

Waste Management System of the Residents of
Brgy. Mojon-Tampoy: An Analysis

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Practical Research 1

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ABSTRACT

The thesis focuses the system of waste management of the residents of Brgy. Mojon-Tampoy and the practices they perform regarding the topic. As a case study, the research explores the in-depth aspects that define the issue of the barangay. In the theoretical part, the idea of Responsible Environmental Behavior is described. Previous studies are discussed and showed different findings on variables affecting waste management. The research used interviews and observations as ways of gathering information on waste management and practices. A total of ten households from Brgy. Mojon-Tampoy were interviewed. Data from the respondents are directly transcribed without alteration although some unclear parts were given an educated guess. The last part clarifies the implementation of environmental programmes and projects focusing on helping the residents on the waste issue. This thesis is not aimed at people who does not have permanent residence at the barangay for they don't have a fixed effect at the waste management issue. This thesis is created in correspondence of what the researchers observed in the barangay that was needed to be addressed, which is aiming for the improvement and development of the waste management system of the residents of Brgy. Mojon-Tampoy.

Chapter I

The Background of the Study

This chapter introduces the background of the study, the problems presented, the research's significance, scope and limitations, study frameworks, and the definition of study related terms.

Introduction

Every living thing has an impact on the environment. Humans inevitably impact the environment, just by simply existing. They imprint their own mark on the world in many different ways. In order for humans to live, they perform actions in order to survive different worldly situations present in this world. The problem is, due to the increasingly fast development of humans, there is also a great increase of issues that are causing problems to humanity. These issues have grown more rapidly and more severe, which is why they should be resolved for mankind to strive.

One of the daunting issues that humans have globally is the mounting waste problem, from the dangerous waste materials to the management of such materials. The world is drowning in ever-growing mounds of garbage, due to the effects of industrialization and modernization, which humanity has yet to provide a solution. Governments around the world tried multiple ways, but it is little to no avail in solving the problem.

Waste management is already a huge problem in the Philippines. *Bennagen et al*, (2002) stated that “The Philippines generate more than 10,000 tons of solid wastes per day, with Metropolitan Manila accounting for more than 50% of the total wastes or 5,800 tons/day”. This problem regarding wastes led to the passage of the Republic Act 9003, or the Ecological Solid Waste Management Act of 2000, in order to combat the waste problem

of the country. This adopts a systematic, comprehensive and ecological solid waste management policy that secures the protection of the health of both the public and the environment, through the formulation and implementation of practices that are best for proper segregation, collection, transport, storage, treatment, and the disposal of solid waste. In addition to waste management, the policy also regards poverty as a topic needing to be solved.

Brgy. Mojon-Tampoy, the place of interest, is currently facing problems pertaining to their waste materials, mainly their solid wastes, and their way of management towards it. According to the recorded observations, community wastes are difficult to be exported due to the topography of the community. In response to this, they rely on effective but damaging measures such as incineration and waste landfills that could pollute the surrounding areas. With the lack of knowledge on finding a better way of management, such are the only actions that they could do to manage the wastes.

Wastes can cause serious damage if not treated properly. Each type of waste can induce a different type of damage and it can heavily affect the lives of those people in the community. It could cause serious health issues, due to contaminants and pollutants that affect people through the air, food, water, and the surroundings. It may also pose a serious threat on the economy of the barangay, if not remedied. The possible extent of the problem is yet to be defined due to the insufficient amount of information regarding to the area and the lifestyle of its residents.

This study aims to identify and understand the waste management issue that affects the residents of Brgy. Mojon-Tampoy. The information will be essential in knowing what actions could be performed in order to reduce or eliminate the dangers of waste materials

that are currently affecting them. If the research is to be successful and applied in a practical way, there is an assurance that the lifestyle of the residents will improve in a healthier and more beneficial way.

Statement of the Problem

This study shall assess the waste management system in the residents of Barangay Mojon-Tampoy, San Jose, Batangas, specifically on their waste as their practices in waste management and shall aim for finding ways to reduce or remove the issues that concerns the people of the barangay.

Moreover, the purpose of this study is to answer the following questions:

- 1) What is the current waste management system of the barangay?
- 2) What are the factors affecting the current waste management of the residents?
- 3) What are the effects of the current waste management to the barangay and its residents?
- 4) What actions could be done to reduce or remove the issue of waste mismanagement?

