

Citizens' Assessment of the Environmental Management Programs Delivered by the Local Government Unit of Lezo, Aklan

¹Jyanee Loi D. Yecla, ²Cecilia T. Reyes, ³Cecile O. Legaspi & ³Anna Mae C. Relingo

Abstract

The performance in the delivery of environmental management programs of the local government of Lezo, Aklan, Philippines was evaluated in this study. Through the Multi-Stage Random Probability Sampling technique, 150 respondents from barangays' share in the municipal population were determined based on the Philippine Statistical Authority's Data on Census Population and Housing for the 2015. The probability respondents were selected using the Kish Grid where female respondents were given even numbered questionnaires while male respondents were assigned odd numbers. The four major core concepts namely awareness, availment, satisfaction and need for action were used in measuring the ratings presented in frequency and percentage distributions. Interview was also conducted to gather reasons for their ratings. The study inferred that majority of the respondents were highly aware of the community-based greening project. However, low awareness was attained on projects such as air pollution control program and waste-water management. A high percentage of respondents have availed the environmental management programs except for solid waste management. Overall, majority of the respondents were satisfied of the environmental management programs rendered by the local government unit and therefore needs less action. It is recommended that the local government unit strengthen air pollution control program.

Keywords: *environmental management, awareness, availment, satisfaction, need for action*

Article History:

Received: August 10, 2022

Accepted: November 10, 2022

Revised: September 21, 2022

Published online: November 12, 2022

Suggested Citation:

Yecla, J.D., Reyes, C.T., Legaspi, C.O. & Relingo, A.C. (2022). Citizen's Assessment of the Environmental Management Programs Delivered by the Local Government Unit of Lezo, Aklan. *International Journal of Academe and Industry Research*, Volume 3 Issue 4, pp. 1 - 20. DOI: <https://doi.org/10.53378/352933>

About the authors:

¹Corresponding author. Master of Science in General Science, Instructor I, Aklan State University

²Doctor of Veterinary Medicine, Professor VI, Aklan State University

³Doctor of Philosophy, Professor VI, Aklan State University

** This paper is presented in the 3rd International Conference on Multidisciplinary Industry and Academic Research.*



© The author (s). Published by Institute of Industry and Academic Research Incorporated.

This is an open-access article published under the Creative Commons Attribution (CC BY 4.0) license, which grants anyone to reproduce, redistribute and transform, commercially or non-commercially, with proper attribution. Read full license details here: <https://creativecommons.org/licenses/by/4.0/>.

1. Introduction

Lezo is a fifth-class municipality in the Philippine province of Aklan. According to the 2015 census, it has a total population of 15,224 people. Based on the Philippine Statistics Authority (PSA), the municipality has a land area of 23.40 square kilometers, accounting for 1.28 percent of Aklan's total area of 1,821.42 square kilometers. It is a little village, but there is more to see than meets the eye. Pottery is the leading industry in the municipality contributing to the residents' lives and revenue. Residents near the river bank make a living by handcrafting clay pots and jars from locally available materials. Buying directly from the pot makers saves money; so, the town is frequented for these beautifully hand-crafted pots.

Citizens are the heart of public governance. As the receiver of the government's programs and services, they provide the most reliable assessment of how efficient the service delivery is. The nature of public opinion is determined by several factors that include the ways in which citizens use public services (Brown, 2007; Yecla & Ortega, 2020). By virtue of Department of Interior and Local Government (DILG) Memorandum Circular 2016-57, the Citizens' Satisfaction Index System (CSIS) was pilot tested to 31 municipalities in the country to equip the tools and procedures for wider implementation in the succeeding years. Periodically, Department of Interior and Local Government (DILG) identifies an LGU which has no prior CSIS survey implementation. Local resource institutes are involved to gather data and interpret the results for research and development purposes.

The performance of the LGU of Lezo, Aklan in the delivery of environmental management programs was measured adopting the CSIS. The CSIS was created as a system of methods to generate citizen input on local government service delivery performance and citizen satisfaction. It serves as a tool for gathering relevant information in gauging citizen satisfaction, which can then be used to establish the agenda for LGU economic and human development plans and goals.

2. Literature review

Environmental management is a vital concern that should encompass efficient and research-based policies and approaches. The world has been threatened with serious calamities and disasters brought by climate change that has seriously threatened our resources. Climate change can be largely traced back to human activities including handling and disposal of solid

waste. It is but practical to conduct researches relevant to this that would be solid base to formulate and implement policies to preserve and conserve the environment.

