemented (e.g. "limited knowledge about the project" , "lack of understanding of the adverse effects of their indiscriminate cutting of trees", and "not being informed about the project"); their characteristic traits of being lazy and stubborn; the priority given to livelihood pursuits (i.e. being busy with their livelihoods); and their sheer disregard for the local regulations, (i.e. "continue to violate despite being arrested"). The "respondent-related barriers" may include their fear of reprisals from the community influentials such as the fishpond-owners. The respondents thus believed that these barriers refrain them from being vigilant against those indifferent to environmental protection and management. The "LGU-related barriers" dealt more on the "laxity in implementing local ordinances", with some observing the "palakasan"-system (i.e. favor for the influential). Also, the pressure caused by the issuance of permits to fish by a nearby municipality (Sta. Maria) have further posed threats to the LGU's strict implementation of their local ordinances.

The above-cited responses revealed the extent to which the respondents can exercise their political will and efficacy relative to solving environmental problems. The respondents may feel efficacious in their activities in helping solve environmental problems but their fear of reprisals from influentials and the extent into which the LGU

has exercised its political authority will most likely lead these vigilant respondents to a sense of powerlessness or even a "sulking attitude".

Individuals/Organizations Perceived as Most Responsible in Solving Environmental Problems. Both "doers" and "non-doers" primarily perceived that the solution of environmental problems must be a concerted effort of the "LGU and the Barangay Officials" - or by "barangay officials" themselves. The "non-doers" on the other hand, reported that NGO' must be responsible - specifically KAPWA Upliftment Foundation, Inc. which was reported by those respondents from the upland as being very active in the introduction of various projects that will help the community residents become more active in the protection and management of the environment.

Location-wise, both coastal and upland based respondents cited the NGO as being responsible in solving environmental problems. The same trend holds true for the males and females.

Environmental Projects Implemented in the Survey Sites, Implementing Agencies, and its Effects to the Day-to-day Living of the Community Residents. When asked on their knowledge on environmental projects implemented in their locality, the respondents were observed to have difficulties in giving outright responses. After some probing questions, however, some were able to identify a number of projects. Most of them likewise had difficulties in identifying the specific dates these projects were implemented. Projects implemented before and after 1990 were reported. Some "doers" identified the "Artificial Reef" under the Coastal Resource Program of the Bureau of Fishery and Aquatic Resources; the "canal construction" by the SHIELD Project of the Institute of Primary Health Care of the Davao Medical School Foundation (DMSF) - including the "seawall", "community toilets" and "fish-landing" by the LGU. Other environmental projects known to the "doers" were the "Artificial Reef"

implemented last 1993, "mangrove plantation", the "fish sanctuary" by the LGU; and the "Green Revolution" of Ms. Imelda Marcos.

The "non-doers" likewise cited the "fish sanctuary" implemented by the LGU; the "contour farming" by the KAPWA Upliftment Foundation, Inc., and the "distribution of toilet bowls" by the SHIELD Project of the Institute of Primary Health Care of DMSF.

Successful Projects. The fish sanctuary - which was implemented by virtue of Local Ordinance 21 and launched in 1993, covering 50 hectares - was described as successful by the respondents because "*daghan na ang isda nga makita*" (more fish can be seen), "there were more 'ogapo'" (fish residing in the corral reefs), and because of "the strong implementation of the local ordinance on banning people from fishing inside the sanctuary".

The "contour farming" project implemented by the KAPWA Foundation was considered successful because KAPWA observed "regular monitoring activities of their recipients.

Failure Projects. The "provision of toilet bowls" and the "construction of canal" under the SHIELD Project of the Institute of Primary Health Care of the Davao Medical School Foundation in the late 1980s and early 1990s were reported as failures because the ground where the toilets were constructed were sandy, while the canal was never functional because of defective construction. The "Green Revolution of Imelda Marcos" of the 1970s were likewise reported as a failure because it was never really implemented.

Worldview of Environment

The worldview of the respondents of the environment was established by asking them about man/woman's relationship to the environment. Findings showed that some "doers" believed that man/woman and the environment were frequently at cross-purposes resulting in man/woman's utilization of their environment. This is clearly described in this statement:

Ang relasyon sa tao sa kinaiyahan mao ang sigi og away, tungod kay kung tag-as na ang kahoy, putlon man dayon sa tao; ang mga tag - iya sa trawlers sigig makigsinumbagay sa mga namuyo sa dagat. (Man/woman has always worked against the environment. For example, once the trees in the forest are already big, people cut them down; in the case of trawl-owners, they have always destroyed marine life.)

In this context, some "doers" were quick in concluding that man/woman and the environment should be friends so that what God has given them will not be destroyed:

Dapat mag-amigohay ang tao ug ang kinaiyahan haron dili maguba ang gipahuram sa Ginoo nga kinaiyahan sa atoa. Dili unta ta mohatag og 'hazardis' ngadto sa kinaiyahan nga gipahuram sa atoa sa atong Ginoo. (Man/woman and environment should be friends so that the environment that was given by God should not be destroyed. Let us not introduce activities which are hazardous to the environment which has only been lent by God to us.)

Some “doers” further cited that the protection of the environment results in a return to “cooler climate” (*Ang pag-amping sa kinaiyahan, maoy makapabalik sa kabugnaw sa atong klima*).

Still, others expressed fears regarding the results of man/woman’s failure to protect the environment such as “drought and famine” and the effects it will have on people’s livelihood:

Kon dili ampingan ang kinaiyahan, adunay hulaw og kagutom.....dako ang mawala sa atoa kay ang kinaiyahan ra man ang atong gisaligan nga atong kakuhaan sa atong panginabuhian. (If the environment will not be protected, drought and famine will occur... We will be at the losing end for we are solely dependent on the environment for our livelihood.)

Other views shared by the “doers” were:

Ang atong pag-amping sa atong kinaiyahan, pag-amping usab sa atong panginabuhian (Our protection of the environment also our protection for our livelihood.)

Ang atong pag-amping sa kinaiyahan, pag-amping usab sa kaugmaon sa atong mga anak. (Our protection of the environment is also our protection of the future of our children.)

Kon mapreserbar ang atong kinaiyahan, permanente nga adunay pangita ang mga tao. (If the environment will be preserved, the people will have a permanent source of income.)

Messages

The "non-doers", shared similar views on the environment as follows:

Kon dili ampingan ang kalibutan, maapektuhan ang mga tao. (If the environment will not be protected, it will affect the people.)

Ang tao nabuhi gumikan sa kinaiyahan. (People live because of the environment.)

Ang kinaiyahan mao ang kakuhaan sa panginabuhì sa tao. (The environment is the source of livelihood of the people.)

Ang tao dili mabuhì kon wala ang kadagatan/kabukiran. (People will not live without the sea/forest.)

Ang kinaiyahan atong ampingan aron naa tay panginabuhian. (Let us protect the environment so that we will have a source of livelihood.)

Ang tao nagsalig sa kabukiran/kadagatan, kinahanglan mag-uma/mangisda aron mabuhì. (People are dependent on the sea and forest; people should farm/fish to live.)

Ang tao mabuhì man sa dagat kon naay kinitaan, pero kon wala tay kinitaan tungod kay gamay na ang isda, dili pod ta mabuhì. (Man lives if he earns income from the sea, but if we cannot due to limited fish supply, he will not live.)

Dili lang ta ang nagpuyo sa kalibutan busa atong ampingan ang atong kinaiyahan kay kon dapatan ta sa mga diwata wala tay mabuhat. (We are not the only ones living in this world; therefore we should protect our environment

Kon maglakaw pagpanagat, magdala og niluto nga karneng baboy nga wala gi-asiman. Kaunon kini sa tunga sa dagat aron modaghan ang dakop nga isda. (When going on a fishing trip, bring salt-free cooked pork. Eat this in the middle of the sea to ensure an abundant fish catch.)

Una molakaw para managat, magpadugo una aron naay daghang makuha nga isda. Kung walay makuha, mobalik ngadto sa pampang sa dagat unya usabon ang pagpadugo. (Before going out to fish, sprinkle the fishing boat with blood for a bountiful catch. Repeat this process if you failed to catch anything.)

Also, it is interesting to note that beliefs and practices were observed not only to ensure a good catch, but likewise - as in the case of some “doers” - as one strategy to protect the fishermen from any harm or any untoward events while fishing.

Dayon larga pagpanagat, magpa-aso og kamanyan aron walay kakulian nga mahitabo panahon sa pagpanagat. (Before leaving on a fishing trip, prepare an offering of burnt herbs to protect you from harm while fishing.)

Other than focusing themselves on fishing-related beliefs and practices, some “doers” shared their beliefs and practices regarding one’s relationship with upland resources, particularly the big trees and the “balete” trees. They associated “big trees” and “balete trees” with the possible punishment or illnesses that the spirits residing in it will most likely inflict on the people:

Ayaw pagpamutol og mga dagkong kahoy kay adunay engkanto nga nagpuyo. Basin silutan ta kon ato kining hulabtan.

because if the spirits will retaliate we cannot do anything about it.)

Atong ampingan ang kinaiyahan para sa mga mosunod nato. (Let us protect the environment for the future generations.)

Generally, the worldviews of both “doers” and “non-doers” on the environment seem to revolve around the economic benefits that one derives from environmental protection and management activities.

Beliefs and Practices

Based on their worldview of the environment, the participants were further asked about their beliefs and practices regarding the environment. Generally, the beliefs and practices were governed by the values placed on the concept of a “good fish catch/harvest”.

The “doers” observed that these beliefs and practices were mechanisms to appease the gods of nature and thus provide for a good catch or harvest. This can be gleaned from the following beliefs and practices:

Sa primerong pagbiyahi sa pagpanagat, dad-on ang bangka kauban ang baboy nga buhi sa lawod, ihawon ang baboy, unya patuloan og dugo sa baboy ang bangka. Kini isip usa ka palihi aron daghan ang madakpan nga isda. (For one going on his first fishing trip, bring the fishing boat and one pig out to sea. Kill the pig and let its blood drip on the boat. This is one custom observed to ensure an abundant fish catch.)

(Do not cut (or disturb) the big trees for there are fairies living in them. They might punish us if we disturb them.)

Ayaw hilabti ang mga balete kay adunay nagpuyo nga mga dili ingon nato. Kon ato kining hilabtan basin kini ang hinugdan sa atong mga sakit, unya mamatay kita. (Do not disturb balete trees for there are spirits living in them. If we disturb them, illnesses might befall us and cause our death.)

The “non-doers” likewise shared similar beliefs and practices cited by the “doers” (i.e. abundant fish catch if pigs’ blood are sprinkled in the canoe). However, other beliefs and practices relative to fishing were shared, e.g. “if the fishing boat is new, sprinkle it with the pig’s blood in the middle of the sea” (*Kon bag-o ang bangka, magdala og baboy ngadto sa tunga sa dagat, ihawon kini og paduguan ang bangka aron modaghan ang makuha nga isda*), “Do not fish if there are strong wind, for it is dangerous and there will be no fish to catch”, “Do not go out to fish on a full moon for there will be zero or lesser fish to catch”.

One “non-doer”, likewise, described an alternative practice for an abundant fish catch, i.e. (specifically for Muslims since pigs are taboo):

Patapukon ang mga bata og magpailog og mga kendi sa mga pukot. (Gather the children together and shower the fish nets with candies for children to pick.)

Some “non-doers” further shared their beliefs and practices relative to farm production. For one to have good farm harvest, one should “offer food to the agricultural deities before planting” and as thanksgiving for the harvest (low or high produce) received from the use of the land. One “non-doer” mentioned one practice of keeping “the farm always clean, therefore, trees around it should be cut”.

While the coastal-based respondents shared the beliefs and practices on environment focusing mainly on a bountiful fish catch, those in the uplands stressed the need to thank the agricultural deities for the harvest (whether high or low) received from the land and the need for good harvests.

Though both males and females commonly cited the need to sprinkle the fishing boat with blood for a good catch or harvest, the females further cited their fears about disturbing the spirits residing in the big trees and "balete" trees. The males, added that the farm should always be clean, with all trees around it cut.

All those who shared these customs and beliefs observed and practiced them, particularly the older members of the communities (with the young ones not practicing these beliefs today).

Knowledge and Enforcement of Environmental Policies/Laws

This section of the research work presents the respondents' knowledge of the local environmental ordinances enacted by the local council; the community members' reception of the enacted local ordinances, the LGU's response to the community's response, and the community's counteraction; the manner these local ordinances were enforced, the responsible agencies and their effectiveness; whether the LGU, community members, NGOs, POs, Civic/Religious Groups, private business sector and schools are active in enforcing local environmental ordinances; barriers faced by the sectors regarding the enforcement of local ordinances; and the knowledge of any existing laws or policies that run counter to sound environmental management.

Local Environmental Ordinances Passed by the Local Government Unit. The Municipality of Malalag has enacted and passed Local Ordinances # 21 banning use of illegal fishing gears and # 27 establishing the fish sanctuary. To establish the

knowledge of the respondents on these local ordinances, they were asked to enumerate the local ordinances made known to them. Research results showed that most “doers” and “non-doers” know about these local ordinances, with some “doers” reporting the local ordinance that bans the cutting of trees, anti-littering ordinances, and the aerial spraying of the banana plantation.

The responses showed that while the coastal respondents focused more on the anti-illegal fishing ordinance, the upland-based respondents mainly stressed the anti-cutting of trees ordinance.

Reception of the Community Members of the Local Ordinances Passed by the Local Government Unit. Survey results indicated that the local ordinances were generally accepted by the community. However, some “doers” noted the initial negative reactions of the community to the establishment of the fish sanctuary considering its immediate effect on the livelihood of the fishermen (dili na kapanagat - cannot fish anymore). Such reactions were however, minimized given the barangay-level meetings conducted by the LGU with the people. Furthermore, some “doers” observed that the local ordinances were “okey for those who believed in it but a problem to the new residents”. This was verified based on the arrests made by the LGU of the violators of the local ordinances. The families of the arrested individuals subsequently filed a case against the LGU in court.

The “non-doers”, on the other hand, reported that some “approved of the local ordinances”, with others noting that these local ordinances were not observed (wala gihimo). Some others believed that some of the community members “accepted the local ordinances but did not follow them”. They attributed this situation to the failure of the people to inform themselves about the local ordinances. They strongly expressed

their resistance against the fish sanctuary as they were not allowed to fish anymore inside the sanctuary thus, saying:

Kung ang fish sanctuary para sa mga tao, nganong dili man mi pasudlon, basin naa silay ginataguan nga dili nila gusto nga among makita ug usa pa basin kana para lang sa ilang kaayuhan (If the fish sanctuary is for the people, why will they not allow us to enter the sanctuary? Maybe they are hiding something there and maybe the fish sanctuary is only for their own interests)

The coastal-based respondents observed that the local ordinances particularly those related to the fish sanctuary were initially received with resistance by the community residents as it will affect their source of livelihood.