Significance of the Study

The findings of this study may provide valuable information about environmental topics such as proper waste management and is deemed to benefit the following:

To the residents of Brgy. Mojon-Tampoy. This study would help the residents to become more knowledgeable on the dangers of waste mismanagement. They would be more encouraged to live an environmental-friendly life to avoid issues such as health risks and environmental damages.

To the Barangay Officials. This study would provide more ideas regarding into improving the waste situation of their barangay. It will help them in executing additional projects that might prove beneficial for the development of the barangay and sustaining it.

To the researchers. The study will give the researchers new ideas pertaining to waste management topics. It will provide them different viewpoints regarding to waste management and other related issues it could be related to.

To future researchers. The study would be used for future research about the topic as their reference. Researchers that will be focusing on environmental issues and its factors would benefit the most in this study. It will provide the researchers background information about waste management and concepts surrounding it. These concepts will help them in the creation of their own ideas in their own respective researches.

Scope and Limitations of the Study

This study focuses on and is limited to the responses of ten households of Barangay Mojon-Tampoy that are living in the area. They are chosen nonetheless even if they are knowledgeable or not on the topic of proper waste management.

Furthermore, this study also focuses on the following: the current waste management system of the barangay, the factors affecting the current waste management of the residents, the effects of their current waste management to them and their barangay, and the possible recommendations for reducing or removing the issue of waste mismanagement.

It is beyond the grasp of the study to delve into issues outside the chosen topic although those topics may be stated for referencing and comparison. Likewise, this paper does not focus on other environment-related topics such as the ecosystem of the area, climate change, and such.

Theoretical Framework

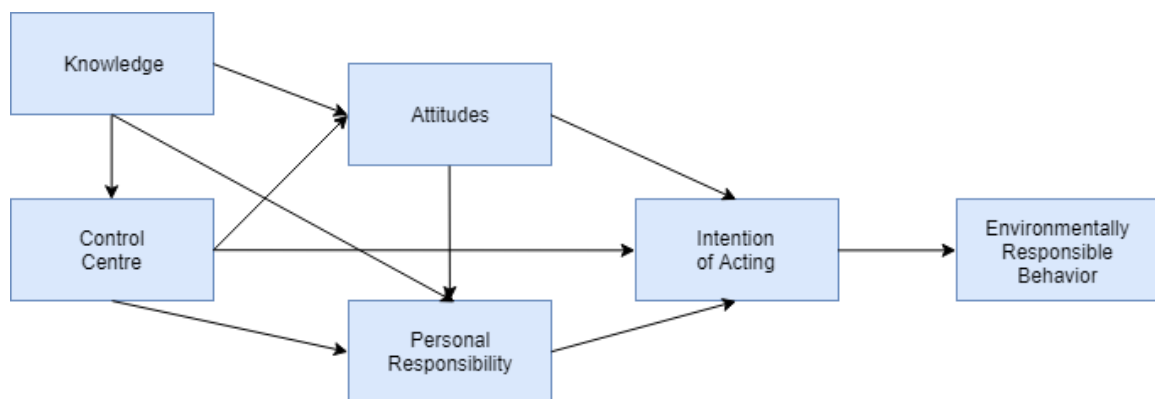


Figure 1: The Environmentally Responsible Behavior Theory

Environmentally Responsible Behavior (ERB) is a specific term describing “any action, individual or group, directed toward remediation of environmental issues/problems” (*Sivek & Hungerford*, 1990). ERB is described by a combination of self interest and concern for other people, species, or ecosystems (*Bamberg & Moser*, 2007). It includes both general actions (talking to other people about environmental issues; encouraging family and friends to behave in environmentally responsible ways) and specific actions such as recycling, purchasing environmentally friendly & sustainable goods, conservation of energy by turning off lights and using alternative sources of energy, such as solar, hydro, or wind energy, and reduction in fossil fuel dependence by utilizing alternative means of transportation. (*Cottrell*, 2003; *Thøgersen*, 2006; *Vaske and Kobrin*, 2001)

This research study applies Hines, Hungerford, and Tomera’s ERB Theory (1986/87) in relation to the practices of people in relation to waste management. This model argues that having the intention to act is big and essential factor that influences the ERB. It indicates the following variables: intention of acting, a control center of personal control, attitudes, sense of personal responsibility, and knowledge, suggested if one will have a responsible behaviour.