One important hazard to environmental and human well-being is indiscriminate solid waste disposal (Ejaz et al., 2010; Neller & Neller, 2015; Domato, 2002). The country generates an average of 0.3 to 0.7 kg of rubbish every day (Bennagen et al., 2002). The ongoing population expansion, the rising generation rate of every Filipino, and the kinds of solid waste generated pose a management challenge for both national and local government entities (Calderon, 2000). The key drawbacks of waste management, particularly in developing nations, are poor garbage collection systems and shortage of disposal sites (Reyes et al., 2013). Consequently, in low-income countries, waste collection rates are frequently less than 70% (Modak, 2010).

The Philippine government launched the National Greening Program (NGP) in 2011, a massive forest restoration program with the goal of planting 1.5 billion trees in 1.5 million hectares by 2016 to restore the environmental balance of deforested natural forests and enhance the socioeconomic status of participating farmers (Goltiano et al., 2021). The NGP is a Forest and Landscape Restoration (FLR) effort that aims to expand forest cover on degraded lands in order to reduce poverty, increase food security, conserve biodiversity, and mitigate climate change. Despite the incorporation of an explicit biodiversity aim in the NGP, the Philippine government is struggling to build initiatives that specifically address biodiversity restoration (von Kleist et al., 2021). On the other hand, green space, particularly community gardens, has received more attention in urban development during the last decade (Haaland & van den Bosch, 2015; Sartison & Artmann, 2020). A matching and developing evidence base has emerged in relation to community gardens and related health outcomes (Lovell et al., 2014).

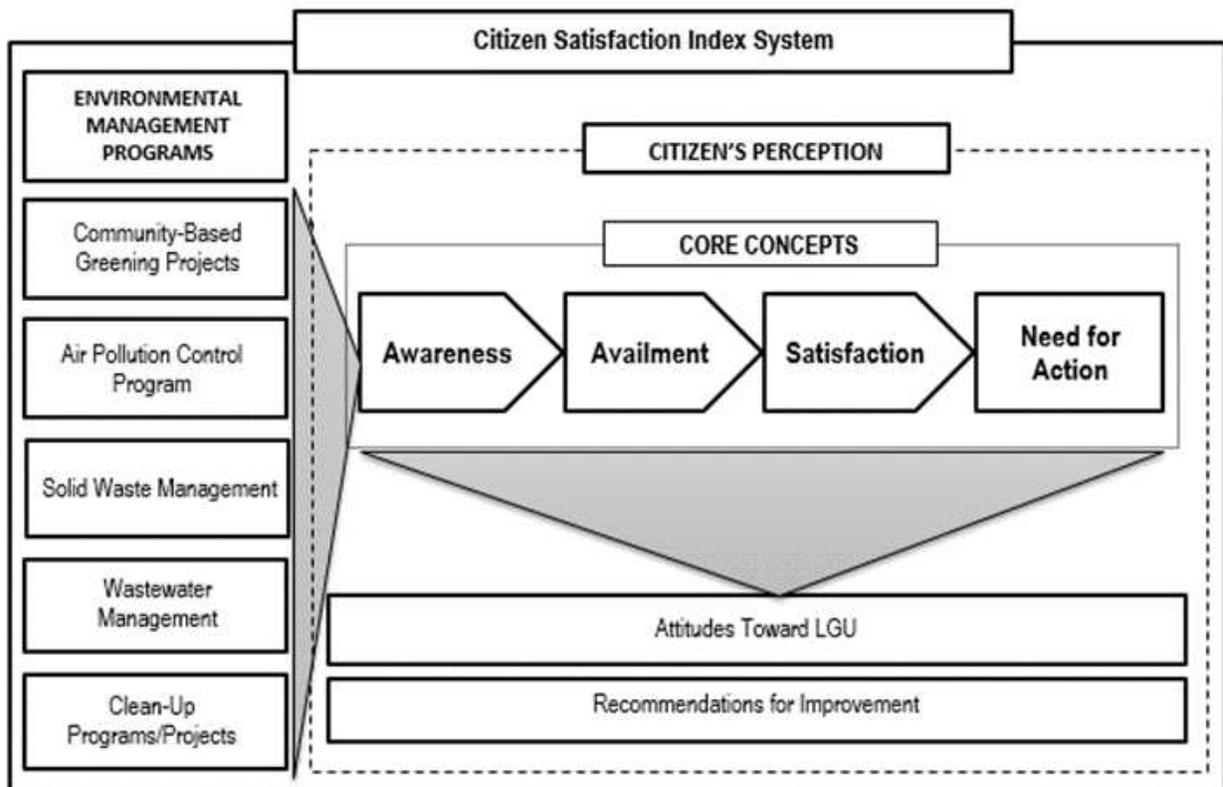
Public service is an important aspect of all societies (Osborne, 2020). They cover a wide range of topics, including human services, community development, welfare, and many others (Osborne, 2020). Citizen participation can boost governmental legitimacy by encouraging decision-making that reflects common beliefs and preferences (Brajaktari, 2016). The CSIS data serve as a guide for local governments in establishing well-informed policies and management decisions related to their duty of providing basic services to the people (DILG, 2016; Reyes et al., 2021). It can take the pulse of the people in order to be responsive to a larger portion of the population. The data can help reinforce decisions on policies and programs that focus on services