All the participants from the upland community aptly described the reception of the community members as “nidawat pero wala gituman” (The community residents accepted the local ordinances but did not do anything about it).

Enforcement of Local Ordinances, Enforcing Agencies and their Effectiveness.

Various processes were observed by the respondents in enforcing the local ordinances. The “doers” cited the “strict implementation of the ordinance on fish sanctuary”, “the arrests made by the LGU of those using illegal fishing gears”. “The barangay captain arresting the violators of fishery laws”, and “warning the people in the uplands regarding the cutting of trees” - including the “organization of women into ‘selda’ (cells) to implement the cleanliness program”. Some “doers” reported the “lax implementation of the anti-littering law”.

The “non-doers”, on the other hand, observed that the “Mayor regularly inspected the public market for fish sold having the telltale signs of dynamic fishing”,

“that many were apprehended and imprisoned” and that “the police force was reported as lax in implementing the local ordinances”.

The coastal-based respondents observed that the local ordinance on fish sanctuary was strictly enforced with some reporting the lax implementation of the local ordinance on anti-littering. The Office of the Mayor was likewise observed as “regularly visiting the public market inspecting the fish offered for sale to determine whether these were caught through dynamite fishing”, resulting in apprehensions among fish vendors selling fish caught by dynamite-using fishermen”. Fish vendors thus avoided such sources. They further cited that the local ordinances were enforced, with the “LGU arresting fishermen using illegal means”, and the Barangay Captain arresting violators of local ordinances”. The zealotness of the enforcers of local ordinances were further emphasized, e.g. “many were arrested and imprisoned” and there were “lesser number of fishermen involved in illegal fishing activities”. Also, they observed that the local ordinances on cleanliness was enforced through the organization of women into “seldas” (cells).

The upland-dweller respondents, on the other hand, observed the enforcement of local ordinances as mainly through information-dissemination strategies, i.e. the barangay official merely informed the residents on the existence of the local ordinance prohibiting the cutting of trees. They stressed, however, that the local officials “never mentioned the status of the enforcement of such local ordinances. Some others observed that they learned about the local ordinances from an NGO (KAPWA).

While the males observed the “strict implementation of the ordinance on fish sanctuary”, and the “information dissemination activities prohibiting the cutting of trees”, including the “loose implementation of the anti-littering law”, the females cited the arrests made of violators of the local ordinances by the barangay captain” and by

the LGU", the "visits conducted by the Office of the Mayor in the public market to inspect fish caught through dynamite fishing - including the cleanliness program through women "seldas".

These local ordinances were observed by the "doers" as enforced by BFAR, LGU and barangay captains, with the "non-doers" citing the "police", "Office of the Mayor", "Barangay Captain", and women "seldas", "barangay officials" and "barangay officials and residents".

Both males and females cited the enforcement of local ordinances was a responsibility of the barangay officials. Some males cited the LGU, BFAR and police while some females mentioned the Office of the Mayor, barangay captain and women's groups.

In terms of the effectiveness of the enforcement of local ordinances, "doers" reported the BFAR and LGU as effective in enforcing of local ordinances resulting to lesser cases of illegal fishing and dynamite fishing, and the women's groups in cleanliness program given the fines they imposed on violators. Some, however, claimed the opposite, i.e. that the LGU has loosely implemented the anti-littering ordinances that barangay officials were inactive in prohibiting the cutting of trees, or that enforcement was limited only to information dissemination of local ordinances. Similarly, the "non-doers" reported the Office of the Mayor as effective in minimizing dynamite fishing since it regularly visits the public market for illegally-caught fish, the lax implementation of the police of the local ordinances and the absence of regular monitoring by barangay officials of the observance of the ordinances prohibiting tree-cutting.

Whether or Not the LGU, Community Members, NGOs, POs, Religious Groups and Schools in Enforcing Local Environmental Ordinances. Some “doers” rated the LGU, community members, NGOs, POs and schools as active in enforcing local ordinances. Similar groups were rated by the some “non-doers” as active - including the religious groups. Both “doers” and “non-doers” rated the private business sector as inactive in the enforcement of local environmental ordinances.

Location-wise, some coastal-based respondents rated the LGU, POs, community members and religious as active in enforcing local ordinances, with the some “non-doers” citing the LGU, community members, NGOs, POs and schools as active. The schools, NGOs and POs were rated by the some “doers” as inactive while the religious groups and POs were rated by the some “non-doers” as inactive.

Some males and females rated the LGU, community residents, NGOs, POs and schools as active in enforcing local ordinances. Some of the males, however, rated the religious groups as active in the enforcement of local ordinances.

Barriers/Obstacles Faced by the LGU, Community Residents, NGOs, POs, Religious Groups, the Private Business Sector and Schools in Enforcing Local Environmental Ordinances. While the concerned groups may at first blush, be viewed as active by the respondents in enforcing local environmental ordinances, they were likewise observed by the respondents to be threatened by many factors. Thus they were asked about the barriers these groups faced in enforcing local ordinances. Both “doers” and “non-doers” identified the “people’s lack of alternative sources of income” and the “people’s non-attendance in meetings” as two main barriers faced by the various sectors in the community in enforcing local

“doers” further cited such other barriers as the “loose implementation of the anti-littering law”, “the interventions made by politicians on individuals arrested”, the “unclear boundaries of the municipal waters”, the “continued issuance of fishing permits by the Municipality of Sta. Maria to Malalag residents”, “some people getting angry when reprimanded”, “slow farm production”, and the landless status of the people. Some “non-doers”, on the other hand, cited such barriers as the “compadre” system (i.e. the godfathers of sons or daughters of the apprehending officer were sometimes given special treatment), “the low level of education of the people” and the “absence of LGU monitoring of the enforcement of local ordinances (e.g. anti-cutting of trees in the upland).

Location-wise, some coastal and upland respondents revealed the “non-attendance in meetings” by the community members as the main barrier to the enforcement of local ordinances. Some coastal respondents further cited other barriers as the “absence of alternative livelihood sources of the people”, the “loose implementation of anti-littering law”, “intervention made by politicians on arrested individuals”, the “unclear boundaries of the municipal waters”, and the “continued issuance of fishing permits by the Municipality of Sta. Maria to Malalag residents”, “people busy in earning income” and the “non-attendance of people in meetings, and the “palakasan-system”, i.e. selective implementation of ordinances because the person is a “compadre”. Some upland respondents cited the people’s “low level of education”, “low farm production”, “absence of LGU’s monitoring system” and their being landless, as barriers relative to the enforcement of the local ordinances.

In terms of sex, some males and females revealed such barriers as the “lack of alternative sources of income” and the people’s “non-attendance to meetings or

general assemblies". Furthermore, some males cited other barriers such as the "loose implementation of anti-littering law", the "intervention made by politicians on individuals apprehended", "unclear boundaries of the municipal waters", the "*palakasan*" i.e. selective implementation of ordinances because the person concerned is a "*compadre*", people's "low level of education" and "low farm production".

Some females, on the other hand, considered the following barriers as "some people getting angry when reprimanded", "people busy in earning income", "absence of LGU's monitoring system" and their being not owners of their farms.

All respondents failed to identify policies and laws running counter to sound environmental management.

Perceived Participation In Environmental Affairs

This section presents the criteria used by the participants in classifying people as active in environmental affairs; assessment of self, LGU, NGOs/POs and community members as active in environmental affairs; and supportive/unsupportive individuals of the respondents' being active in environmental affairs.

Criteria Used in Classifying People as Active in Environmental Affairs.

The respondents shared varied behaviors as indicators in classifying people as active (or inactive) in environmental affairs. Survey results showed that some "doers" and "non-doers" consider the people as active in environmental affairs if they "obeyed the local ordinances", "are aware of the adverse effects of their activities on the environment", "have planted trees", "cooperated in environmental projects", and "organized people to do something about their environmental affairs". Some "doers" added that people can be active in environmental affairs if they "observed local

ordinances", "apprehend violators of local ordinances", "doing legally and socially acceptable behavior relative to environmental protection such as proper waste disposal of garbage", "reprimand those behaving contrary to sound environment management", "vigilant in monitoring violators of local ordinances", "are informed about their environment and the activities of their community", "inform others of what is going on in the community", and "practice what they are preaching".

The "non-doers", on the other hand, added such indicators as "being inquisitive", "being interested", and "joining activities enhancing environmental protection"

The coastal and upland-based respondents similarly cited "awareness of the adverse effects of their activities in the environment", and "organizing people to do something about their environmental problems" as reliable indicators for classifying people as active in environmental affairs. They differed from the upland dwellers, with the coastal respondents mentioning other indicators as "obeying enforced local ordinances", "practicing what they preached", "apprehending violators of local ordinances", "participate in community activities such as meetings", "informing others on what is going on in the community", "doing legally and socially acceptable behavior relative to environmental protection such as proper waste disposal", "reprimand those behaving contrary to sound environmental management", "vigilant in monitoring violators of local ordinances", and "reporting violators of local ordinances to concerned authorities".

The upland dwellers consider people as active in environmental affairs if they "plant trees", "are informed", "cooperate in environmental projects", "inquisitive", "interested", and "join the activities of KAPWA Foundation".

community”, “reporting to the barangay captain anybody violating the local ordinances”, “always attend the meetings called by the barangay captain relative to environmental protection and management”, “planted trees”, and “attend meetings organized by KAPWA Foundation”. The active “non-doers” justified their claims by citing that they “planted trees”, “*‘willing’ mobiya sa trabaho o pamilya para mo-attend sa meetings bahin sa pag-atiman sa atong kinaiyahan*” (willing to leave work or family temporarily to attend meetings on environmental protection), and “reprimand violators of local ordinances”. Those “non-doers” claiming themselves as inactive in environmental affairs gave the following explanation:

Dili kaayo aktibo pero mo-attend sa mga meetings, kon naay panahon. (Not very active but manages to attend meetings whenever possible.)

Dili kaayo kay naay gagmay pa nga mga anak. (Not so active because my children are still small.)

Dili kaayo kay busy sa pag-atiman sa akong punong.
(Not so active because I am busy attending to my fishpond.)

The findings show that some “doers” and “non-doers” used similar indicators in claiming themselves active in environmental affairs, specifically, “planting trees” and “reprimanding violators of local ordinances”.

Comparing responses of the coastal and upland respondents, the study showed that the coastal-based respondents were more active given the varied activities identified in describing themselves active in environmental affairs compared to the upland dwellers. While the upland dwellers limited themselves to “planting trees” and “attending meetings called by KAPWA Foundation”, the coastal dwellers cited multiple activities, e.g. “disposing of discarded barbecue sticks scattered in the streets properly”, “reprimanding violators of local ordinances”, “obeying the requests of the barangay

Males and females both cited the following indicators in classifying people as active (or inactive) in environmental affairs: "aware of the adverse effects of their activities on the environment", "plant trees", "participate in community activities such as meetings", and "cooperate in all environmental projects". Males differ with the females in citing additional indicators such as "practice what they preached", "apprehend violators of the local ordinances", "obey the enforced local ordinances", "being informed", "inquisitive", and "interested". The females cited other indicators as "organizing people to do something about their environmental problems", "informing others on what is going on in the community", "doing legally and socially acceptable behavior relative to environmental protection such as proper waste disposal", "reprimanding violators of local ordinances", and "being vigilant in monitoring violators of local ordinances".

Whether or Not the Respondents Consider Themselves as Active in Environmental Affairs. Other than asking the respondents about their perceived indicators in classifying an individual as active (or inactive) in environmental affairs, they were further asked to identify whether they consider themselves active (or inactive) in environmental affairs. Survey results showed that while almost all the "doers" claimed being active in environmental affairs, some "non-doers" similarly claimed that they are active in environmental affairs.

One "doers" described himself as active in environmental affairs because "collects discarded barbecue sticks in disposes them properly". Others related their being active in environmental affairs by "reprimanding violators of local ordinances", "obeying the requests of the barangay captain to clean our surroundings", "mobilizing my Muslim brothers and sisters in cleaning their surroundings", "scolding neighbors throwing their garbage anywhere", "participating in the cleanliness activities of the

captain to clean our surroundings”, “mobilizing my Muslim brothers and sisters in cleaning their surroundings”, “scolding neighbors throwing their garbage anywhere”, “participating in the cleanliness activities of the community”, “reporting to the barangay captain anybody violating the local ordinances”, “always attend the meetings called by the barangay captain relative to environmental protection and management”, and “*‘willing’ mobiya sa trabaho o pamilya para mo-attend sa meetings bahin sa pag-atiman sa atong kinaiyahan*” (willing to leave work or family to attend meetings on environmental protection). Also, some coastal respondents implied that they might be active in environmental affairs but were constrained, i.e. “being “busy”, “busy attending to the fishpond-needs”, and “having small children”.

Comparing the male-female respondents, the males mentioned limited activities in considering themselves as active in environmental affairs compared to the females. The males particularly indicated having “picked up strewn barbecue sticks in the streets”, “planted trees” and “attended meetings organized by the KAPWA Foundation”. The females, on the other hand, reported their “reprimanding violators of local ordinances”, “obeying the requests of the barangay captain to clean our surroundings”, “mobilizing my Muslim brothers and sisters in cleaning their surroundings”, “scolding neighbors throwing their garbage anywhere”, “participating in the cleanliness activities of the community”, “reporting to the barangay captain anybody violating the local ordinances”, “always attend the meetings called by the barangay captain relative to environmental protection and management”, “planted trees”, and “attend meetings organized by KAPWA Foundation”, and “*‘willing’ mobiya sa trabaho o pamilya para mo-attend sa meetings bahin sa pag-atiman sa atong kinaiyahan*” (willing to leave work and family to attend meetings on environmental protection). Some of the females revealed that they could have been very active in their community’s

environmental affairs - except for "being busy", "being busy attending to the fishpond-needs", and their "having small children".

Whether or not the LGU was Perceived by the Respondents as Active in Environmental Affairs. Being the lead agency in any development activity in the community, the respondents were asked to rate whether the LGU was active (or inactive) in the environmental affairs of their community. Research findings revealed that the majority of the "doer"-respondents perceived their LGU as active in environmental affairs, with only a few "non-doers" believing so. Some "doers" and "non-doers" similarly reported the LGU as having "organized the Barangay Advisory Team on Environment (BATE)" and "encouraged community members to sweep their surroundings". The LGU was further observed by the "doers" as active in environmental affairs given the "barangay officials informing the community members on environment-related activities through the community assemblies (pulong-pulong)", "conducted 'purok' (community) visits to check the cleanliness of the surroundings", and "implemented tree-planting activities". The "non-doers" did not give any other indicators.

