



Environmental Management Among Residents at Brgy. Sinundolan, San Remigio, Antique, Philippines

Peter Ralph B. Galicia^{1*}, Pablo S. Crespo¹, Jr., Geneva M. Eler¹, Riza Leah G. De La Torre¹

Article Information

Received: April 25, 2022

Accepted: April 28, 2022

Published: May 2, 2022

Keywords

*Attitude, Awareness,
Environment, Maritime
education, Waste management*

ABSTRACT

This quantitative-qualitative study aimed to determine the level of environmental management awareness among residents at Barangay Sinundolan, San Remigio, Antique, Philippines. The respondents of the study were the forty-six (46) residents of Barangay Sinundolan, San Remigio, Antique, Philippines, and were categorized according to sex, educational attainment, type of house, and location of residence. Descriptive statistical tools were used to determine the respondents' waste management awareness. The questionnaire was adopted on Lamprea's (2019) study on solid waste awareness, attitude, and practices among students of recognized maritime higher institutions (MHEIs) in Western Visayas. The qualitative data were taken by interviewing the respondents. Comments and suggestions of the respondents were recorded. Results revealed that the level of awareness of environmental management among residents of Barangay Sinundolan, San Remigio, Antique, Philippines is "high" as an entire group and according to certain categories. Qualitative findings were solicited from the respondents' comments and suggestions for the community's common good on environmental management. An environmental intervention program, "UgnayAn sa komunidad: The Environmental Program," was formulated to address the environmental awareness among the residents of barangay Sinundolan, San Remigio, Antique.

INTRODUCTION

Human beings must achieve their physiological needs to survive in the environment. They need water to drink, food, clothes to wear, and shelter to rest. All these needs are available in their surroundings for their day-to-day activities. They become entirely dependent on the community of living plants and animals. Worse, people exploit nature and no longer value its importance for their own needs. Modern societies introduce technological innovations that produce modern use of fertilizer and pesticides, better strains of domestic animals and crops, produce plastics and packaging materials, and irrigate farmland, which leads to rapid economic growth but causes harm to the environment.

The increase in resource consumption to maintain the quality of life and the threat of technological innovations have directly and indirectly impacted the environment – water and air pollution, shortage of freshwater, and waste generation.

Several studies suggest how to improve environmental awareness in the community. According to the study of Mei et al. (2016), blending the environmental awareness to the culture improves the policy-making considerations. Chen & Tsai (2016) study regarded university students as future decision-makers in society and highly likely to become opinion-shapers in terms of the environment. Their awareness of the marine environment will significantly affect sustainable marine development. Altin, A. et al. (2014) study that environmental rights and responsibilities be integrated into the school curriculum. Yan, G. et al.'s (2012) study shows that public information on environmental protection has risen through the

internet and social media. Kamaruddin, S.M. et al. (2016) study suggest that the government should strengthen coordination with the community to gain their interest and involvement in environmental issues.

Lamprea's (2019) study improves maritime higher education institutions (MHEIs) in Western Visayas. In another study by Galon and Alimen (2017), most environmental activities were tree planting, information education campaigns on disaster management and the environment, emergency drills on fire, bombing, earthquakes, floods, tsunamis, coastal and shoreline clean-up, and mangroves planting. Most respondents agreed that the first structures to protect residents from natural disasters and environmental disturbances are floodways and canals, dikes, and wave breakers.

The study was conducted by Orquinaza and Cantor (2017) on waste management at Barangay Pangpang Norte, Mambusao, Capiiz, Philippines. It mentioned that the barangay needs to provide a dumping site for proper disposal of the garbage. There is a lack of implementation of a waste management program, no funds for waste management, proper garbage disposal to avoid sickness, improve drainage, and more cooperation among the residents. In addition, waste management must start in every household. Need for dumping site and dump truck for proper disposal of garbage, adequate number of the trash can and labeled correctly. In addition, the community should be informed of the schedule of the disposal team to pick up the waste.