that are regarded to be lacking and those that have a big impact on citizen satisfaction. The CSIS have numerous uses for various stakeholders pursuing relevant contribution to attain socio-economic development goals both in the local and national arena. It has multiple applications for diverse stakeholders pursuing appropriate contributions to achieve socioeconomic development goals both locally and nationally. Thus, it may make suggestions to LGUs in developing a Citizen-driven Priority Action Plan (CPAP) focused at prioritizing interventions that address areas for improvement in public service delivery. The national government can give better informed oversight supervision and technical-administrative support to LGUs with knowledge based on citizen-driven assessments of basic services.

Conceptual framework

Figure 1

CSIS Conceptual Framework



Source: <https://csis.dilg.gov.ph>

In terms of the CSIS, the conceptual framework in figure 1 describes the range of concepts employed in gauging citizen satisfaction. The dotted line group is made up of the basic principles in assessing satisfaction at the service or program level. The key notions have logical ties with one another. The dotted line delineates the boundaries of public perception of service delivery, dividing the inner conceptions from the socio-demographic profile and the services actually delivered by their local governments.

Within the citizen's perception domain are the fundamental concepts, reasons that substantiate the core concepts, general attitudes of citizens toward the LGU, overall satisfaction, overall need for action, and suggestions for improvement. These themes comprise the key findings of the CSIS survey because they represent the primary information acquired from residents to evaluate how well public services provided by their LGUs are accepted or perceived in their opinion. Above it is the socio-demographic and the housing profiles, which provide information on the citizen.

Anchored on the concept of CSIS, this study assessed the performance of the Lezo, Aklan LGU in implementing environmental management programs in the locality. Specifically, it aimed to determine citizens' rating and their reasons in the delivery of environmental program as to community-based greening projects, air pollution control program, solid waste management, waste-water management, and clean-up programs/projects. Moreover, this sought to determine the solid waste management practices of the citizens and their recommendations to improve environmental management programs.

3. Methodology

The study utilized mixed method research design. The survey used a structured questionnaire validated by the DILG, the same instrument was utilized to LGUs where CSIS was implemented. In addition, face-to-face interview was also conducted to gather their reasons behind their ratings.

This study assessed and measured several variables to determine the level of the LGU performance. Through the researcher-made questionnaire, the following were determined:

Awareness. It refers to the presence of knowledge about the service offered by the local government unit. Before getting into satisfaction, it is crucial to first determine whether they are aware that the service is delivered by their local government unit.

Availment. It refers to the respondent's contact with local government through programs, projects, and services that are being implemented or offered. This could suggest a desire among citizens to use public services. Only people who claimed to be aware of the service would be queried about availability for service indicator level assessments.

Satisfaction. It refers to a citizen's contentment with their experience in utilizing or contacting the services of the local government. In some circumstances, this may also indicate the citizen's satisfaction with the services they were able to access. Only individuals who have used the service are asked about their satisfaction in service indicator level assessments.

Need for Action. The citizen's evaluation of whether or not a certain service requires specific and decisive steps for improvement or reform is referred to as the need for action. This concept is combined with satisfaction to present readers with an extra dimension that could help optimize service prioritization for future use.

As specified in the DILG Memorandum Circular No. 2012-113, 150 probability respondents (8 years and above) residing in the different barangays of Lezo for not less than six months. They were selected using a multi-staged random probability sampling method. At a sample size of 150 respondents, margin of error (MOE) is +/- 6% at 95% confidence level (CL). For data analysis, percentage scores and adjectival ratings (High: Equal or more than 50%+MoE; (Low: Less than 50%+MoE) were used.

4. Findings and Discussion

Table 1 displays the respondents' knowledge about the Municipality of Lezo's various environmental management projects. It should be highlighted that nearly three-quarters of the respondents (109 or 72.67 %) were well-versed in the community-based greening project. This was followed by 89 (59.33 %) who were extremely informed about solid waste management and clean-up programs. On the other side, awareness of programs such as air pollution control (61 or 40.67 %) and waste water management was poor (35 or 23.33%).