As the theory states, for people to perform proper waste management, the right situational variables and factors must be present. Unfortunately, the barangay of Mojon-Tampoy have problems on their waste management, which proves that some factors are not be present in their barangay. It could be the lack of proper knowledge that limits them on finding solutions for their problem. It is also possible that there is a lack of proper attitude towards their own environmental responsibility which could also hinder the residents on making proper decisions for the negation of the bad effects that wastes induce

to their area. With such reasons, ERB is encouraged for attaining discipline for the environment. By influencing values, attitudes, and behaviours of individuals in positive ways, environmental education ultimately seeks to minimize negative environmental impacts (*Hines, Hungerford, & Tomera, 1986*).

How this applies to our research is that this theory will serve as a starting point into looking at the issue of interest. The basis for our research would be the variables present on this theory, and we will look into the topic, specifically their waste management and their practices, with these factors.

Conceptual Framework

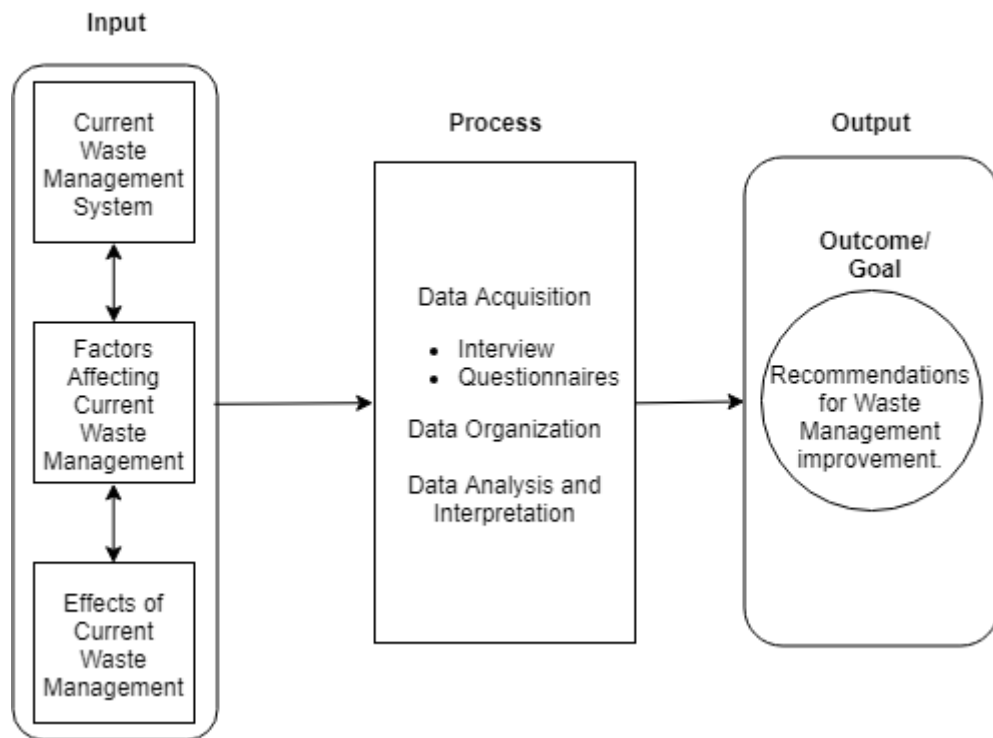


Figure 2: Conceptual Paradigm of the Study

Figure 2 shows the different variables that will be involved in the creation of a proper action plan for the current situation of wastes in Brgy. Mojon-Tampoy. This model shows three levels arranged from left to right to represent the flow of the process, following an input-process-output diagram, and relationship of each one of the processes. As presented in the model, there would be three variables that would be essential for determining the measures to be used in solving the problem of the barangay. Those variables would serve as indicators and guides as to what action will be done.

First variable of the model is the current waste management system of the barangay, which would be vital in determining the detrimental components of it that causes the issue of mismanagement in the barangay proper. Knowing the current management of the barangay would be needed to be able to conceptualize the appropriate action to be used. This would also prove beneficial as it would also lead into knowing the possible factors of the problem of waste management and the kind of effect/s it bring/s or will bring.