All the coastal respondents reported their LGU as active in the community's environmental affairs, with only a few upland dwellers similarly reporting the LGU as active in environmental affairs. The coastal respondents observed that the LGU's being active in environmental affairs as shown in their "organizing of Barangay Advisory Team on Environment (BATE)" and "encouraging community members to sweep their surroundings". Upland dwellers on the other hand, cited the LGU's "implementation of tree-planting activities" and the "barangay officials informing the community members on environment-related activities through the community assemblies

(“pulong-pulong”). Social upland-dwellers indicated that in the “absence of monitoring activities”, the LGU is inactive in environmental affairs.

The males who perceived the LGU as active in environmental affairs noted that the “barangay officials informed the community members on environment-related activities through the community assemblies (‘pulong-pulong’)” and that the LGU “implemented tree-planting activities”. The females, on the other hand, observed that the LGU “organized the Barangay Advisory Team on Environment (BATE)”, “encouraged community members to sweep their surroundings”, “conducted purok visits to check the cleanliness of the surroundings”, and “implemented tree-planting activities”. Those females claiming the LGU as inactive in environmental affairs claimed that the LGU did not conduct monitoring activities.

Whether the NGOs/POs Were Perceived as Active in Environmental Affairs. The survey results showed that only a few respondents reported that the NGOs/POs as active in environmental affairs. Those “doers” claiming the NGOs/POs as active in environmental affairs cited the latter’s activities, e.g. “teaching the community residents on environmental protection activities such as contour farming”, and noting the strong presence of the NGOs/POs in training the community on contour-farming”, expressed as “pirmi sila diri mag-edukar bahin sa ‘contour-farming’” (they are always here educating community members on contour farming). The “non-doers” claiming the NGOs/POs as active noted their strong presence in the community given their education program on ‘contour-farming’” and “promotion of organic farming”.

When the responses of the coastal and upland respondents were compared, the results showed that the coastal respondents noted the absence of NGOs in their community, with the upland respondents reporting that the NGOs are active in their

community, i.e. “teaching the community residents on environmental protection activities such as ‘contour-farming’”, noting the strong presence of the NGOs/POs in their community giving education on contour-farming, expressed as “pirmi sila diri mag-edukar bahin sa ‘contour-farming’” (they are always here educating community members on contour-farming) and the “promotion of organic farming.

Whether or Not the Community Members were Perceived by the Respondents as Active in Environmental Affairs. Are the community residents also active in your community environmental affairs? Some “doers” claimed that the community members are active in environmental affairs, as evidenced by their “reports of violators of the local ordinances to the authorities”. Some “doers” reported that the community residents may be active in environmental affairs but are still constrained by their being non-landowners:

Dili kaayo aktibo kay sarilista ra man mi. Kasagaran sa tag-iya sa yuta dili mosugot nga magtanom mi ug mga kahoy sama sa manga kay mga permanente man daw kini nga mga kahoy. (Not so active because we are just tenants. Most of the land-owners will not allow us to plant trees such as mangoes for these are permanent trees.)

Dili motambong sa mga meeting. (Do not attend the meetings.)

It is interesting to note that none of the “non-doers” believed that the community members were active in environmental affairs.

Among the coastal respondents, they observed the community residents as “reporting the violators of local ordinances to the authorities”, with the upland respondents mentioning their constraints in being active in environmental affairs. The

constraint was related to their tenants-status, i.e. not owning any piece of land. This way be explained by their remark that "if only they have their own land, they can do all environmental protection activities that they can think of". Some upland dwellers likewise noted that people are inactive because they do not attend meetings.

Some males and females claimed that the community residents were active in environmental affairs because they "reported violators of local ordinances". Likewise, some males and females noted that being tenants, the community residents tended to be inactive in environmental affairs.

Individuals Who Encouraged (or Discouraged) the Respondents to be Active in Environmental Affairs. After establishing whether or not the various partners of development are active in environmental affairs, the respondents were asked about the individuals who encouraged (or discouraged) them to be active on environmental affairs. Some "doers" and "non-doers" reported that the "barangay captain and his wife" and KAPWA encouraged the respondents to be active in environmental affairs. Some "doers" added that "*ang ubang kagawad sa barangay*" (some of the barangay councilors), and "active members of the community" encouraged them to be active in environmental affairs, with some of the "non-doers" citing the "members of the local barangay council" and one popular-female president of their 'purok' (community)".

For some coastal and upland dwellers, the female purok-president appeared to be influential in their decision to be actively involved in community environmental affairs. Some coastal respondents indicated that they were encouraged by the "barangay captain and his wife", "some of the barangay councilors", "some active women community members", and "members of the barangay council". Some upland respondents mentioned the KAPWA Foundation as influencing their being active on environmental affairs.

What about those discouraging the community members to be active in environmental affairs? In response, some "doers" reported the "inactive neighbors who claimed that the KAPWA Foundation is a communist front" so as to reduce their interest and participation in environmental protection including the "owners of their house lots" who forbade them to construct toilets. (In turn, these concerned respondents claimed having confronted these individuals and discussed dangers of being inactive in environmental affairs). Some "non-doers" reported that the "land-owners" discouraged them from being active in environmental affairs, including the natives who continuously practiced "swidden farming".

Some coastal and upland respondents reported that their being "landless" is one factor for their being in environmental affairs.

While the males considered the land-owners, i.e. (where their house lots are located and where they are farming), and the natives' "slash-and-burn farming practices as barriers in their being active in environmental affairs, the females were more concerned about the "inactive neighbors circulating stories that the KAPWA Foundation is a communist front (Ang KAPWA usa ka '666').

Perceived Benefits and Barriers

Perceived benefits include the gains that the people may get from being either active or inactive in environmental affairs while perceived barriers refer to the disadvantages that people may likewise get from being either active or not active in environmental affairs.

Benefits People Gain From Being Active in Environmental Affairs. An individual tends to be active in an activity on the basis of the possible rewards that such an individual may receive from such an involvement. In this context, the respondents were asked to identify the benefits they gained from being active in environmental affairs. Research findings revealed that some “doers” and “non-doers” reported such benefits as the “increased knowledge on environmental protection and management”, “increased income”, and the “restoration of soil fertility that results to a high-yielding farm”. The “doers” added such benefits as *“mobalik na ang gidaghanon sa isda”* (there will be an increased supply of fish), with the “non-doers” citing the possibility of “being recognized”, and *“dili na magbaha”* (there will be no more floods).

The coastal and upland respondents mentioned various benefits derived from being active in environmental affairs. Coastal respondents indicated the “increased knowledge on environmental protection and management”, *“mobalik na ang gidaghanon sa isda”* (the increasing supply of fish), and the sense of “being recognized”. Meanwhile upland dwellers cited the following benefits: *“motaas ang income”* (income will increase) given the “high farm-yield” (*“dako nga abot sa panguma”*), brought about by the *“pagbalik sa katambok sa yuta”* (restoration of the fertility of the soil). Also, some upland respondents noted that floods will no longer occur (*“dili na magbaha”*).

Some males and females cited the “increase in income” as one possible benefit from being active in environmental affairs. Some males enumerated that being active in environmental affairs may result in flood-free communities (*“dili na magbaha”*) and *“mobalik na ang gidaghanon sa mga isda”* (the increasing fish).

All the respondents - "doers", "non-doers", coastal, upland, male and females alike - claimed that of their being active in environmental affairs will eventually result in "increase in household income".

Disadvantages of Being Active in Environmental Affairs. The respondents found difficulty in responding to questions on the dis-incentives that one may get from being active in environmental affairs. This explains why only a few answered to this question. Some "doers" and "non-doers" who did cited the possible "reprisals" or "pressures" one can get from being active in environmental affairs. Some "doers" also cited the tendency *"nga mapabayaang ang panimalay nga maoy hinungdan sa pag-away sa mga magtiayon"* (possible neglect of domestic task resulting in husband-wife disputes). Likewise, some "non-doers" confirmed this by saying *"masuko ang bana kay dili maatiman ang bana"* (the husband will get angry because he will not be attended to), *"away sa misis kay langan-langan daw"* (wife arguing with the husband believing that environmental protection is just a waste of one's time), and "not being informed".

For some coastal respondents, the disadvantages of being active can be felt when one experience "reprisals" and when the "husband gets angry for being neglected", with some upland dwellers saying *"mapabayaang ang panimalay nga maoy hinungdan sa away"* (the home will be neglected resulting in quarrels between the husband and wife), "wife quarreling the husband believing that the husband is simply wasting his time", and not "being informed".

For the males, they feared "marital disputes since their wives believes the husbands are just wasting their time". Females on the other hand, feared "reprisals", the "husband getting angry because he is neglected", "the home will be neglected resulting in the husband-and- wife disputes", and not "being informed".

Advantages of Being Inactive in Environmental Affairs. The respondents were likewise asked about the advantages that people can get from being inactive in environmental affairs. The respondents found question difficult to answer, as evidenced by only one group responding to the question, i.e. female upland “doers”. They explained that one avoids getting into any quarrel when one is active in environmental affairs.

Disadvantages of Being Inactive in Environmental Affairs. Aside from establishing the advantages of being inactive in environmental affairs, the respondents were further asked to indicate the disadvantages of being inactive in environmental affairs. Among some “doers” and “non-doers” one disadvantage of being inactive is “not being informed”. Other disadvantages shared by the “doers” include “no additional knowledge gained relative to environmental affairs”, “*pagpadayon sa pagpahimulos sa kabukiran*” (continued abuse of the forest) and “*maglisod sa panginabuhì*” (will experienced economic crisis). The “non-doers” described the disadvantages that a person may get from being inactive in environmental affairs in the following manner:

“Samot kaguba ang kinaiyahan” (Further deterioration of the environment)

“Walay income” (No income)

“Walay nahibaloan bahin sa pag-amping sa kinaiyahan” (No knowledge on environmental protection)

“Daot nga kinabuhì” (Their life will be in crisis.)

The coastal respondents vary with the upland respondents in identifying the disadvantages one may get from being inactive in environmental affairs. While the coastal respondents cited only two answers, i.e. “having an economically depressed

life" and "being not informed about environmental affairs", the upland dwellers cited the following: "no knowledge on environmental protection", "continued abuse of the forest", "continued deterioration of the forest", "less income" and "*mosamot ka pobre*" (worsening poverty).

Some males and females considered that "not being informed" is the disadvantage in being inactive in environmental affairs.

Provision of Time, Money and Materials in Involvement with Environmental Affairs. When asked about providing their time, money and materials in environmental affairs, the respondents were observed to answer the question with difficulty. One upland female "doer" reported having provided time, some money and materials in environmental affairs, including the support provided by the husband. Likewise, one upland male "non-doer" claimed having provided time, money and materials, however, often quarreled by the wife given the longer time spent outside the house.

Trusted Individuals As Source of Information About Environment. When asked about the trusted individuals being sources of information on environment, the respondents provided various single-responses. Some "doers" and "non-doers" identified the "barangay captain" as one to be trusted in providing information on the environment. Some "doers" identified "Mr. Juan Forras Pala Jr." and the "Department of Environment and Natural Resources" as credible sources of information on the environment, with some "non-doers" citing the KAPWA Foundation.

Comparing the location of the respondents, it is interesting to note that the upland dwellers identified noted the KAPWA Foundation as a credible information-source on environment. The coastal respondents, cited the barangay captain, DENR and Mr. Juan Forras Pala, Jr.

Some males trusted a Davao-based radio commentator (Mr. Juan Porras Pala, Jr.), a government agency (Department of Environment and Natural Resources (DENR), and an NGO (KAPWA Foundation) as sources of information about the environment, with the females heavily relying on the "barangay captain".

Skills and Other Support

This section deals with the skills needed by the community members to be active in environmental affairs, the technology and services people need to be more active and the perceived rating on the extent to which the pre-identified factors influence people to be actively involved in environmental protection and management.

Skills Needed to Enable Community Members Become Active in Environmental Protection and Management. When asked about the skills needed to enable community members become active in environmental protection and management, the respondents had difficulty identifying other skills-except those related to livelihood. Some "doers and "non-doers" suggested skills for alternative sources of livelihood such as nipa production, for mat weaving, dressmaking and food processing. The "non-doers" mentioned other skills needed such as the "proper way of planting trees", "communication skills, specifically on how to let people understand a project", and skills on environmental protection and management..

Interesting findings can be observed in comparing the coastal and upland respondents. While most the coastal respondents focused on skills for alternative livelihood, the upland-dwellers identified as "communication skills", "how to plant trees properly", and "livelihood skills". Some "doers" mentioned that skills on environmental protection and management are needed by community residents to be active in environmental protection and management.

Both males and females suggested skills on alternative livelihood, and "environmental protection and management". Some males identified skills on "planting trees properly", while some of the females mentioned, "communication skills were" being needed by community residents.

Technology and Support Services Do People Need to be More Active in Environmental Protection and Management. Most of the technology and support services perceived as needed to encourage people to be more active in environmental matters were related to livelihood to wit: "livelihood as hog raising, growing bakhaw for wives to weave mats", "financial support to livelihood projects", "training on how to improve livelihood", "technology on how to increase income" and "goat dispersal program", including "support to coop members and provision of seedlings for tree planting".

The "doers" expressed the need of the people for technology and support services such as financial support for their livelihood activities as in "mat-weaving", "dressmaking", "food-processing", "goat-dispersal" and finding alternative sources of income. The "non-doers", on the other hand, expressed the need for support in the "repair of the seawall", "how to increase income", "alternative sources of income", and "seedlings" for tree-planting activities.

In terms of location, both the coastal and upland respondents, do not differ much in terms of the technology and services needed for the community members to be active in environmental protection and management. The same observation applies for the male-female categories.

Rating on the Extent Into which the Pre-identified Factors Enable People to Get Actively Involved in Environmental Protection and Management. When asked to rate the extent to which the pre-identified factors enable people to get actively involved in

environmental protection and management, the results showed that both “doers” and “non-doers” rated the “understanding of environmental problems” and the “enforcement of environmental ordinances” as crucial in enabling people to be involved with environmental protection and management. The “doers” however added that the “existence of environmental ordinances” and “increased family income” were likewise crucial in influencing people to get involved with environmental protection and management.

Comparing coastal and upland respondents, both of them claimed that “understanding of environmental problems” was crucial, with the coastal respondents likewise citing “LGU support” as crucial. The upland respondents further added that the “existence of environmental ordinances “ and “enforcement of environmental ordinances” were similarly crucial.