Table 1*Awareness on Environmental Management Projects/ Program*

Project/ Program	Yes (F)	No (F)	Awareness			
			N	%	Cut- Off (%)	Interpretation
Community-based greening projects	109	41	150	72.67	58.00	High
Air Pollution Control Program	61	89	150	40.67	58.00	Low
Solid Waste Management	89	61	150	59.33	58.00	High
Waste Water Management	35	115	150	23.33	58.00	Low
Clean-up Programs/	89	61	150	59.33	58.00	High

It can be drawn from the ratings that there should be intervention to improve citizen's knowledge on air pollution control and waste water management. Information regarding air pollution and health hazards focuses on individual risk behaviors, but it is communicated through channels that are unlikely to reach the most vulnerable groups (Ramirez et al., 2019). Further, awareness on waste water management was assessed to be low. In the Philippines, wastewater disposal has become a huge concern because just 10% of the country's wastewater is processed and 58% of the groundwater has been recognized as hazardous. Furthermore, just 5% of the total population is connected to sewers (Claudio, 2015). To ensure long-term development, it is vital to protect water resources and construct an excellent local government in the health, environment and tourism sectors.

Table 2*Availment on Environmental Management Projects/ Program*

Project/ Program	Yes (F)	No (F)	Awareness			
			N	%	Cut- Off (%)	Interpretation
Community-based greening projects	81	28	109	74.31	59.39	High
Air Pollution Control Program	50	11	61	81.97	62.55	High
Solid Waste Management	40	49	89	44.94	60.39	Low
Waste Water Management	28	7	35	80.00	66.57	High
Clean-up Programs/Projects	64	25	89	71.91	60.39	High

From respondents who were aware of the environment management projects of the municipality, a high availment rating was attained specifically on projects such as air pollution control program (50 or 81.97%), waste water management (28 or 80%), community-based

greening projects (81 or 74.31%), and clean-up programs (64 or 71.91%). The project less availed was on solid waste management as revealed by 40 or 44.9%.

Table 3

Reasons for Non-Availment of Environmental Management Programs/Projects

Reason	F	%
Community-Based Greening Project		
Busy	11	39.29
Not interested	6	21.43
No program offered in the Barangay	6	21.43
Only 4P's participates	3	10.71
Barangay does the service	2	7.14
Air Pollution Control Program		
Laws are not followed	4	36.36
Too old to be involved in the program/physically unfit	3	27.27
Not Interested	2	18.18
Minimal Pollution in the Area	1	9.09
Not implemented in the area	1	9.09
Solid Waste Management		
No proper waste segregation and Strict/Firm implementation of the program	20	40.82
No garbage collector	11	22.45
Individual/Own waste segregation/ Disposal	11	22.45
Laws are not followed	5	10.2
Not offered in the barangay	1	2.04
I have helper in the house.	1	2.04
Waste-Water Management		
Not implemented	4	57.14
Needs improvement/ Maintenance	2	28.57
Not Interested	1	14.29
Clean-Up Programs/Projects		
Not participating/ Busy	9	36
Kanya-Kanya Clean-up Mentality/ Individual/ Own way of segregation	6	24
The Program/Project is not implemented or offered in the Barangay	4	16
Not all area is equipped with drainage system	2	8
No Strict/ Firm Implementation of the program	2	8
4P's only	1	4
Not Interested	1	4

As the result revealed that solid waste management was least availed by the citizens, table 2 shows the non-availment reasons where most of the citizens observed that the policies relevant to solid waste management is not properly implemented in the locality. Waste generation in the Philippines has increased rapidly due to rapid economic and population growth, contributing to environmental deterioration (Castillo & Otoma, 2013). Despite the introduction

of the Ecological Solid Waste Management Act of 2000, Municipal Recovery Facilities (MRFs) and sanitary landfills serve only around 21% and 4% of the country's Local Government Units (LGUs), respectively. The country's solid waste management (SWM) may still be regarded ineffective or inefficient.

Out of the 28 respondents who did not avail community-based greening projects of the local government, most of them (11 or 39.29%) were busy, six each or 21.43% were not interested and there was no program offered in the barangay while three or 10.71% indicated that only the Pantawid Pamilyang Pilipino Program (4P's) beneficiaries were involved in this project. Only two or 7.14% of the respondents mentioned that the barangay does the service on greening project.

In terms of air pollution control program, the respondents signified six reasons of non-availment. The first reason was the laws were not followed (4 or 36.36%), secondly, three or 27.27% of the respondents were too old to be involved in the program/ physically unfit and two or 18.18% were not interested on such program. Only one each or 9.09% who said that there was minimal pollution in the area and the program was not implemented in the area.

In terms of the solid waste management program, most of the respondents (20 or 40.82%) did not avail since there was no proper waste segregation and strict/firm implementation of the program. This situation is primarily observed in areas away from town where many people still burn their garbage or improperly dispose solid waste. As per on-site observation, this is contributed by the lack of facilities such as MRF (Material Facility Recovery), no garbage collector assigned and no on-site personnel to monitor those individuals who violate. Eleven each or 22.45% signified that there was no garbage collector and they have their own waste segregation/disposal. Another five or 10.30% did not avail because laws are not followed and one each or 2.04% said that the service was not offered in the barangay and he/she has a helper.