Environmental management teaches and educates people from all walks of life about the proper use and protection of the environment. It must address all sensitive issues

¹ University of Antique, Main Campus Lotilla St., Sibalom, Antique 5713, Philippines

* Corresponding author's e-mail: antique_1985@yahoo.com.ph

relative to environmental management. People must clearly understand environmental concerns and issues and follow sustainable development practices. Addressing environmental issues would help ensure environmental sustainability (Keles, R., 2012). Avsar et al.'s (2022) study revealed that recycling packaging waste collection helped the environment.

Based on the previous concerns and related studies

on the environment, the researcher conducts a survey on environmental awareness at Brgy. Sinundulan, San Remigio, Antique, Philippines.

Theoretical framework of the study

This research is anchored on Risk and Social Theory in Environmental Management by Measham and Lockie (2012). It marks a timely contribution to calculating and managing the risks to human communities of rapid

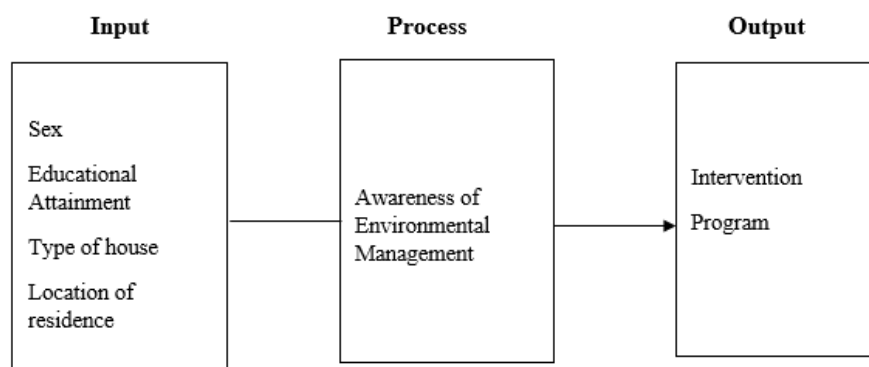


Figure 1: Illustration in graphic form of the paradigm of this research.

environmental and technological change.

Objectives of the study

The purpose of the study was to determine the level of awareness of environmental management among residents at Barangay Sinundulan, San Remigio, Antique, Philippines.

MATERIALS AND METHODS

Research design

The researchers employed the quantitative-qualitative research design using the survey to determine the environmental management among residents as categorized according to sex, educational attainment, type of house, and location of residence in Barangay Sinundulan, San Remigio, Antique, Philippines

Participants

The participants in this study were the 46 randomly selected residents of Barangay Sinundulan, San Remigio, Antique, Philippines. Most of them lived away from the riverbank, and respondents were mostly female. The distribution of the respondents according to different categories for this study is shown in Table 1.

Instrument

The researchers adopted the research instrument on Lamprea's (2019) study on awareness, attitude, and solid waste practices among the students of recognized maritime higher institutions (MHEIs) in Western Visayas. The research instrument consists of five rating scales, 5, 4, 3, 2, and 1, with the corresponding descriptions, strongly aware, aware, uncertain, unaware, and strongly unaware.

All items in the research instrument had factor loads of 0.936 for awareness of environmental management under the valid constructs intended for the study. The instrument consisted of 2 parts: Part I elicited information on the respondents' sex, educational attainment, type of residence, and location of residence. Part II elicited data on environmental awareness among Barangay Sinundulan, San Remigio, and Antique residents.

Procedure

The researcher requested permission to administer the research instrument from the Office of the Municipality Mayor of San Remigio, Senior Environmental

Table 1: Distribution of Respondents

Categories		Frequency	Percentage
Entire Group		46	100%
Sex	Male	11	23.90%
	Female	35	76.10%
Educational Attainment	Elementary	17	37%
	High School	25	54.30%
	College	4	8.70%
Type of Residence	Light material	26	56.50%
	Concrete material	20	43.50%
Location of Residence	Living near the riverbank	17	37%
	Not living near the riverbank	29	63%

Management Specialist of San Remigio, and Barangay Captain of Sinundolan. Upon approval of the permit, meticulous oral instructions in English, Tagalog, and Karay-a, the local dialect, were given to ensure that the participants understood the questionnaire properly.