It is interesting to note that males failed to indicate any of the pre-identified factors as crucial in influencing people to get involved with environmental protection and management. The females, indicated the following as crucial in influencing people to get involve in environmental protection and management: “understanding of environmental problems”, “existence of environmental ordinances”, enforcement of environmental ordinances”, maintenance of smooth interpersonal relationship” and increased family income”.

Also, the “traditional folk beliefs were considered “helpful” by the “non-doers”, “coastal residents”, and females in influencing people to get actively involved in environmental protection and management. Furthermore, the coastal residents considered “values, beliefs and practices” as helpful.

Views on the Sanctuary

The views on the sanctuary by the participants were established by reviewing their knowledge on the purpose, size, and date of inception of the fish sanctuary, visits made of the fish sanctuary and their personal opinions about it, local ordinances enforced relative to the fish sanctuary, enforcement of local ordinances, the barriers encountered in the enforcement of local ordinances, proposed development plans that will be implemented in the locality and its effects on the environment and fish sanctuary, information needed to acquire relative to the development plans, and the preferred person(s) or group of persons to provide the needed information about the development plans.

This section includes not only the "doers" views of the sanctuary, but likewise include those of the "non-doers". All these respondents reside in the "doer" municipality.

Purpose of the Fish Sanctuary. Some of the "doers" and "non-doers" reported that the fish sanctuary was a "breeding place for fish" and "established to help increase the fish supply". Some "doers" further cited it to be "a habitat of fish".

The coastal respondents indicated that the fish sanctuary was established as a "habitat for the fish", a "breeding ground for fish", and as "an area for fish to grow and increase the fish supply that will later be available for fishing". The upland respondents likewise reported that the fish sanctuary will serve as a "fish habitat" and was "established to help increase the supply of fish".

Males mainly described the fish sanctuary as a "fish habitat", with the females citing other purposes such as a "breeding ground for fish", "to nurture the fries and contribute to the "increases in the fish supply".

Establishment of the Fish Sanctuary. The respondents were ambiguous on the actual data the sanctuary was established with the "doers" citing the period between 1992 and 1993 and the "non-doers" mentioning 1995.

The coastal respondents reported 1992 to 1995 as the period the fish sanctuary was established, while the upland dwellers gave no specific dates.

While the males mentioned 1992 to 1995 as the probable dates the fish sanctuary was established, the females failed to give any specific dates.

As indicated in Local Ordinance 27, the fish sanctuary was established in 1993.

Actual Visits of the Fish Sanctuary. The actual visits to the fish sanctuary were made by some coastal male "doers". None the "non-doers" have ever visited the sanctuary because of the ordinance that bans illegal entry to the fish sanctuary. Those who claimed having visited the fish sanctuary were usually the coastal residents and males. This shows that none of the upland dwellers (both males and females, "doers" and "non-doers") - including the "non-doers" from the coastal areas - have visited the fish sanctuary.

Personal Opinion About the Fish Sanctuary. Opinions on the fish sanctuary included both those from the "doers" and "non-doers". The "doers" have the following opinions about the fish sanctuary :

Maayo ang kahimtang kay daghan na ang isda. (The fish sanctuary is good for it has more fish in it.)

Kon daghan na ang isda matabangan ta sa atong pagpanagat og daghang isda. (If there are more fish, it will help our fishing activities.)

Uyon ko sa fish sanctuary kay kini para sa kaayuhan sa tanan.
(I agree with the fish sanctuary since this is for the good of all.)

Some of the "non-doers", however, expressed that the fish sanctuary is "*maayo ra na sa mga LGU kay gibawal man ang mga gagmay nga mananagat sa pagsulod pero ang mga dagkong tao sa gobyerno wala gibawalan*. (The fish sanctuary is only good for the LGU because while the small fishermen were banned from entering the sanctuary, local government officials were not.

In terms of location, the coastal respondents observed that the situation in the fish sanctuary was improved for there are more fish seen. However, some coastal respondents appear to be indifferent, to such improvements, i.e. "the fish sanctuary being good for the LGU since the small fishermen are banned from entering the sanctuary while those in the government were not banned from it." The upland dwellers, on the other hand, were more positive - albeit from a distance - suggesting that the "present situation of the fish sanctuary is good given the increasing number of fish seen in it" and "approving of the fish sanctuary" for it is for the good of the community residents.

While the males viewed the fish sanctuary positively (e.g. "the situation of the fish sanctuary is good given the increasing number of fish seen in it" and "if the fish supply increases, it will help us"), the females were both positive and indifferent about it. Overall, they approve of the sanctuary "for it is for the good of the community residents".

Cebuano Terms for Fish Sanctuary. Asked for a Cebuano term for "fish sanctuary", the respondents gave varied responses. The "doers" referred to it as:

Fuy-anan/Puluy-anan sa isda (Fish habitat)

Itloganan sa isda aron mopondo ang similya (A fish-breeding area where the fries will not be disturbed.)

Similyahan (Breeding ground for fish.)

Itloganan sa isda (Fish-breeding areas.)

The “non-doers”, on the other hand, referred to the fish sanctuary as the “*punduhan sa isda*” (fish-haven), “*kulungan sa isda*” (cage for the fish), and “*puy-anan sa isda*” (fish habitat).

In terms of location, both the coastal and upland respondents indicated that the fish sanctuary is the “*puy-anan sa isda*” (fish habitat). The coastal respondents further claimed that the fish sanctuary is the “*itloganan sa isda aron mopondo ang similya*” (a fish breeding-area so that the fries are not disturbed), “*similyahan*” (fish-breeding site), and “*punduhan sa isda*” (a fish-haven). The “non-doers” further added that the “fish sanctuary” means “*kulungan sa isda*” (a cage for the fish).

Both males and females consider the fish sanctuary as the “*puy-anan sa isda*” (fish habitat), with the males adding that the fish sanctuary is “*itloganan sa isda aron mopondo ang similya*” (a fish-breeding area so that the fries are not disturbed), “*punduhan sa isda*” (fish-haven), and “*kulungan sa isda*” (a fish-cage). The females further shared that the fish sanctuary is the “*similyahan sa isda*” (a fish-breeding ground) and the “*itloganan sa isda*” (fish-breeding area).

Laws Passed About the Fish Sanctuary. The Municipality of Malalag has passed and enforced Local Ordinance No. 27 providing for the creation of the fish sanctuary. Some “doers” cited the specific ordinance that provided for the creation of the fish sanctuary, i.e. Number 27, and explained that in such ordinance, “no one is allowed to fish, swim and collect seashells” in the fish sanctuary. Some “non-doers”, on the other hand, mentioned other ordinances providing for “non-entry to the fish sanctuary” and “bans fishing inside it”.

In terms of location, while the upland respondents described the ordinance that bans fishing, swimming and collection of seashells inside the sanctuary, the coastal

residents mentioned the ordinance providing for the creation of the fish sanctuary, the non-entry to fish sanctuary, and banning fishing inside.

The males cited the ordinances on the creation of the fish sanctuary and that on the non-entry to the fish sanctuary, while the females mentioned the ordinance that bans fishing, swimming and collection of seashells inside the sanctuary.

Fish Size of the Sanctuary. Some "doers" indicated the exact size of the fish sanctuary (i.e. fifty hectares), with others reporting seven hectares. The "non-doers" were unsure of the exact size of the sanctuary simply saying "*dako-dako sad*" (it is large). Some coastal respondents reported the size of the fish sanctuary at fifty hectares, with others giving broad estimates - "*dako-dako sad*" (it has a large area). Some upland respondents, meanwhile, believed that the fish sanctuary covers seven hectares.

Overall, the males provided varying figures, i.e. fifty hectares, seven hectares, and even rough guesses "*dako-dako sad*" (it has a large area).

Responsible Individuals/Agency in Managing the Fish Sanctuary. As perceived by some "doers" and "non-doers", the management of the fish sanctuary is the responsibility of the "LGU". Some "doers" believed that the management of the fish sanctuary should also be handled by the "*bantay dagat*", the "fishermen themselves", "caretaker", and the "Mayor", with the "non-doers" reporting the "barangay captain" as being equally responsible for the management of the sanctuary.

For the upland respondents, the person responsible for the management of the fish sanctuary is the Mayor, with the coastal respondents citing varied groups, such as the "LGU", the "*bantay dagat*", the "fishermen themselves", the "caretaker" and the "barangay captain". The males cited similar responsible persons, with the females mentioning the mayor and the LGU.

In terms of the enforcers of the local ordinance on the fish sanctuary, the “doers” appeared to be concerned in harnessing the assistance of “non-LGU personnel”, particularly the *“bantay dagat”* and the “fishermen themselves”, while some “non-doers” indicated their dependence on the local officials (e.g. LGU and barangay officials and the LGU). The coastal respondents cited the same enforcers identified by both “doers” and “non-doers” as being responsible in enforcing the local ordinance on fish sanctuary, with the upland respondents failing to cite a single enforcer.

As observed by some “doers” and “non-doers” these enforcers appear to be effective given the “many fish seen inside the sanctuary”, with some “doers” adding that *“wala kaayo nisupak”* (lesser violations) and the “non-doers” citing the “ban on entry to the fish sanctuary”. The coastal respondents noted that there were “less violations”, “increased fish supply”, and the strong implementation of “no-entry” ordinance to the sanctuary. Sex-wise, the males believed that the enforcers were effective since there were lesser violations, and “no one can enter the sanctuary”. The females further cited the “increasing fish supply”, and the fact that “no one was allowed to enter the fish sanctuary.

Both “doers” and “non-doers” reported that people followed the ordinances relative to fish sanctuary since they “understood the purpose of the establishment of the fish sanctuary” i.e. made possible by the “continuing education on fish sanctuary organized by the barangay officials” and because of the guards around the fish sanctuary.

Both coastal and upland respondents attributed the observance of the people of the local ordinances to the presence of guards in the sanctuary, with some coastal

respondents relating it to the people's understanding of the purpose of the fish sanctuary.

The males differed from the females in explaining local compliance of the ordinances related to the fish sanctuary. The males believed that this is so because people understand the purpose of the fish sanctuary while the females related it to the presence of guards in the sanctuary - positive vs. negative (sanctions).

Barriers in the Enforcement of Ordinances Regarding the Fish Sanctuary.

Though the respondents claimed that the enforcement of ordinances relative to fish sanctuary is effective and observed by the people, they were further asked about the barriers experienced in enforcing the said ordinances. The results showed that some "doers" cited such barriers as the "people's lack of awareness on their environment", "not all being informed on the importance of the fish sanctuary", and the "failure of the people to understand the fish sanctuary". The "non-doers", on the other hand, considered the "uninformed people" as the barriers to the effective enforcement of ordinances relative to fish sanctuary. All these barriers were likewise cited by the coastal respondents, with the upland respondents failing to cite any barrier at all.

The males indicated that the barriers were the "uninformed people", the "people's lack of understanding of the fish sanctuary", and the "people's lack of awareness of the fish sanctuary". The females meanwhile, claimed that barriers will occur if "all the people were not informed on the importance of the fish sanctuary" - as likewise observed by those respondents objecting to the laudable objectives of the fish sanctuary by the LGU.

Benefits the Community Members Can Get from Having a Fish Sanctuary in the Area. As reported by some "doers" the benefits that the community members may gain from having a fish sanctuary in the area included the "increased

fish supply”, and the possible assistance that people receive when the fish supply has increased (*matabangan ta kon daghan na ang isda*). Some “non-doers” reported such barriers as “*dagko na ang isda*” (fish are now big), “*nidaghan na ang isda didto sa sanctuary*” (the fish supply in the sanctuary has already increased), and “*prestige sa taga-LGU*” (prestige for the LGU).

For the upland respondents, the benefits that the community members can get from the fish sanctuary is the assistance received with the increased fish supply “*matabangan ta kon daghan na ang isda*”. For coastal respondents, the benefits include “*dagko na ang isda*” (fish are now big), “*nidaghan na ang isda didto sa sanctuary*” (the fish supply in the sanctuary has already increased), and “*prestige sa taga LGU*” (prestige for the LGU).

The males likewise claimed that the benefits the community members will get from the sanctuary were the bigger fish “*dagko na ang isda*” and the possible assistance that people can get with an increased fish supply. The females likewise mentioned such benefits as the “increased fish supply”, “*nidaghan na ang isda didto sa sanctuary*” (the fish supply fish in the sanctuary has already increased), and “*prestige sa taga-LGU*” (prestige for the LGU).

Proposed Development Plans for the Area. Other than the questions on the sanctuary, the respondents were further asked about their knowledge of the proposed development plans in their area. Overall, the respondents know of varied proposed development plans. For some “doers”, the proposed development plans known included the “coastal resource development plan”, the “shipyard”, the “oil mills”, the “food processing plant”, and the “mango processing plant”. Some “non-doers” reported the “banana packing house”, the “oil factory”, the “port warehouses”, and the “food processing plant”. The coastal-respondents appeared to know more

proposed development plans in the area than the upland respondents: the "coastal resource development plan", the "shipyard", the "oil mills", the "banana packing house", the "oil factory", and the "port warehouses". The upland respondents cited the "mango processing plant".

The males cited such plans as the "coastal resource development plan", the "food processing plant", the "banana packing house", and the "mango processing plant", with the females specifically citing the "shipyard", the "oil mills", the "oil factory", the "port warehouses" and the "mango processing plant".

Some "doers" agreed to these development plans provided that the developers "hire people from this locality", with some disagreeing with the plans for fear of being displaced from fishing activities. Some "non-doers" agreed with the plans in the hope that their children might be employed as workers eventually - some expressed the fear that "such a situation will only happen if their children will be allowed by the owners of development to work there and if they have a "padrino" to help them obtain jobs from in these plants". Those "non-doers" disagreeing with the plans reported their fear of being displaced since the proposed site of the banana-packing houses are their current places of residence.

Do these proposed development plans have any impact in the environment in general? Some "doers" expressed their fears that these plans might affect the supply of water and thus pollute their drinking water, with some "non-doers" foreseeing "*nga patagon ang mga buntod*" (the hilly parts of the area will be bulldozed) and the "waterbeds might be drained".

The coastal respondents worry so much about the "hilly parts being levelled off", with the upland respondents worrying about their water supplies, i.e. "waterbeds will be drained", and the 'possible pollution of their drinking water".

Some males expressed the fear of “draining of the waterbeds”, with some females citing the “bulldozing of the hilly parts of the area” and the “possible water-pollution”.