In terms of waste water management, three reasons were mentioned by seven respondents for their non-availment. The majority of them (four or 57.14%) revealed that the program was not implemented. Two or 28.57% of them said that the program needs improvement/maintenance and only one or 14.29% was not interested of the service.

The reasons why the respondents did not avail of the clean-up program was that they were busy/did not participate as mentioned by 9 or 36% of them. This was followed by 6 or 24% who indicated that they individually cleaned their surroundings and have their own way of waste

segregation. Only one each or 4% who said that clean-up drive was for the Pantawid Pamilya Pilipino program beneficiaries only and he/she was not interested.

Table 4

Satisfaction on Environmental Management Projects/ Programs

Project/Program	Yes (F)	No (F)	Satisfaction			
			N	%	Cut-Off (%)	Interpretation
Community-based greening projects	72	9	81	88.89%	60.89	High
Air Pollution Control Program	42	8	50	84.00%	63.86	High
Solid Waste Management	30	10	40	75.00%	65.50	High
Waste Water Management	21	7	28	75.00%	68.52	High
Clean-up Programs/Projects	57	7	64	89.06%	62.25	High

All the services gained high satisfaction rating. The respondents (57 or 89.06%) were highly satisfied of the clean-up program. This was closely followed by 72 or 88.89% who were highly satisfied of the community-based greening project. Another 42 or 84% said they were highly satisfied of the air pollution control program while 30 or 75% and 21 or 75% were contented of the solid waste management and waste water management programs, respectively. This indicates that the environmental management projects of the Municipality of Lezo were properly implemented by the different offices involved.

The reasons for satisfaction with community-based greening project are shown in Table 9. It could be noted that one-half of the respondents (36 or 50%) were satisfied of the service because tree planting activities were held. Another 15 or 20.83% signified that the service was beneficial to the environment/people, 13 or 18.06% indicated that the service was properly implemented while five or 6.94% said that the project provided safety/prevents flood and two or 2.78% manifested that the service encourages public participation. There was only one or 1.39% of the respondents who indicated that the community people were educated through the project.

The table further shows the reasons why the respondents were satisfied with the air pollution control program. Clean and safe air was the reason why the majority (24 or 57.14%) of the respondents were satisfied of the air pollution control program. Others reasons are as follows: prevent sickness (nine or 21.43%), smoking was prohibited (three or 7.14%) and encouraged public participation (two or 4.76%).

Table 5*Reasons for Satisfaction with Environmental Management Programs/Projects*

Reason	F	%
Community-based greening projects		
Tree planting activities are held	36	50
Beneficial to the environment/people	15	20.83
Properly implemented	13	18.06
Provides safety/prevents flood	5	6.94
Encourage public participation	2	2.78
Educates people in the community	1	1.39
Air Pollution Control Program		
Clean and safe air	24	57.14
Prevent Sickness	9	21.43
Smoking is prohibited	3	7.14
Encourage public participation	2	4.76
Beneficial to the environment	1	2.38
Ensures cleanliness	1	2.38
Prevents cutting of trees	1	2.38
Properly implemented	1	2.38
Solid Waste Management		
Clean surroundings	8	26.67
Segregation is practiced	6	20
Everyone participates	5	16.67
Proper collection of garbage	4	13.33
Properly implemented	3	10
Regular collection of garbage	2	6.67
Educates people in the community	1	3.33
Prevent pollution/health issues	1	3.33
Waste Water Management		
Proper drainage/sewage system	10	47.62
Maintained	9	42.86
Beneficial	1	4.76
Properly Implemented	1	4.76
Clean-up Programs/ Projects		
Clean-up drives are held	23	40.35
Clean surroundings	17	29.82
Everyone participates	4	7.02
Water is safe	4	7.02
Beneficial to the environment	4	7.02
Properly implemented	4	7.02
Proper collection of garbage	1	1.75

In terms of the solid waste management service of the Municipality of Lezo, clean surrounding was one of the reasons why five or 26.67% of the respondents were satisfied. Other reasons are: segregation was practiced (six or 20%), everyone participated in the program (five or 16.67%), proper collection of garbage (four or 13.33%), properly implemented program (three

or 10%), regular collection of garbage (two or 6.67%) and people in the community were educated and pollution /health issues were prevented (one or 3.33%).

In terms of the satisfaction with the waste water management service, most of the respondents (10 or 47.62%) indicated that there was proper drainage/sewage system, nine or 42.86% were satisfied because the waste water management was properly maintained. One each or 4.76% replied that the service was beneficial and properly implemented.

Meanwhile, out of the 57 respondents who availed of the clean-up program, most of them (23 or 40.35%) were satisfied because clean-up drives were held and 17 or 29.82% who said that the surroundings were cleaned. Only one or 1.75% mentioned that there was proper collection of garbage.