Quantitative-Qualitative Data Analysis

The completed questionnaires were scored and subjected to appropriate computer-processed statistics using the Statistical Package for the Social Sciences (SPSS) software version 23. Means, frequency count, and percentage were the descriptive statistical tools for the quantitative analysis.

Table 2: Level of Environmental Management among the Residents of Barangay Sinundolan, San Remigio, Antique, Philippines

Categories		Frequency	Percentage
Entire Group		4.02	High
Sex	Male	4.09	High
	Female	4.00	High
Educational Attainment	Elementary	3.93	High
	High School	4.07	High
	College	4.12	High
Type of Residence	Light material	4.00	High
	Concrete material	4.03	High
Location of Residence	Living near the riverbank	3.96	High
	Not living near the riverbank	4.10	High
Legend:			
Scale		Description	
1.0-3.0		Low	
3.1-5.0		High	

Based on the interview conducted, the following are the findings of the study:

1. In order to avoid accidents and sickness, there is a need to educate the locality on waste management and segregation of wastes according to their categories. The concerned agencies should provide a series of environmental management seminars, particularly on the proper segregation of household wastes.

2. The residents need to educate on the importance of taking good care of the environment by planting more trees and illegal logging activity. The concerned agencies should educate the locality on the importance of trees and the effect of deforestation.

3. The barangay needs to provide a dumping site for proper waste disposal. The barangay officials should identify areas for dumping sites away from houses and riverbanks.

4. Every household should start to collect and segregate the waste at home. This means that waste segregation should start in every household.

5. Residents must participate in government through barangay officials on environmental endeavors. This means that all residents should support the government initiative to preserve the environment.

6. The barangay needs to provide a Materials Recovery

In addition, the researchers used interviews to obtain qualitative data about the environmental management among the residents of Barangay Sinundolan, San Remigio, Antique, Philippines.

RESULTS AND DISCUSSION

Qualitative Findings

Based on Table 2, the environmental management level among the residents in Barangay Sinundolan, San Remigio, Antique, Philippines was "Aware" when taken as an entire group and grouped into various categories.

Facility (MRF) to receive, separate, and prepare the recyclable waste. This means that government officials should identify an area in the locality of the MRF and should be away from houses, riverbanks, and people.

7. Residents must plant more trees beneath the riverbank to prevent landslides. The local officials should encourage the residents to plant more trees, particularly in a landslide-prone areas.

8. Educate residents on the ill effect of dumping waste into the river on their health and environment. All concerned agencies should conduct more seminars among the resident on the effect of waste on their health and environment.

9. Cleanliness must start in every household to ensure every family is healthy. The local officials should encourage every household that cleanliness must start at home.

10. The barangay needs more funds for environmental management programs such as waste management, clean and green, and pollution prevention. The local government unit should allocate funds for environmental programs.

11. The barangay should identify the area for MRF and schedule a weekly collection of garbage in every household. The officials should inform the locality of the collection schedule of waste.

12. Garbage bins should be placed in public places and must be labeled properly. This means that garbage bins should be visible in the public eye with corresponding labels.

CONCLUSIONS

Environmental management among Barangay Sinundolan, San Remigio, Antique, Philippines was “high” when taken as an entire group and according to certain categories. The respondents proposed programs to educate the locality in protecting the environment and improve their environmental management. An environmental intervention program, “UgnayAn sa komunidad: The Environmental Program”, was formulated to address the level of environmental awareness among the residents of barangay Sinundolan, San Remigio, Antique.