What about the fish sanctuary? Will it be affected by these proposed development plans? All the respondents - both “doers”, “non-doers”, coastal, upland, males and females alike - claimed that these proposed development plans will have an impact on the fish sanctuary. For some “doers”, the impact will be on pollution *“kay ang ilang hugaw dinhi man sa dagat padulong busa mangamatay ang mga isda sa dagat....dapat ipalayo kining mga plano sa dagat”* (because their waste will go to the sea and decrease the fish supply, thus the location of the plans should be far from the sea). Some “non-doers” reported the possible impact these plans will have on the fish sanctuary, as follows: *“ilang hugaw ilabay sa dagat”* (they will throw their waste out to sea), and *“kay ang ilang hugaw naa man sa dagat busa maapektuhan ang mga kita sa mananagat kay mawala naman ang mga isda”* (because their waste will go to the sea these will affect the income of the fishermen because the fish will eventually disappear). They further proposed that the location of the plans should be further from the sea, i.e. approximately seven kilometers away.

It is interesting to note that both coastal and upland respondents expressed their fears on the possible pollution these plans will bring to the fish sanctuary (e.g. waste disposed in the sea). The males preferred that the location of the plans should be seven kilometers away from the sea, given the possible pollution that they will bring to the sea. The females similarly cited the pollution such wastes will bring to the sea, decreasing the fish supply and thus reducing the income of the fishermen.

Information Desired For Decision-Making On the Development Plans in the Area. Some "doers" and "non-doers" would like to acquire information on the "benefits that the people will receive from these development plans", with some "doers" expressing interest in knowing the "hazards that it will bring the community residents". Some "non-doers" are interested in knowing the possible "relation that the farmers will have with the development plants", and "access to credit".

It is interesting to note that the coastal respondents found it difficult to identify the information that they would like to get in making decisions about the development plans. Upland respondents, on the other hand, expressed their interest on the "benefits that the people will get from these development plans" and the "hazards that it will bring the community residents".

The males appeared to be interested in getting information on the "benefits that the people will get from these development plans", the "hazards that it will bring the community residents" and the possible relations that the farmers will have with the plans". The females preferred information relating to "access to credit".

Trusted Individuals/Organizations to Provide the Respondents Their Needed Information In Decision-Making About Development Plans. The preferred sources of information cited by the respondents vary from one group to the other. For some "doers", a basketball celebrity (Mr. Robert Jaworski), the LGU, the barangay officials, and the barangay captain were trusted in providing them the needed information relative to the proposed development plans. Some "doers" commented that the "*okey ang artista pero dili mi mosalig kay kutob ra siya sa estorya ug dili man mi kakita sa iyang buhat*" (a showbiz personality may be okey but we will not trust him or her since he/she will be limited to telling yet we cannot witness what he/she is really doing)

Some "non-doers" preferred a "woman celebrity" and the usual "rumor mills" for they are busy with their occupation.

The coastal respondents appeared to trust the "barangay captain", a "basketball celebrity" (Mr. Robert Jaworski), and a "woman celebrity" in providing the needed information on development plans, with the upland respondents trusting the "LGU", "barangay officials", "rumor mills", and "showbiz personalities".

The males cited a "basketball celebrity" (Mr. Robert Jaworski), a "female celebrity", the "LGU", and the "barangay officials" in providing the needed information, with the females likewise citing the "LGU", "barangay captain", "rumor mills", and "showbiz personalities"

SUMMARY OF FINDINGS

This section summarizes selected findings that may have bearings on the communication strategies that will be designed to encourage target audiences to become active in environmental protection and management.

A. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY "DOERS"- "NON-DOERS"

<i>Influencing Factors</i>	<i>Doers</i>				<i>Non-doers</i>			
	<i>LGU</i>	<i>OL</i>	<i>CM</i>	<i>TOTAL</i>	<i>LGU</i>	<i>OL</i>	<i>CM</i>	<i>TOTAL</i>
Values, beliefs, practices	I	I	I	I	C	I	I	I
Understanding of environmental problems	I	C	I	I	C	I	C	C
Existence of environmental laws or ordinances	C	I	C	C		I	C	C
Enforcement of environmental laws or ordinances	C	I	C	C	I	I	C	I
LGU support	C	I	I	I	I	I	I	I
Access to appropriate technology	I	I	I	I	C	I	I	I
Access to technical support services and training	I	I	I	I	C	I	I	I
Access to credit	H	H	H	H	I	I	I	I
Personal investment in terms of time, money and materials	C	I	I	I	I	I	I	I
Approval/support from family and/or influential persons	I	I	I	I	I	I	I	I
Maintenance of smooth interpersonal relationships	I	I	I	I	I	I	I	I
Increased family income	I	I	C	I	I	I	I	I
Traditional folk beliefs	I	H	I	I	I	I	H	I

Legend: *LGU* - Local Government Unit

OL - Opinion Leaders

CM - Community Members

B. FACTORS INFLUENCING PEOPLE'S INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY SEX AND SOURCES OF DATA

<i>Influencing Factors</i>	<i>Female</i>				<i>Male</i>			
	<i>LGU</i>	<i>OL</i>	<i>CM</i>	<i>Total</i>	<i>LGU</i>	<i>OL</i>	<i>CM</i>	<i>Total</i>
Values, beliefs, practices	I	I	I	I	C	I	I	I
Understanding of environmental problems	I	C	C	C	C	C	I	C
Existence of environmental laws/ordinances	C	I	C	C	C	I	I	I
Enforcement of environmental laws/ordinances	C	I	C	C	C	C	I	C
LGU support	C	I	C	C	I	C	I	C
Access to appropriate technology	I	I	I	I	I	I	I	I
Access to technical support services and training	I	I	I	I	I	C	I	I
Access to credit	I	H	I	I	I	I	I	I
Personal investment in terms of time, money and materials	I	I	I	I	I	I	I	I
Approval/support from family and/or influential persons	I	I	I	I	I	I	I	I
Maintenance of smooth interpersonal relationships	I	I	C	I	I	I	I	I
Increased family income	I	I	C	I	I	I	I	I
Traditional folk beliefs	I	H	H	H	I	H	I	I

Legend: LGU - Local Government Unit
OL - Opinion Leaders
CM - Community Members

C. FACTORS INFLUENCING PEOPLE'S INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY LOCATION AND SOURCES OF DATA

<i>Influencing Factors</i>	<i>Female</i>			<i>Male</i>		
	<i>OL</i>	<i>CM</i>	<i>Total</i>	<i>OL</i>	<i>CM</i>	<i>Total</i>
Values, beliefs, practices	I	I	I	I	H	I
Understanding of environmental problems	C	C	C	C	C	C
Existence of environmental laws/ordinances	I	C	C	I	I	I
Enforcement of environmental laws/ordinances	I	C	C	I	I	I
LGU support	I	I	I	C	C	C
Access to appropriate technology	I	I	I	I	I	I
Access to technical support services and training	I	I	I	I	I	I
Access to credit	I	I	I	H	I	I
Personal investment in terms of time, money and materials	I	I	I	I	I	I
Approval/support from family and/or influential persons	I	I	I	I	I	I
Maintenance of smooth interpersonal relationships	I	C	C	I	I	I
Increased family income	I	I	I	I	I	I
Traditional folk beliefs	I	I	I	I	H	I

Legend: *LGU - Local Government Unit*
 OL - Opinion Leaders
 CM - Community Member

D. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY DOER-NON-DOER CATEGORY AND SOURCES OF DATA AND GENDER

Influencing Factors	Doer						Non-doers					
	LGU		Opinion Leaders		Community Members		LGU		Opinion Leaders		Community Members	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Values, beliefs, practices	I	C	I	I	I	I	C	C	I	I	I	I
Understanding of environmental problems	I	I	C	C	C	I	I	C	I	C	C	C
Existence of environmental laws/ordinances	C	C	I	I	C	I	C	C	I	I	I	C
Enforcement of environmental laws/ordinances	C	C	I	C	C	I	C	C	I	I	C	C
LGU support	C	C	I	C	C	I	C	C	I	I	C	I
Access to appropriate technology	I	I	I	I	H	I	I	I	I	I	I	H
Access to technical support services and training	I	I	I	C	H	I	I	I	I	I	I	I
Access to credit	H	I	H	H	I	H	I	I	I	I	I	I
Personal investment in terms of time, money and materials	C	I	I	I	I	I	I	I	I	I	I	I
Approval/support from family and/or influential persons	I	I	I	I	I	I	I	I	I	I	I	I
Maintenance of smooth interpersonal relationships	I	I	I	I	C	I	I	I	I	I	C	I
Increased family income	I	I	I	I	C	I	I	I	I	I	I	I
Traditional folk beliefs	I	I	H	H	-	I	I	I	I	-	H	H

E. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY LOCATION AND BY SOURCES OF DATA AND GENDER

<i>Influencing Factors</i>	<i>Upland/Barangay</i>				<i>Coastal/Poblacion</i>			
	Opinion Leaders		Community Members		Opinion Leaders		Community Members	
	Women	Men	Women	Men	Women	Men	Women	Men
Values, beliefs, practices	I	I	C	I	I	I	H	I
Understanding of environmental problems	C	C	C	C	I	C	C	I
Existence of environmental laws/ordinances	I	C	C	C	I	I	C	I
Enforcement of environmental laws/ordinances	I	C	C	C	I	I	C	I
LGU support	I	I	C	H	I	C	C	I
Access to appropriate technology	I	I	I	I	I	C	I	I
Access to technical support services and training	I	I	H	I	I	I	I	I
Access to credit	I	I	H	I	H	H	I	I
Personal investment in terms of time, money and materials	I	I	I	I	I	C	I	I
Approval/support from family and/or influential persons	I	I	I	C	I	I	I	I
Maintenance of smooth interpersonal relationships	I	I	C	I	I	C	I	I
Increased family income	I	I	I	I	I	I	C	I
Traditional folk beliefs	H	H	H	I	-	I	H	I

F. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY DOER-NON-DOER CATEGORY AND BY LOCATION, SOURCES OF DATA AND GENDER

Influencing Factors	Doer								Non-doers								
	Upland				Coastal				Upland				Coastal				
	OL		CM		OL		CM		OL		CM		OL		CM		
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	
Values, beliefs, practices	I	I	C	I	I	C	H	I	I	I	I	I	I	I	I	H	H
Understanding of environmental problems	C	C	I	I	I	C	C	I	C	C	C	C	I	C	C	I	I
Existence of environmental laws/ordinances	I	I	C	I	I	C	C	I	C	C	I	I	I	I	I	I	I
Enforcement of environmental laws/ordinances	I	I	C	I	I	C	C	I	C	C	C	I	I	I	I	I	I
LGU support	I	I	C		C	C	C	I	I	C	C	I	C	I	C	I	I
Access to appropriate technology	I	I	H	H	I	C	H	I	I	C	C	I	I	I	I	H	H
Access to technical support services and training	I	C	H	I	C	C	H	I	C	I	C	I	I	I	C	I	I
Access to credit	I	I	H	I	H	H	I	I	C	I	I	I	H	I	I	H	H
Personal investment in terms of time, money and materials	C	I	I	H	I	C	I	I	I	I	I	C	I	C	I	I	I
Approval/support from family and/or influential persons	I	H	C	I	C	C	H	I	I	C	C	I	C	I	I	H	H
Maintenance of smooth interpersonal relationships	I	I	C	I	I	C	I	I	I	I	I	C	C	C	I	I	I
Increased family income	I	C	C	I	I	I	C	I	C	I	C	I	H	I	C	H	H
Traditional folk beliefs	H	H	B	I	-	I	B	I	I				-	-	H	H	H

Legend: LGU - Local Government Unit OL - Opinion Leaders CM - Community Members

G. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY URBAN-RURAL CATEGORY AND BY SOURCES OF DATA

<i>Influencing Factors</i>	<i>Urban</i>			<i>Rural</i>		
	<i>Opinion Leaders</i>	<i>Community Members</i>	<i>Total</i>	<i>Opinion Leaders</i>	<i>Community Members</i>	<i>Total</i>
Values, beliefs, practices	I	H	I	I	I	I
Understanding of environmental problems	C	C	C	C	C	C
Existence of environmental laws/ordinances	I	I	C	I	C	I
Enforcement of environmental laws/ordinances	I	I	C	I	C	I
LGU support	C	C	I	I	I	C
Access to appropriate technology	I	I	I	I	I	I
Access to technical support services and training	I	I	I	I	I	I
Access to credit	H	I	I	I	I	I
Personal investment in terms of time, money and materials	I	I	I	I	I	I
Approval/support from family and/or influential persons	I	I	I	I	I	I
Maintenance of smooth interpersonal relationships	I	I	C	I	C	I
Increased family income	I	I	I	I	I	I
Traditional folk beliefs	I	H	I	I	I	I

H. INFLUENCING FACTORS TO PEOPLE'S ACTIVE INVOLVEMENT IN ENVIRONMENTAL PROTECTION AND MANAGEMENT CLASSIFIED BY URBAN-RURAL CATEGORY AND BY SOURCES OF DATA AND GENDER

<i>Influencing Factors</i>	<i>Urban</i>				<i>Rural</i>			
	<i>Opinion Leaders</i>		<i>Community Members</i>		<i>Opinion Leaders</i>		<i>Community Members</i>	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Values, beliefs, practices	I	I	H	I	I	I	I	C
Understanding of environmental problems	I	C	C	I	C	C	C	C
Existence of environmental laws/ordinances	I	I	C	I	I	C	I	C
Enforcement of environmental laws/ordinances	I	I	C	I	I	C	C	C
LGU support	C	C	C	I	I	I	I	C
Access to appropriate technology	I	I	I	I	I	I	I	I
Access to technical support services and training	I	I	I	I	I	I	I	H
Access to credit	H	H	I	I	I	I	H	I
Personal investment in terms of time, money and materials	I	C	I	I	I	I	I	I
Approval/support from family and/or influential persons	C	I	I	I	I	I	I	C
Maintenance of smooth interpersonal relationships	I	C	I	I	I	I	C	C
Increased family income	I	I	C	I	I	I	I	C
Traditional folk beliefs	-	I	H	I	I	H	I	-

I. ACTUAL BEHAVIORS OF DOER LGU (MALALAG, DAVAO DEL SUR)

Stage 1: DECIDE TO PARTICIPATE/COMMIT

- ⇒ Discuss on the possible ordinances to pass and enforce
- ⇒ Hired environmental officer
- ⇒ Allocated Budget
- ⇒ Establish monitoring team
- ⇒ Establish fish sanctuary

Stage 2: ORGANIZE

- ⇒ Information dissemination on fish sanctuary
- ⇒ Conducted public hearings
- ⇒ Mobilize residents
- ⇒ Reactivated the Municipal Advisory Team on Environment (MATE)
- ⇒ Organized Barangay Advisory Team Environment (BATE)
- ⇒ Forged partnership with NGOs and POs
- ⇒ Coordinated and Collaborated with NGOs, POs, military and community residents regarding enforcement of fishery laws