Table 6

Reasons for Dissatisfaction with Environmental Management Programs/Projects

Reason	Frequency
Community-based greening projects	
No regulation implemented	6
Not participating	3
Air Pollution Control Program	
Still polluted	5
No regulation imposed	3
Solid Waste Management	
Proper Segregation was not implemented	5
Irregularity/Late collection	4
No Dumping Site	1
Waste Water Management	
Poor maintenance	6
People are not obeying laws	1
Clean-up Programs/ Projects	
Not Organized	4
Not held regularly/Poor maintenance	3

Table 6 shows the reasons for dissatisfactions with the availed community program. The nine respondents who were dissatisfied of the community-based greening project, six of them

revealed that there was no regulation that was implemented in their locality. The other three respondents said they did not participate in this service area.

Out of the eight respondents who were dissatisfied with the air pollution control program, five of them said that the locality is still polluted while three signified that there was no imposed on such service.

Out of ten respondents who were dissatisfied of the solid waste management services, five of them indicated that proper segregation was not implemented. Another four mentioned that there was irregularity/late collection of waste and one respondent indicated that there was no dumping site.

Of the seven respondents who were not satisfied with the waste water management services, almost all (six or 85.70%) mentioned that the service facilities were not poorly maintained. Only one or 14.30% signified that the people do not obey laws.

There were only two reasons why the respondents were not satisfied with the clean-up project of the Municipality of Lezo. The majority (four or 57.14%) indicated that the project was not organized. There were three or 42.86% who manifested that the program was not done/held regularly/poor maintenance of the program.

Table 7

Need for Action on Environmental Management Projects/ Programs

Project/Program	Yes (F)	No (F)	Satisfaction			
			N	%	Cut-Off (%)	Interpretation
Community-based greening projects	30	51	81	37.04	60.89	Low
Air Pollution Control Program	19	31	50	38.00	63.86	Low
Solid Waste Management	22	18	40	55.00	65.50	Low
Waste Water Management	10	18	28	35.71	68.52	Low
Clean-up Programs/Projects	16	48	64	25.00	62.25	Low

From the respondents who were aware and availed the services on environmental management by the LGU, most of the respondents said that the LGU rendered the service properly and needed less action. Only 22 or 55% of the respondents who signified that solid waste management should need more improvement. The rest of the projects under the environmental management service do not need any appropriate action as revealed by more than majority of the respondents.

It is observed that the greening projects spearheaded by the national government linked with other government initiatives such as 4Ps, Cash for Work and DOLE-TUPAD programs have significantly contributed to the awareness and visibility of community-based greening projects in LGUs. The continuous population expansion, the rising generation rate of every Filipino, and the kinds of solid waste generated pose a management challenge for both national and local government entities. Inefficient waste management in the country causes trash to pile up, contributing to the deterioration of the country's environment and having an influence on public health (Macawile & Su, 2009).

Table 8*Solid Waste Management Practices*

Indicators	F	%
Garbage Disposal		
Collect	3	2
Burn	96	64
Bury	62	41.33
Throw	3	2
Others	1	0.67
Who Collects The Garbage		
Municipality	2	66.67
Barangay	1	33.33
Private collector	0	0
Others	0	0
Practice of Waste Segregation		
Yes	2	66.67
No	1	33.33
Regularity of Garbage Collection		
Everyday	1	33.33
Once a week	2	66.67

The data in table 8 reflects how the respondents disposed their garbage. More than majority (96 or 64%) were burning their garbage while 62 or 41.33% bury them on the ground. Three each or 2% collected and just throw their garbage. One or 0.67% of the respondent attested that the method of disposing the garbage was not mentioned by the other respondents. Improper solid waste disposal can endanger the environment and human health. Direct health concerns

mostly affect personnel in this industry, who must be kept as far away from garbage as possible. Open burning and open dumping of MSW pose serious risks to human health and the ecosystem as toxic compounds are released into the atmosphere and the environment, including dioxins and dioxin-like compounds (Talang & Sirivithayapakorn, 2021). To address the country's growing solid waste problem, the government of the Philippines enacted the Ecological Solid Waste Management Act of 2000, also known as Republic Act no. 9003, declaring the state's policy to adopt a systematic, comprehensive, and ecological solid waste management program that includes the establishment of the necessary institutional mechanisms. However, the number of those who burn their garbage is still notably high especially those who live far from the city where garbage collection services of the LGU is not implemented and almost non-existence of Material Recovery Facility (MRF).

Results further show the respondents' practice on the collection of garbage. Among the three respondents who signified that their garbage was collected, more than majority (2 or 66.67%) said that the municipality gathered the garbage. Only 1 or 33.33% who expressed that it was collected by the barangay. Inefficient waste collection and lack of disposal facilities are the common problems in developing countries (Atienza, 2011). This situation has compromised the environmental health status of the countries which branches out to numerous and more serious threat to the environment.