Recommendations

It is recommended that the barangay official should further improve the environmental management awareness among residents, especially living on the river bank and beneath the mountainside, through a series of environmental activities such as tree planting/growing, coastal clean-up, and proper waste disposal to help preserve the environment, avoid sickness, and pollution. The result of this study should be presented to the local government officials to strengthen environmental policies and training of the local community and, if possible, draft resolutions of environmental programs for Barangay Sinundolan, San Remigio, Antique, Philippines. In addition, the faculty of maritime studies should participate in the community extension services to exercise their social responsibilities. These recommendations are aligned with the United Nations’ Sustainable Development Goals (SDG) 2030: SDG 3-Good health and well-being, SDG 6-Clean water and sanitation, SDG 13-Climate action, SDG 14-Life below water, and SDG 15-Life on land

REFERENCES

- Avsar, Y., Uksal, F. & Bilgili, L. (2022) Environmental gains in collecting packaging waste obtained in Uskudar district by changing the collection type. *Journal of the Air & Waste Management Association*, 72:3, 281-293, DOI: [10.1080/10962247.2021.1972054](https://doi.org/10.1080/10962247.2021.1972054)
- Altin, A., Tecer, S., Tecer, L., Altin, S., & Kahraman, B.K. (2014). Environmental awareness level of secondary school students: A case study in Balikesir (Turkiye). *Procedia - Social and Behavioral Sciences* 141 (2014) 1208 – 1214. www.sciencedirect.com
- Chung-Ling, C. & Chen-Hao T. (2016) Marine environmental awareness among university students in Taiwan: a potential signal for sustainability of the oceans. *Environmental Education Research*, 22:7, 958-977, DOI: [10.1080/13504622.2015.1054266](https://doi.org/10.1080/13504622.2015.1054266)
- Galon, D.I., & Alimen, R.A. (2017). Environmental management among residents at brgy. taloc, bago city, negros occidental, philippines. *College of Business Research Journal, JBLFMU-Molo*. Volume 1, No. 1, page 49-61. Iloilo City, Philippines.
- Gay, L.R., Mills, G.E., & Airasian, P. (2006). *Education research, competencies for analysis and application*. 8th Ed. New Jersey: Perason Education, Inc.
- Gayo, R.G., & Cajutol, J.C. (2013). Level of awareness on solid waste management among residents of panay, capiz. *JBLFMU – Research Journal*, Volume 6, No. 1, 91-104. Iloilo City, Philippines.
- Kamaruddin, S.M. et al. (2016). Community awareness on environmental management through local agenda 21 (LA21). *Procedia - Social and Behavioral Sciences* 222 (2016) 729 – 737. www.sciencedirect.com
- Keles, R. (2012). The quality of life and the environment. *Procedia - Social and Behavioral Sciences* 35 (2012) 23 – 32. www.sciencedirect.com
- Lamprea, L.L.G. (2019). *Awareness, attitude, and practices on solid waste: Bases for an enhanced environmental management system*. Unpublished Doctor of Philosophy in Maritime Education (Curriculum & Assessment) Dissertation. John B. Lacson Foundation Maritime University (Arevalo), Inc., Iloilo City, Philippines.
- Martir, C.G. (2014). Marine environmental protection: Awareness, practices, issues, and concerns among third year students in selected maritime higher education institutions (MHEIs). *JBLFMU Graduate School Research Journal*, Volume 7, No. 1, page 33. Iloilo City, Philippines.
- Mei, N. S. et al. (2016). Environmental awareness and behaviour index for Malaysia. *Procedia - Social and Behavioral Sciences* 222 (2016) 668 – 675. www.sciencedirect.com
- Orquinaza, N.B., and Cantor, S.S. (2017). Waste management among the residents of Barangay pangpang norte, mambusao, capiz, philippines. *College of Business Research Journal, JBLFMU-Molo*. Volume 1, No. 1, page 49-61. Iloilo City, Philippines.
- Solis, T.A., Martir, C.G., and Sepaya, J.S. (2013). Environmental knowledge among residents of buenavista, province of guimaras. *JBLFMU – Research Journal*, Volume 6, No. 1, 27-59. Iloilo City, Philippines.
- Yan, G., et al. (2012). Change trend of public environmental awareness in shanghai (2007 to 2011). *Energy Procedia* 16 (2012) 715-721. www.sciencedirect.com