Stage 3: PLAN

- ⇒ Passed laws
- ⇒ Prepare plans for waste management

Stage 4: IMPLEMENT

- ⇒ Implemented projects such as reforestation, artificial reefs, tree planting projects
- ⇒ Deputized barangay official as alternative to "bantay dagat"
- ⇒ Organized a task force composed of police, members of MATE, barangay officials and POs
- ⇒ Organized composite enforcement team of police, civilian volunteers and barangay officials
- ⇒ Resolve conflicts
- ⇒ Apprehended violators of local ordinance

Stage 5: MARKET

- ⇒ Collected fines from the apprehended violators of fishery laws

Stage 6: MONITOR PROCESS AND IMPACT

- ⇒ Limited monitoring

**J. ACTUAL BEHAVIORS OF COMMUNITY MEMBERS INVOLVED IN
COASTAL RESOURCE MANAGEMENT (MALALAG, DAVAO DEL SUR)**

Stage 1: DECIDE TO PARTICIPATE/COMMIT

- ⇒ Expressed the need to protect the environment (coastal and upland)
- ⇒ Informed other members to get their support on the environmental project

Stage 2: ORGANIZE

- ⇒ Accepted responsibility to protect environment
- ⇒ Coordinated with the barangay officials in apprehending violators of local ordinance

Stage 3: PLAN

- ⇒ Looked for alternative sources of livelihood

Stage 4: IMPLEMENT

- ⇒ Acted as "watchdogs"
- ⇒ Vigilant in monitoring violators of local ordinance
- ⇒ Reported violators of local ordinance
- ⇒ Reprimanded violators of local ordinance

Stage 5: MARKET

Stage 6: MONITOR PROCESS AND IMPACT

- ⇒ Discussed issues with community members

K. CHARACTERISTICS OF PERSONS ACTIVE IN ENVIRONMENTAL AFFAIRS AS IDENTIFIED BY DOERS AND NON-DOERS

<i>Qualities Identified</i>	<i>Doers</i>		<i>Non-doers</i>	
	<i>Opinion Leaders</i>	<i>Community Members</i>	<i>Opinion Leaders</i>	<i>Community Members</i>
Obeying Local Ordinances/Policies	✓	✓	✓	
Participating in all activities on Environmental Protection and Management such as tree planting, education campaigns and rallies	✓	✓	✓	
Participation in information dissemination	✓			
Aware of the adverse effects of deteriorating environment	✓	✓	✓	✓
Active participation in decision-making	✓			
Taking concrete actions	✓			
Reprimanding violators of Local Ordinances	✓	✓		
Informed	✓	✓		
Know their roles in Environmental Protection	✓			
Apprehend Violators		✓		
Vigilant monitoring and reporting of violators		✓	✓	
Has interest				✓
Cooperative in Environmental Protection and Management			✓	✓
Organize people to do something about their environmental protection		✓		
High level of awareness of the community's activities in Environmental Protection and Management	✓			
Concern about the deteriorating situation of environment	✓			
Participating in the consultation and deliberation	✓			
Monitors and reports any destruction in the environment	✓			
Participation in community dialogues				✓
United against activities causing degradation of the environment				✓
Consistent involvement in Environment Protection				✓

L. PERCEIVED BENEFITS FROM BEING ACTIVE

<i>Perceived Benefits</i>	<i>Local Government Unit</i>		<i>Opinion Leaders</i>		<i>Community Members</i>	
	<i>Doers</i>	<i>Non-doers</i>	<i>Doers</i>	<i>Non-doers</i>	<i>Doers</i>	<i>Non-doers</i>
Greener Environment		✓				
Limited calamities		✓				✓
Cooler/comfortable place		✓	✓	✓		
More development in the locality		✓				
Comfortable life (increase fish supply/high farm production)	✓		✓	✓	✓	
Upliftment of livelihood	✓					
Lesser unemployment problems	✓					
Improve economic conditions for the locality	✓		✓	✓		
Increase revenue for LGU	✓		✓			
Increase income			✓	✓	✓	
Increase knowledge on Environmental Protection and Management					✓	
Restoration of soil fertility					✓	
Being recognized						✓

M. PERCEIVED BARRIERS TO PARTICIPATION IN ENVIRONMENTAL PROTECTION AND MANAGEMENT

<i>Internal/External Barriers</i>	<i>Local Government Unit</i>	<i>Opinion Leaders</i>	<i>Community Members</i>
A. Internal Factors			
Lack of awareness of the adverse effects			✓
Lack of knowledge on the benefits of their involvement			✓
Lack of alternative sources of livelihood			✓
Lack of commitment	✓		✓
Projects implemented not within their interest			✓
Not able to wean themselves from the "dole-out system"			✓
Conflict between vested interest and welfare of the people	✓		
Limited knowledge about Local Ordinances	✓		
Fear of being hated by the apprehended individuals	✓		✓
Attitude of "livelihood first before anything else"			✓
Limited training on Environmental Protection		✓	
Lack of knowledge on Environmental Protection and Management		✓	
Lack of encouragement from the LGU		✓	
Lack of understanding of the Local Ordinances			✓
B. External Factors			
Lack of strong organization			✓
Limited funds/logistical support/technology	✓	✓	✓
Limited support staff	✓		
Leadership problems (disunited local officials, limited skills)	✓		
Lack of coordination among local officials	✓		
Negative experience in previous projects			✓
Marital disputes			✓
Limited access to technology		✓	
Migrant residents		✓	
Limited discussions/dissemination on the content of Local Ordinance		✓	
Lack of cooperation from the people		✓	
Political intervention (palakasan)		✓	✓
Unclear delineation of functions such as acting as legislators and implementors at the same time		✓	
Lax enforcement of Local Ordinances by the LGU		✓	✓
Landlessness of people		✓	
Issuance of fishing permits by a nearby Municipality	✓		
Unclear boundaries of Municipal waters	✓		
Absence of monitoring schemes	✓		

N. SKILL NEEDED OF THE LOCAL GOVERNMENT UNIT AND COMMUNITY RESIDENTS TO BE ACTIVE IN ENVIRONMENTAL PROTECTION AND MANAGEMENT

<i>Skills Needed</i>	<i>Local Government Unit</i>	<i>Community Members</i>
Ability to seek information	✓	✓
Developing political will and efficacy	✓	✓
Research skills (Environmental Impact Assessment)	✓	✓
Organizing skills (advocacy)	✓	✓
Communication skills (explaining environmental issues)	✓	✓
Establishing rapport	✓	✓
Value education	✓	✓
PIME (Planning, Implementation, Monitoring and Evaluation) skills	✓	✓
Technical knowledge on environmental laws	✓	
Use of media to educate people	✓	
Coordinating and collaborating skills	✓	
Skills on information dissemination	✓	
Technical skills on environmental protection and management	✓	
Time management	✓	
Skills related to legislation (making effective ordinances)	✓	
Technical knowledge and skills on coastal and upland management		✓
Program management skills		✓
Alternative livelihood skills		✓
IEC (development on the detrimental effects of depleted resources)		✓

O. GENDER DIFFERENCES

1. Influencing Factors:

- ⇒ Both men and women waited "crucial" the following factors; "understanding of environmental problems", "enforcement of environmental laws/ordinances" and "LGU support", with the women further rating "existence of environmental laws/ordinances" as crucial
- ⇒ Women rated "traditional folk beliefs" as "helpful" while the men rated such as "important"

2. Concept of Environment

- ⇒ Both men and women viewed the environment as economically beneficial, i.e. as source of living
- ⇒ Both men and women proposed for a "corporate responsibility approach" in environmental protection and management rather than "solo-flight responsibility approach"

3. Skills needed

- ⇒ Both men and women are generally oriented towards acquisition on skills on alternative sources of livelihood
- ⇒ Women emphasized communication skills while men decide for proper tree planting

P. TRUSTED AND CURRENTLY ACCESSED CHANNELS OF COMMUNICATIONS

1. Broadcast Media

- ⇒ DXOW
- ⇒ DXDC
- ⇒ DXMF - Bombo Radyo
- ⇒ DXUM

2. Television Channel

- ⇒ ABS-CBN

3. Preferred Radio Programs

- ⇒ Drama
- ⇒ News Commentary

4. Preferred TV Program

- ⇒ Public Affairs

5. Local Government Units

- ⇒ Barangay Council
- ⇒ Barangay Officials

6. Individuals

- ⇒ Barangay Captains
- ⇒ A basketball celebrity
- ⇒ A woman showbiz personality

7. Non-Government Organizations

- ⇒ KAPWA Uplifment Foundation, Inc.
- ⇒ GreenCOM

8. National Government Agencies

- ⇒ Department of Environment and Natural Resources (DENR)
- ⇒ Department of Agriculture (DA)
- ⇒ Bureau of Fishery and Aquatic Resources (BFAR)

APPENDIX A
INDEPTH INTERVIEWEES, LGU

I. Malalag, Davao del Sur

<i>A. Female</i>		
1.	Myrna Ursal	- Municipal Councilor
2.	Aida de Roda	- Social Welfare Officer 4
3.	Lilia Uy	- Municipal Health Officer
4.	Maribeth Magtabog	- Municipal Health Officer
5.	Giza Pablo	- Member, Municipal Development Council
6.	Gloria Empacis	- Secretary, Sangguniang Bayan
7.	Givel Mamaril	- Municipal Administrator
<i>B. Male</i>		
1.	Stanley Bernasor Jr.	- Agriculturist
2.	Dionisio Lepornio	- Municipal Planning and Development Coordinator
3.	Domingo Billones	- Municipal Councilor
4.	Gerome Jamila	- Local Civil Registrar
5.	Jessie Bajenting	- Municipal Assessor
6.	Federico Palacay	- CENRO
7.	Andres Montejo	- Municipal Mayor
8.	Berone Destura	- Municipal Treasurer

II. Sta. Maria Davao del Sur

<i>A. Female</i>		
1.	Rose Guisado	- Municipal Councilor
2.	Cirila Federigo	- Social Welfare Assistant
3.	Teresita Masaganda	- Assistant Municipal Treasurer
4.	Celina Lambino	- Agrarian Reform Program Technologist
5.	Juanita Cabañero	- Agricultural Technologist
6.	Magdalena Avanceña	- Administrative Officer II
7.	Vilma Dacayan	- Municipal Assesor
<i>B. Male</i>		
1.	Crisostomo Respeto	- SB Member
2.	Ramon Avanceña	- Municipal Councilor
3.	Leo Carr	- Vice Mayor
4.	Diacarba Abe	- Municipal Councilor
5.	Sigfredo Merka Sr.	- Municipal Councilor
6.	Nicanor Tagase	- Barangay Captain, San Antonio
7.	Margarito Geolina Jr.	- Municipal Planning and Development Coordinator
8.	Justin Masaganda	- Incharge, Marine Resource
9.	Anwar Mohamad	- Barangay Captain

APPENDIX B
INDEPTH INTERVIEW: OPINION LEADERS
Malalag, Davao del Sur

A. Male	
1. * Daniel Lastimosa	- Previous Chairperson of NAPUGAMA (Nagkahiusang Pundok sa Gagmay'ng Mananagat)
2. * Fr. Nestor Lisondra	- Catholic Parish Priest
3. * Ronilo Bajenting	- Project Coordinator, KAPWA
4. ** Edzel Libre	- District Coordinator, Kabataang Pilipino Movement
5. *** Rodolfo Aringo	- Barangay Captain, Barangay Baybay
6. ** Rogelio Pascua	- Barangay Captain, Barangay Ibo
1. * Nilo Narvaez	- A political apponent of the incumbent mayor, Proprietor - Narvaez Bakery
2. * Melencio Tenoreo	- Acting Secretary, Tribal Council
3. ** Heracho Salgados	- Chairman, Malalag Market Vendors Multi-Purpose Coop
4. ** Fred Masueto	- President - Baybay, Malalag Labor Organization
B. Female	
1. * Violeta Jiel	- President, Kabalikat sa Kaunlaran ng mga Kababaihan ng Malalag, Inc
2. * Herminigilda Montejo	- President, Federation of Malalag Peasant Women
3. ** Elena Aringo	- Chairperson, Kababaihang Kabalikat sa Kaunlaran ng Kababihan ng Malalag, Inc.
4. ** Ofelia Clarito	- Field Officer, Kapwa Upliftment Foundation
1. * Isabel Golingay	- President, Catholic Women's League
2. ** Delfina Escalante	- Member, BHW
3. ** Viverly Doronio	- Barangay Secretary, Baybay, Malalag

Legend: * Urban
 ** Rural

APPENDIX C
LIST OF FGD PARTICIPANTS
Malalag, Davao del Sur

I. Upland Barangay (Mabini, Malalag)	
1. Pedro Resurreccion	1. Paulino Embudo
2. Silvestre Banzon	2. Alfredo Olivo
3. Seferino Languita	3. Alexis Comendador
4. Cipriano Ochia	4. Melquiades Rentor
5. Ernesto Arnan	5. Ramon Sincover
6. Romeo Manzolin	6. Henry Roflo
7. Angel Alteres	
8. Cirilo Escalante	
9. Evangeline Enlogada	1. Carmelita Alejado
10. Zosima Mongolia	2. Felomina Enan
11. Cirila Escalante	3. Erlinda Gaborales
12. Fabiola Elevera	4. Belen Asinista
13. Imelda Guarin	5. Florentina Moyong
14. Remedios Oras	6. Monica delos Santos
15. Gabriela Sibong	7. Gabina Bagi

II. Coastal Barangay (Baybay, Malalag)	
1. Antonio Umahang	1. Bonifacio Sapoy
2. Tomas Brogat	2. Sahir Pamasanda
3. Generoso Salaver	3. Leodigario Jalon
4. Felipe Doronio	4. Fernando Egat
5. Marcelino Hiura	5. Lili Aykin
6. Cristituto Amo Ali	6. Bernardo Jimenez
7. Abubakar Asaali	7. Nicolas Estoy
8. Pablito Bihona	8. Abdul Rakman
9. Wilma Gido	9. Porferia Anonas
10. Ma. Dolores Aringo	10. Wenifreda Sobiano
11. Cristeta Barcenal	11. Cresencia Casarayan
12. Concepcion Jalon	12. Elizabeth Aupe
13. Salama Aringo	13. Marfe Supian
14. Marieta Aupe	14. Viverly Doronio
15. Adelaide Salaver	15. Cirila Pede
	16. Noraya Madraga
	17. Arsenia Lupian
	18. Corazon Gamao
	19. Elizabeth Pide

APPENDIX D
Selected Socio-Demographic
Characteristics of LGU Respondents:
Malalag and Sta. Maria