Proper waste disposal is among the most vital aspects of any institution. As to the response on whether or not the respondents practiced waste segregation, more than majority (2 or 66.67%) were practicing the technique. Only 1 or 33.33% who did not practice waste segregation.

When asked on the regularity of garbage collection, more than majority (2 or 66.67%) stated that their garbage was collected once a week. Only 1 or 33.33% responded that garbage collection was done every day.

Table 9

Overall Satisfaction with Regards to Environmental Management Programs/Projects

Response	F	%	Interpretation
Satisfied	104	75.36	High
Not satisfied	34	24.64	

As shown in Table 9, three-fourths of the respondents (104 or 75.36%) were highly satisfied of the environment management programs of the Municipality of Lezo. Only 34 or 24.64% were dissatisfied. Thus, a high adjectival rating was attained.

Table 10*Recommendations from Citizens*

Recommendations	F	%
Conduct Seminars/Trainings and encourage public participation on the services and programs of the LGU	21	14.00
Organize Clean and Green projects	20	13.33
Improve programs and services	19	12.67
Sustain those beneficial environmental programs	18	12.00
Strictly implementation of waste segregation	13	8.67
Collect garbage regularly	11	7.33
Proper implementation of environmental programs and services	9	6.00
Develop waste management programs	6	4.00
Entail discipline to the public	5	3.33
Cooperation of the People in the Community	5	3.33
Reforestation	4	2.67
Proposed Funds/Budget for the Projects of LGU	4	2.67
Implement Dumping Site	4	2.67
Develop environmental ordinance in the area	3	2.00
Construct/ Maintain proper drainage and sewerage	2	1.33
Strictly Implementation/ Completion of all the repair/construction Projects of the LGU	2	1.33
Awareness of Barangay Officials to their Duties and Responsibilities	2	1.33
Hire more employees	1	0.67
Regular conduct of cleaning program in the barangay	1	0.67

In table 10, the recommendations of the respondents are revealed. Conduct seminars/training and encourage public participation on the services and programs of the Municipality of Lezo was recommended by 21 or 14% of the respondents. A closer number (20 or 13.3%) suggested organizing clean and green projects, 19 or 12.67% said that the programs and service must be improved, 18 or 12% proposed that the LGU should sustain those beneficial environmental programs, 13 or 8.67% recommended to sustain those beneficial environmental programs while 11 or 7.33% suggested that garbage should be collected regularly. Only one each

or 0.67% who recommended hiring more employees and regular conduct of cleaning program in the barangay should be done.

5. Conclusion

The citizens' satisfaction on environmental management programs is satisfactory. This indicates that the citizens' rating with the Lezo's environment related programs/services generated good reactions. On-going intervention and additional effort toward improvement are still necessary. The Municipality of Lezo must enhance interventions for solid waste management and wastewater management.

Respondents were mostly aware of the environmental management particularly the community-based greening projects, solid waste management and clean-up programs/projects. They were less aware on programs to control air pollution and wastewater management. Therefore, the Municipality of Lezo should improve public awareness along these programs.

On the other hand, most of the citizens still burn their garbage. Burning wastes such as plastic harms the environment by releasing hazardous compounds that pollute our air. Humans and animals can breathe polluted air, which is then deposited in the soil, surface water, and on plants. This pose a long-term health and environmental issues that would lead to more serious threat to humanity.

6. Acknowledgement

The researchers would like to acknowledge the Department of Interior and Local Governance (DILG) as the funding agency and Aklan State Univerisity (ASU) administration for the support. This publication is to give thanks for all the support on the late Engr. Tomas O. Ortega⁽⁺⁾ that made this research possible.

References

Atienza, V. (2011). Review of the waste management system in the Philippines: initiatives to promote waste segregation and recycling through good governance. *Chiba, Japan, Institute of Developing Economies, Japan External Trade Organization.*