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Age						
30 - 36	1	3	4	-	3	3
37 - 43	2	2	4	2	2	4
44 - 50	2	2	4	2	1	3
51 - 57	-	-	-	3	1	4
58 - 64	3	-	3	2	-	2
<i>Total</i>	<i>8</i>	<i>7</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>
Civil Status						
Single	-	1	1	-	-	-
Married	8	6	14	9	6	15
Widow(er)	-	-	-	-	1	1
<i>Total</i>	<i>8</i>	<i>7</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>
Religion						
Roman Catholic	7	6	13	6	7	13
Protestant	1	-	1	-	-	-
Born-Again-Christian	-	1	1	-	-	-
Islam	-	-	-	2	-	2
Phil. Independent Church	-	-	-	1	-	1
<i>Total</i>	<i>8</i>	<i>7</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Educational Attainment						
Elementary	-	1	1	1	-	1
Highschool	1	-	1	1	1	2
College	6	5	11	6	6	12
Law	1	-	1	1	-	1
Medical Doctor	-	1	1	-	-	-
<i>Total</i>	<i>8</i>	<i>6</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>
Length of Residence						
Below 4 years	1	-	1	-	-	-
4 - 17	2	2	4	1	1	2
18 - 31	3	2	5	4	4	8
32 - 45	2	1	3	1	2	3
46 - 59	-	1	1	3	-	3
NAP, Residing outside the Survey Sites	-	1	1	-	-	-
<i>Total</i>	<i>8</i>	<i>7</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>
Places of Origin						
NAP (Since birth)	1	1	2	4	2	6
Within the Survey Sites	-	2	2	-	-	-
W/in Davao del Sur but outside Malalag (Bansalan, Digos, Davao City, Hagonoy)	1	1	2	-	2	2

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Within Mindanao but Outside Davao del Sur (Butuan City, Iligan City, Misamis Occidental, Lanao del Norte, Camiguin, North Cotabato, Zamboanga)	2	3	5	3	1	4
Visayas (Bohol, Cebu, Leyte)	4	-	4	2	2	4
Luzon	-	-	-	-	-	-
Total	8	7	15	9	7	16
Current Position in the LGU						
Municipal Mayor	1	-	1	-	-	-
Vice Mayor	-	-	-	1	-	1
Incharge, Marine Resources	-	-	-	1	-	1
SB Members	1	2	3	4	1	5
Agriculturist	1	-	1	-	-	-
Member, Municipal Development Council	-	1	1	-	-	-
Local Civil Registrar	1	-	1	-	-	-
CENRO Officer	1	-	1	-	-	-
Social Work Officer	-	1	1	-	1	1
Municipal Health Officer	-	1	1	-	-	-
SB Secretary	-	1	1	-	-	-
Municipal Treasurer	1	-	1	-	-	-
Municipal Administrator	-	1	1	-	-	-

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Municipal Assessor	1	-	1	-	1	1
Assistant Municipal Treasurer	-	-	-	-	1	1
Agrarian Reform Program Technician	-	-	-	-	1	1
Agricultural Technologist	-	-	-	-	1	1
Administrative Officer II	-	-	-	-	1	1
Barangay Captains	-	-	-	2	-	2
Municipal Planning and Development Coordinator	1	-	1	1	-	1
Total	8	7	15	9	7	16
Number of Years in the Current Position						
Below 1 year	-	1	1	-	1	1
1 - 6	4	1	5	7	4	11
7 - 12	2	5	7	2	2	4
13 - 18	1	-	1	-	-	-
19 - 24	1	-	1	-	-	-
Total	8	7	15	9	7	16

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Number of Years in the Public Office						
2 - 8	2	3	5	3	2	5
9 - 15	-	2	2	-	3	3
16 - 22	3	2	5	4	1	5
23 - 29	1	-	1	1	1	2
30 - 36	2	-	2	1	-	1
<i>Total</i>	<i>8</i>	<i>7</i>	<i>15</i>	<i>9</i>	<i>7</i>	<i>16</i>
Previous Occupation						
None	-	-	-	1	-	1
Appointed Municipal Councilor	1	-	1	2	1	3
Private Secretary	-	1	1	-	-	-
Municipal Bookkeeper	-	-	-	-	1	1
Statistical Aid	-	-	-	-	1	1
BFAR Biologist	-	-	-	-	1	1
Private Accountant	-	-	-	-	1	1
Audit Analysts	-	-	-	-	1	1
OIC Mayor	-	-	-	1	-	1
Municipal Councilor	-	-	-	1	-	1
Barangay Captain	1	-	1	1	-	1
Agriculturist	1	-	1	1	-	1
Clerical Aide	-	-	-	1	-	1
Police	-	1	1	-	-	-
Community Organizer	-	1	1	-	-	-

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Extension Officer	1	-	1	-	-	-
Administrative Officer	1	-	1	-	-	-
Planning Officer	1	-	1	-	-	-
DENR Scaler	1	-	1	-	-	-
Provincial Engineer	-	1	1	-	-	-
Property Custodian	1	-	1	-	-	-
Social Worker	-	1	1	-	-	-
Local Registrar	-	1	1	-	-	-
Resident Physician	-	1	1	-	-	-
Teacher	-	-	-	1	1	2
Membership in Organization						
Yes	7	7	14	8	7	15
No	1	-	1	1	-	1
<i>Total</i>	8	7	15	9	7	16
Number of Organization Joined						
1	1	1	2	6	2	8
2	1	-	1	1	3	4
3	2	4	6	-	1	1
4	3	1	4	1	-	1
5	-	1	1	-	1	1
<i>Total</i>	7	7	14	8	7	15

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Position in the Organizations Joined						
Member	14	13	27	9	6	15
Officer	7	9	16	3	10	13
<i>Total</i>	<i>21</i>	<i>22</i>	<i>43</i>	<i>12</i>	<i>16</i>	<i>28</i>
Rating of Participation in Organizations Joined						
Active	20	22	42	11	15	26
Inactive	1	-	1	1	1	2
<i>Total</i>	<i>21</i>	<i>22</i>	<i>43</i>	<i>12</i>	<i>16</i>	<i>28</i>
Names of Organizations Joined						
Kabalikat sa Kaunlarang sa Kababaihan sa Malalag, Inc.	-	1	1	-	-	-
Parish Pastoral Council	2	1	3	2	-	2
Parish Finance Committee	-	1	1	1	2	3
Parents-Teachers Association	-	2	2	-	1	1
Malalag Bay Service Coop	-	2	2	1	1	2
Contractor's Association of Davao del Sur	-	1	1	-	-	-
Women's Organization	-	2	2	-	-	-

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Girl Scout of the Philippines	-	2	2	-	-	-
Councilor's League of the Philippines	-	1	1	-	-	-
Women's Councilors League of the Philippines	-	1	1	-	-	-
Philippine Medical Association	-	1	1	-	-	-
Association of Municipal Health Officers	-	1	1	-	-	-
Alliance of Public Health Workers	-	1	1	-	-	-
Rural Improvement Club	-	2	2	-	3	3
Lakas Magsasakang Pilipino	-	1	1	-	-	-
Municipal Advisory Team on Environment	1	1	2	-	-	-
Malalag Integrated Livelihood Coop	1	1	2	-	-	-
King Coop	1	-	1	-	-	-
Adoracion Norturna Filipina	3	-	3	-	-	-
Family Life Apostolate	2	-	2	-	-	-
Mamanka	1	-	1	-	-	-
Malalag Christian Coop	1	-	1	-	-	-
GKK	1	-	1	-	2	2

Selected Socio-Demographic Characteristics	Malalag			Sta. Maria		
	Male	Female	Total	Male	Female	Total
Knights of Columbus	1	-	1	1	-	1
Lay Minister	1	-	1	-	-	-
Couples for Christ	1	-	1	-	-	-
UP Alumni Association	1	-	1	-	-	-
Knights of Rizal	1	-	1	1	-	1
League of Municipal Mayors in the Philippines	1	-	1	-	-	-
RECOM	1	-	1	-	-	-
Nagkahiusang Mag-uuma ug Mananagat sa Habagatang Dabaw	1	-	1	-	-	-
Sta. Maria Multi-Purpose Coop	-	-	-	2	2	4
Muslim Association	-	-	-	1	-	1
Fishing Village Coop	-	-	-	1	-	1
Sta. Maria Coconut Planters Association	-	-	-	1	-	1
Farmer's Organization	-	-	-	1	-	1
Mortuary Adis (Kasakit)	-	-	-	-	1	1
Kalipay	-	-	-	-	1	1
Peoples' Economic Council	-	-	-	-	1	1
PICPA- Digos Chapter	-	-	-	-	1	1
Municipal Assessor's League of the Philippines	-	-	-	-	1	1

APPENDIX E
Selected Socio-Demographic Characteristics
of Opinion Leaders: Malalag, Davao del Sur

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Age										
27 - 34	-	-	-	-	-	1	1	-	-	2
35 - 42	2	-	-	-	2	-	-	1	1	2
43 - 50	-	1	1	-	2	1	1	-	1	3
51 - 58	1	-	-	-	1	-	-	1	-	1
59 - 66	-	1	1	1	3	1	-	-	-	1
<i>Total</i>	3	2	2	1	8	3	2	2	2	9
Civil Status										
Single	1	-	-	-	1	-	1	-	-	1
Married	2	2	2	1	7	3	1	2	2	8
Widow(er)	-	-	-	-	-	-	-	-	-	-
<i>Total</i>	3	2	2	1	8	3	2	2	2	9

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Educational Attainment										
Elementary	1	-	-	-	1	-	-	1	1	2
Highschool	-	1	-	-	1	1	1	1	-	3
College	1	1	2	-	4	2	1	-	1	4
Masteral	1	-	-	1	2	-	-	-	-	-
<i>Total</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>9</i>
Length of Residence										
1 - 12	1	-	-	-	1	-	1	-	1	2
13 - 24	1	-	-	-	1	-	-	1	1	2
25 - 36	-	2	2	1	5	2	-	-	-	2
37 - 48	1	-	-	-	1	1	1	1	-	3
<i>Total</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>9</i>
Places of Origin										
NAP (Since birth)	-	-	-	-	-	-	1	-	-	1
Within Malalag	1	-	-	-	1	-	-	-	-	-
W/in Davao del Sur but outside Malalag (Sta. Maria)	-	1	-	-	1	-	-	-	-	-
Within Mindanao but outside Davao del Sur (Zamboanga del Norte, Maguindanao, North Cotabato)	-	-	2	-	2	-	1	1	-	2
Visayas (Cebu, Leyte, Iloilo, Negros Occidental)	2	1	-	1	4	2	-	1	2	5
Luzon (Tarlac)	-	-	-	-	-	1	-	-	-	1
<i>Total</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>9</i>

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Position in the Organization										
Parish Priest	1	-	-	-	1	-	-	-	-	-
Project Coordinator	1	-	-	-	1	-	-	-	-	-
Member	1	-	-	-	1	-	-	-	1	1
Proprieter	-	-	1	-	1	-	-	-	-	-
Secretary	-	-	1	-	1	-	-	-	1	1
Chairman	-	-	-	-	-	-	1	1	-	2
Field Officer	-	-	-	-	-	-	1	-	-	1
District Coordinator	-	-	-	-	-	1	-	-	-	1
Barangay Captain	-	-	-	-	-	2	-	-	-	2
President	-	2	-	1	3	-	-	1	-	1
Total	3	2	2	1	8	3	2	2	2	9
Number of Years in Current Position										
Below 1 year	-	-	-	-	-	-	-	1	-	1
1 - 5	3	2	-	1	6	2	1	1	1	5
6 - 10	-	-	1	-	1	1	1	-	1	3
11- 15	-	-	-	-	-	-	-	-	-	-
16- 20	-	-	-	-	-	-	-	-	-	-
21- 25	-	-	-	-	-	-	-	-	-	-
26- 30	-	-	1	-	1	-	-	-	-	-
Total	3	2	2	1	8	3	2	2	2	9

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Previous Occupation										
Fisherman	1	-	-	-	1	-	-	-	-	-
None	-	-	-	-	-	-	-	-	1	1
Assistant Parish Priest	1	-	-	-	1	-	-	-	-	-
Community Organizer	1	-	-	-	1	-	-	-	-	-
Chairman	-	-	-	-	-	-	1	-	-	1
Field Officer	-	-	-	-	-	-	1	-	-	1
Employee	-	-	1	-	1	-	-	-	-	-
Teacher	-	-	1	1	2	-	-	-	-	-
Barangay Health Worker	-	-	-	-	-	-	-	-	1	1
KB Municipal President	-	-	-	-	-	1	-	-	-	1
Fish Vendor	-	-	-	-	-	1	-	-	-	1
Retired Teacher	-	-	-	-	-	1	-	-	-	1
Board Secretary	-	-	-	-	-	-	-	1	-	1
Motorcycle Driver	-	-	-	-	-	-	-	1	-	1
Day Care Worker	-	1	-	-	1	-	-	-	-	-
Provincial SPHN	-	1	-	-	1	-	-	-	-	-
<i>Total</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>9</i>

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Number of Years in Development/Community/Civic Work										
1 - 5	2	-	-	-	2	-	1	2	1	4
6 - 10	1	-	1	-	2	1	-	-	-	1
11 - 15	-	1	-	-	1	-	-	-	-	-
16 - 20	-	-	-	-	-	-	-	-	-	-
21 - 25	-	1	-	-	1	-	-	-	-	-
26 - 30	-	-	1	1	2	-	1	-	-	1
31 - 35	-	-	-	-	-	2	-	-	-	2
<i>Total</i>	3	2	2	1	8	3	2	2	1	8
Number of years in Environmental Work										
1 - 6	2	-	-	1	3	1	1	-	1	3
7 - 12	1	-	-	-	1	-	-	-	-	-
13 - 18	-	1	-	-	1	-	-	-	-	-
19 - 24	-	1	-	-	1	-	1	-	-	1
25 - 30	-	-	-	-	-	-	-	-	-	-
31 - 36	-	-	-	-	-	2	-	-	-	2
<i>Total</i>	3	2	-	1	6	3	2	-	1	6
Membership on Community Organization										
Yes	-	2	2	1	5	3	2	2	1	8
No	3	-	-	-	3	-	-	-	1	1
<i>Total</i>	3	2	2	1	8	3	2	2	2	9

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Number of Community Organization Joined										
1	-	-	1	-	1	-	-	1	-	1
2	-	1	-	-	1	-	1	1	-	2
3	-	1	1	1	3	1	1	-	1	2
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	1	-	-	-	1
6	-	-	-	-	-	1	-	-	-	1
<i>Total</i>	-	2	2	1	5	3	2	2	1	8
Position in the Community Organization										
Officer	-	2	1	-	3	3	-	1	3	7
Member	-	3	3	3	9	11	5	2	-	18
<i>Total</i>	-	5	4	3	12	14	5	3	3	25
Rating of Participation in the Community Organization										
Active	-	5	4	2	11	14	5	3	3	25
Not Active	-	-	-	1	1	-	-	-	-	-
<i>Total</i>	-	5	4	3	12	14	5	3	3	25