- Bennagen, M. E., Nepomuceno, G. and R. Covar (2002). *Solid waste segregation and recycling in Metro Manila: Household attitudes and behavior*. Economy and Environment Program for Southeast Asia (EEPSEA) Research Report 2002-RR3.
- Brajaktari, E. (2016). *Citizen engagement in public service delivery. The critical role of public officials*. Global Centre for Public Service Excellence: Singapore.
- Calderon, R. (2000). The garbage dilemma in Dasma. *Heraldo Filipino* 14(4): 2.
- Castillo, A. L., & Otoma, S. (2013). Status of solid waste management in the Philippines. In *Proceedings of the annual conference of Japan Society of Material Cycles and Waste Management the 24th annual conference of Japan Society of Material Cycles and Waste Management* (p. 677). Japan Society of Material Cycles and Waste Management.
- Census of Population (2015). "Region VI (Western Visayas)". Total Population by Province, City, Municipality and Barangay. PSA. Retrieved 5 April 2018.
- Claudio, L. E. (2015). Retrieved from <https://docplayer.net/20107578-Waste-water-management-in-the-philippines-lormelyn-e-claudio-regional-director-environmentalmanagement-bureau-region-3-23-april-2015.html>. February 8, 2019
- Department of Interior and Local Governance. *CSIS Manual, 2019*. Bureau of Local Government Supervision,
- Department of the Interior and Local Government, Quezon City, Philippines, Ch. 3 – 5.
- Domato, A. (2002). International environmental governance—its impact on social and human development. H. Ginkel, B. Barrett, J. Court, & J. Velasquez (Eds.), *Human development and the environment: challenges for the United Nations in the new millennium* (pp. 284-301). The United Nations University Press.
- Dungo, C. (2001). *Only one sanitary landfill for RP trash*. The Manila Times, December 14 issue, pp. 1 and 8.
- Ejaz, N., Akhtar, N., Hashmi, H. N., & Naeem, U. A. (2010). Environmental impacts of improper solid waste management in developing countries: A case study of Rawalpindi city. In C. A. Brebbia (Ed.), *The sustainable world* (pp. 379-387). Southampton, England: WIT Press. Retrieved from DOI: 10.5772/48169
- Goltiano, H., Gregorio, N., Pasa, A., Herbohn, J., Tripoli, R., & Valenzona, J. (2021). The effect of the implementation of the National Greening Program on the socioeconomic status of smallholders in Caibiran, Biliran, Philippines. *Small-scale Forestry*, 20(4), 585-604.

- Haaland, C., & van Den Bosch, C. K. (2015). Challenges and strategies for urban green-space planning in cities undergoing densification: A review. *Urban forestry & urban greening*, 14(4), 760-771.
- Lovell, R., Husk, K., Bethel, A., & Garside, R. (2014). What are the health and well-being impacts of community gardening for adults and children: a mixed method systematic review protocol. *Environmental Evidence*, 3(1), 1-13.
- Macawile, J., & Su, G. (2009). Local government officials' perceptions and attitudes towards solid waste management in Dasmarinas, Cavite, Philippines. *Journal of Applied Sciences in Environmental Sanitation*, 4(1), 63-69.
- Modak, Prasad (2010). *Chapter 5-Municipal Solid Waste Management: Turning waste into Resources*. Shanghai Manual – A Guide for Sustainable Urban Development in the 21st Century. United Nations.
- Neller, A. H., & Neller, R. J. (2009). Environment well-being and human well-being. In R. C. Elliot (Ed.), *Institutional issues involving ethics and justice*. Volume 2, (p.137) Oxford, England: Eolss.
- Osborne, S. P. (2020). *Public service logic: creating value for public service users, citizens, and society through public service delivery*. Routledge.
- Ramírez, A. S., Ramondt, S., Van Bogart, K., & Perez-Zuniga, R. (2019). Public awareness of air pollution and health threats: challenges and opportunities for communication strategies to improve environmental health literacy. *Journal of Health Communication*, 24(1), 75-83.
- Republic Act No. 1414 - *An Act to Create the Province of Aklan*. Chan Robles Virtual Law Library. 25 April 1956. Archived from the original on 4 March 2016. Retrieved 15 July 2018.
- Reyes, C. T., Legaspi, C. O., Abayon, C. G., Ortega, T. O., Relingo, A. M. C., Teruel, M. E. M., & Yecla, J. L. D. (2021). Local Government Unit's Support to Educational Programs as Viewed by the Citizens: The Case of Lezo, Aklan. *International Journal of Emerging Issues in Early Childhood Education*, 3(1), 35-43.
- Reyes, P.B., Furto, M.V. 2013. Greening of the Solid Waste Management in Batangas City. *Journal of Energy Technologies and Policy* 3: 187-194.

- Sartison, K., & Artmann, M. (2020). Edible cities—An innovative nature-based solution for urban sustainability transformation? An explorative study of urban food production in German cities. *Urban Forestry & Urban Greening*, 49, 126-604.
- Talang, R. P. N., & Sirivithayapakorn, S. (2021). Environmental and financial assessments of open burning, open dumping and integrated municipal solid waste disposal schemes among different income groups. *Journal of Cleaner Production*, 312, 127761.
- Von Kleist, K., Herbohn, J., Baynes, J., & Gregorio, N. (2021). How improved governance can help achieve the biodiversity conservation goals of the Philippine National Greening Program. *Land Use Policy*, 104, 104312.
- Yecla, J. L., & Ortega, T. (2020). Local Government Unit's Health Services as Viewed by the Citizens of Banga, Aklan. *Journal of Academic Research*, 5(1), 1-14