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Name of Organization										
United Farmers and Fishermen Association	-	-	1	-	1	-	-	-	-	-
Malalag Integrated Livelihood Coop	-	-	2	-	2	-	-	-	-	-
Market Vendors Coop	-	-	1	-	1	-	-	-	-	-
Rural Improvement Club	-	3	-	-	3	-	-	-	-	-
Malalag Peasant Women Organization	-	1	-	-	1	-	-	-	-	-
Municipal Advisory Team on Environment	-	1	-	-	1	2	-	-	-	2
Malalag District Public School Teacher and Employees Association	-	-	-	1	1	-	-	-	-	-
Catholic Women's League	-	-	-	1	1	-	-	-	-	-
Marriage Enrichment Seminar	-	-	-	1	1	-	-	-	-	-
Kabataang Filipino Movement	-	-	-	-	-	1	-	-	-	1
LUPON	-	-	-	-	-	1	-	-	-	1
Muslim-Christian Movement	-	-	-	-	-	1	-	-	-	1
Malalag Service Coop	-	-	-	-	-	1	-	-	-	1
Baybay Multi-Purpose Coop	-	-	-	-	-	1	-	-	-	1

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
Gagmay'ng Kristohanong Katilingban	-	-	-	-	-	1	1	-	-	2
Kapunungan sa KASAKIT	-	-	-	-	-	1	-	-	-	1
Seniors Citizen	-	-	-	-	-	1	-	-	-	1
Ibo Coconut Multi-Purpose Coop	-	-	-	-	-	1	-	-	-	1
Federation of Coconut Multi-Purpose of Malalag	-	-	-	-	-	1	-	-	-	1
Malalag Coop Development Council	-	-	-	-	-	1	-	-	-	1
Federation of Coconut Farmers in Davao del Sur	-	-	-	-	-	1	-	-	-	1
Day Care Worker Association	-	-	-	-	-	-	1	-	-	1
Kababaihang Kabalikat sa Kaunlaran ng Kababihan ng Malalag, Inc	-	-	-	-	-	-	1	-	-	1
Cotabato Annual Conference - Christian Youth Fellowship	-	-	-	-	-	-	1	-	-	1
Ecumenical Youth Org.	-	-	-	-	-	-	1	-	-	1
Municipal Development Council	-	-	-	-	-	-	-	1	-	1

Selected Socio-Demographic Characteristics	Urban					Rural				
	Doers		Non-Doers		Total	Doers		Non-Doers		Total
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>		<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
Malalag Market Vendors Multi-Purpose Coop	-	-	-	-	-	-	-	1	-	1
Baybay Labor Organization	-	-	-	-	-	-	-	1	-	1
Women's	-	-	-	-	-	-	-	-	1	1
GATT-SEA K Association	-	-	-	-	-	-	-	-	1	1
DMCI	-	-	-	-	-	-	-	-	1	1

APPENDIX F
Selected Socio-Demographic
Characteristics of FGD Participants
in Malalag, Davao del Sur

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	<i>Deer</i>	<i>Non-Deer</i>	<i>Deer</i>	<i>Non-Deer</i>		<i>Deer</i>	<i>Non-Deer</i>	<i>Deer</i>	<i>Non-Deer</i>	
Age										
18 - 25	-	1	-	2	3	-	1	1	1	3
26 - 33	-	-	3	3	6	-	-	2	2	4
34 - 41	3	1	2	1	7	2	1	1	1	5
42 - 49	2	2	1	-	5	4	4	1	5	14
50 - 57	1	1	1	1	4	2	1	1	1	5
58 - 65	2	1	-	-	3	-	1	1	1	3
<i>Total</i>	8	6	7	7	28	8	8	7	11	34
Civil Status										
Single	-	-	-	-	-	-	1	1	-	2
Married	8	6	7	7	28	8	7	5	8	28
Widow(er)	-	-	-	-	-	-	-	1	3	4
<i>Total</i>	8	6	7	7	28	8	8	7	11	34
Religion										
Roman Catholic	8	6	7	4	25	5	5	6	11	27
Filipinista	-	-	-	3	3	-	-	-	-	-
Protestant	-	-	-	-	-	1	-	-	-	1
Islam	-	-	-	-	-	2	3	1	-	6
<i>Total</i>	8	6	7	7	28	8	8	7	11	34

Socio-Demographic Characteristics	Upland				Coastal					
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Educational Attainment										
No Formal Education	-	-	-	-	-	-	1	-	1	2
Primary	8	3	5	7	23	3	4	1	6	14
Secondary	-	3	-	-	3	5	3	4	3	15
Tertiary	-	-	2	-	2	-	-	2	1	3
Total	8	6	7	7	28	8	8	7	11	34
Length of Residence										
Less than one year	-	-	-	1	1	-	-	-	-	-
2 - 10	1	-	1	1	3	1	5	-	-	6
11 - 19	2	3	2	1	8	3	-	1	1	5
20 - 28	2	2	2	1	7	1	1	3	1	6
29 - 37	2	1	2	1	6	-	-	-	3	3
38 - 46	1	-	-	2	3	2	2	2	5	11
47 - 55	-	-	-	-	-	1	-	1	1	3
Total	8	6	7	7	28	8	8	7	11	34
Places of Origin										
NAP (Since birth)	-	-	1	3	4	1	1	4	5	11
Within the Municipality	-	1	-	-	1	2	1	2	-	5
W/in Mindanao (Zamboanga Sur, Misamis Occidental, Ozamis City, Jolo)	-	-	-	1	1	-	3	-	2	5
Visayas (Cebu, Bacolod, Negros Occidental, Bohol)	5	5	5	1	16	3	1	-	3	7
W/in Davao del Sur but outside Malalag	3	-	1	2	6	1	2	1	1	5
Luzon (Masbate)	-	-	-	-	-	1	-	-	-	1
Total	8	6	7	7	28	8	8	7	11	34

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Doer	Non-Doer	Doer	Non-Doer		Doer	Non-Doer	Doer	Non-Doer	
Number of Children Living with FGD Participants										
None	1	-	-	-	1	-	1	-	1	2
1 - 2	2	2	1	3	8	2	2	2	2	8
3 - 4	3	-	4	1	8	4	3	5	6	18
5 - 6	1	4	1	3	9	2	-	-	2	4
7 - 8	-	-	1	-	1	-	-	-	-	-
9 - 10	1	-	-	-	1	-	1	-	-	1
NAP	-	-	-	-	-	-	1	-	-	1
Total	8	6	7	7	28	8	8	7	11	34
Number of 0 - 6 years old children										
NAP	-	-	-	-	-	-	1	-	-	1
None	5	4	4	1	14	5	5	2	8	20
1	1	-	3	2	6	2	2	4	1	9
2	-	1	-	2	3	1	-	-	2	3
3	1	1	-	2	4	-	-	-	-	-
4	1	-	-	-	1	-	-	1	-	1
Total	8	6	7	7	28	8	8	7	11	34
Primary Source of Income										
No Source of Income	-	-	-	7	7	-	-	-	1	1
Farming	8	5	2	-	15	-	-	-	-	-
Tuba Gatherer	-	1	-	-	1	-	1	-	-	1
BHW/C VHW	-	-	5	-	5	-	-	1	-	1
Fishing	-	-	-	-	-	8	6	2	-	16
Fish Peddling/Vending	-	-	-	-	-	-	1	3	7	11
Business	-	-	-	-	-	-	-	1	3	4
Total	8	6	7	7	28	8	8	7	11	34

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Secondary Source of Income										
* W/out Secondary Source of Income	2	2	3	7	14	3	5	2	9	19
* W/ Secondary Source of Income	6	4	4	-	14	5	3	5	2	15
Fishing	-	-	-	-	-	-	(1)	-	-	(1)
Photographs	(1)	-	-	-	(1)	-	-	-	-	-
Hornal	(2)	-	-	-	(2)	(4)	(1)	-	-	(5)
Livestock Raising	(1)	-	(1)	-	(2)	-	-	(1)	(1)	(2)
Sari-sari Store	(1)	-	(1)	-	(2)	-	-	(2)	(1)	(3)
Carpenter	(1)	-	-	-	(1)	-	-	-	-	-
Farming	-	(1)	(1)	-	(2)	-	-	-	-	-
Tuba Gatherer	-	(1)	-	-	(1)	-	-	-	-	-
Selling of Spices	-	(1)	-	-	(1)	-	-	(2)	-	(2)
Buy & Sell of farm produce	-	(1)	-	-	(1)	-	-	-	-	-
BNS	-	-	(1)	-	(1)	-	-	-	-	-
BHW	-	-	-	-	-	-	-	-	-	-
Security Guard	-	-	-	-	-	(1)	-	-	-	(1)
Selling Bibingka (rice cake)	-	-	-	-	-	-	(1)	-	-	(1)

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Primary Source of Income of Spouses										
NAP	-	-	-	-	-	-	1	2	3	6
Unemployed	1	-	-	-	1	-	-	-	1	1
Military	4	3	-	-	7	3	4	-	1	8
BHW	1	1	-	-	2	1	-	-	-	1
Livestock Raising	1	-	-	-	1	-	1	-	-	1
Business	1	-	-	-	1	1	-	-	-	1
Farming	-	1	6	7	14	-	-	-	-	-
Fruit/Vegetable Vending	-	1	-	-	1	-	-	-	-	-
Carpenter	-	-	1	-	1	-	-	2	-	2
Dressmaking	-	-	-	-	-	1	-	-	-	1
Barangay Secretary	-	-	-	-	-	1	-	-	-	1
Disbursing Officer	-	-	-	-	-	1	-	-	-	1
Fish Vendor	-	-	-	-	-	-	1	-	1	2
Selling Herbal Medicine	-	-	-	-	-	-	1	-	-	1
Fishing	-	-	-	-	-	-	-	2	5	7
Tanod	-	-	-	-	-	-	-	1	-	1

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Secondary Source of Income Spouses										
NAP	-	-	-	-	-	-	-	1	3	4
W/out Secondary Source	8	6	4	6	24	7	8	4	8	27
With Secondary Source	-	-	3	1	4	1	-	2	-	3
Livestock Raising	-	-	(1)	-	(1)	(1)	-	-	-	(1)
Buy & Sell of Livestock	-	-	(1)	-	(1)	-	-	-	-	-
Laborer	-	-	(1)	-	(1)	-	-	-	-	-
Gold panning	-	-	-	(1)	(1)	-	-	-	-	-
Repair	-	-	-	-	-	-	-	(1)	-	(1)
Fishery	-	-	-	-	-	-	-	(1)	-	(1)
Number of Working HH Members										
0	-	-	-	-	-	-	-	-	1	1
1	5	3	-	7	15	1	6	1	1	9
2	2	2	4	-	8	5	1	3	8	17
3	1	1	2	-	4	1	-	-	1	2
4	-	-	1	-	1	1	1	3	-	5
Total	8	6	7	7	28	8	8	7	11	34
Membership on Community Organization										
Yes	8	5	7	1	21	8	2	5	9	24
No	-	1	-	6	7	-	6	2	2	10
Total	8	6	7	7	28	8	8	7	11	34

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	<i>Deer</i>	<i>Non-Deer</i>	<i>Deer</i>	<i>Non-Deer</i>		<i>Deer</i>	<i>Non-Deer</i>	<i>Deer</i>	<i>Non-Deer</i>	
Number of Community Organization Joined										
1	3	2	5	1	11	7	2	3	4	16
2	1	-	2	-	3	-	-	2	4	6
3	3	3	-	-	6	1	-	-	1	2
4	1	-	-	-	1	-	-	-	-	-
<i>Total</i>	8	5	7	1	21	8	2	5	9	24
Position in the Community Organization										
Officer	6	2	2	-	10	5	1	1	1	8
Member	12	9	7	1	29	5	1	6	14	26
<i>Total</i>	18	11	9	1	39	10	2	7	15	34
Rating of Participation in the Community Organization										
Active	18	11	9	1	39	10	2	7	15	34
Not Active	-	-	-	-	-	-	-	-	-	-
<i>Total</i>	18	11	9	1	39	10	2	7	15	34

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Five Most Important Problems Facing the Community Today										
Limited Capital	2	-	-	-	2	-	-	4	11	15
Long Draught	2	-	-	-	2	-	-	-	-	-
Flood	1	-	-	-	1	-	-	-	-	-
Denuded Forest	2	-	1	-	3	-	-	-	-	-
No Stable Source of Income	1	-	-	4	5	3	1	-	-	4
Illnesses of Children	1	-	-	-	1	1	1	-	-	2
Poverty	3	2	1	3	9	5	6	-	-	11
Expensive Fertilizer	1	1	-	-	2	-	-	-	-	-
Low farm production	2	1	2	-	5	-	-	-	-	-
Limited Supply of Medicine	1	-	-	-	1	-	-	5	-	5
School is far	1	-	1	-	2	-	-	-	-	-
Stealing of Livestock	2	1	1	-	4	-	-	-	-	-
Disunited Com. Members	1	-	-	-	1	-	-	1	-	1
Poor Road	1	3	4	7	15	-	-	2	-	2
Far source of water	1	1	6	-	8	-	-	-	-	-
Infertile Soil	-	2	-	1	3	-	-	-	-	-
No Electricity	-	1	1	-	2	-	-	-	-	-
Low Buying Price of Produce	-	1	-	-	1	-	-	-	-	-
No Toilet/Poor Sanitation	-	-	-	-	-	2	-	2	5	9
Lapanday Toxic Waster	-	-	-	-	-	2	-	-	-	2

Selected Socio-Demographic Characteristics	Upland					Coastal				
	Male		Female		Total	Male		Female		Total
	Deer	Non-Deer	Deer	Non-Deer		Deer	Non-Deer	Deer	Non-Deer	
Illegal Fishing	-	-	-	-	-	3	-	-	-	3
Poor Drainage	-	-	-	-	-	1	-	1	-	2
Limited livelihood program	-	-	-	-	-	2	-	-	-	2
Limited Fish catch	-	-	-	-	-	1	4	-	-	5
No money to send Children to school	-	-	-	-	-	-	5	-	-	5
No house lot	-	-	-	-	-	-	1	1	2	4
No Formal Education	-	-	-	-	-	-	1	-	-	1
Limited Employment Opportunities	-	-	-	-	-	-	1	2	1	4
Expensive Commodities	-	-	-	-	-	-	1	-	-	1
Limited Supply of Water	-	-	-	-	-	-	-	5	-	5
Astray Animals	-	-	-	-	-	-	-	1	-	1