Another variable for the research would be the factors that causes the mismanagement of wastes in the area. The roots of the problem would provide an excellent insight to the main issue. With a deep understanding of the origin of the main causes of the problem, it would be easier to form a definite recommendation to solve the issue. The specifics of the problem would provide a more detailed information that would help in creating the appropriate solution.

The third variable to be examined is the effects of the current waste management of the barangay. Knowing what the mismanagement of waste affects in the barangay helps in knowing where the solution will be directed to. This would ensure a more precise action

for faster improvements in the barangay, making the residents' life in the barangay more convenient.

Definition of Terms

Attitude

- A settled way of thinking, typically one that is reflected in a person's behavior. A possible variable on the waste management of the residents.

Biodegradable

- A substance or object capable of being changed to a harmless natural state by bacteria. Type of wastes focused on the current waste management of the barangay.

Factors

- A circumstance, fact, or influence that contributes to a result or outcome. The influences or causes of the current waste management of Brgy. Mojon-Tampoy.

LGU (Local Government Unit)

- A form of public administration which in a majority of contexts, exists as the lowest tier of administration within a given state. Pertains to the barangay government unit of Brgy. Mojon-Tampoy.

Non-biodegradable

- A substance or chemical that cannot be changed to a harmless natural state by the action of bacteria. Type of wastes focused on the current waste management of the barangay.

Practices

- The customary, habitual, or expected procedure of the people of Mojon-Tampoy as their way/s of waste management.

Chapter II

Review of Related Literature and Studies

This chapter presents a review of related literature, both foreign and local, which the researchers deem relevant with the present study. This also presents the different variables relative to the study. Such literatures and studies cited paved the way in determining the extent of how far researchers have gone through along the area under investigation.

Conceptual Literature

Solid Wastes

According to the Resource Conservation and Recovery Act (1946), “solid waste means any garbage or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, resulting from industrial, commercial, mining, and agricultural operations, and from community activities.” *Firth et al*, (1995) defined solid wastes as “all wastes arising from human and animal activities that are normally solid and are discarded as useless or unwanted”. Technically, solid wastes are defined as “all organic and inorganic non-liquid, and non-gaseous portions of the total waste mass”.

Solid wastes is a waste type consisting of everyday items which are discarded or thrown away by the public. Its composition varies greatly between areas, and it changes significantly as time passes. In areas with well-developed waste recycling system, the type of waste are composed mainly of intractable wastes such as plastic firm and non-recyclable packaging materials. In areas without significant recycling activity, the wastes are usually

food wastes, market wastes, plastic wastes, product packaging materials, and miscellaneous solid wastes from other sources.

Solid Waste Management

The management of solid waste has four components: recycling – the process of converting waste materials into new materials and objects, composting – the process of transforming waste materials, especially organic materials, into fertilizer and soil amendment, disposal – the process of throwing away of the waste materials, and waste-to-energy – the process of using waste materials to generate energy and fuel. The Environmental Protection Agency, a U.S. federal government agency, developed a hierarchy ranking in accordance to this. The ranking evaluated the ways in which in regard to maximizing the benefits in doing and having the least waste effect when performed. The reduction of waste through prevention and minimization is the most preferred option, followed by recycling and composting, then by energy generation and recovery, and finally, treatment and disposal, which is the least favourable option to perform.

Rebullida (2000) stated problems relating to the traditional solid waste management, some are the increasing volume of solid wastes, lack of disposal sites, and ineffective age-old system of disposal by open dumping and landfills and environmental degradation and dangers to health. A greater volume of wastes was brought about by an increased population and rise of more businesses and industries. When the government lack funds, it cannot cope with the increasing volume of waste. A related problem is scavenging by poor people whose health are at risk due to the effects of improper waste management.

Policies and Legislations

In history, solid waste management did not have any specific attention in policy and legislation except being as part of the domain of environmental issues on usage, preservation and conservation, management of the resources, and the regulation of negative behaviour towards the environment (*Rebullida*, 2000). However, one of the articles of the Philippine Constitution, Article 11, states that “the State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature”. Thus, the Philippine government must consider the declaration of various Presidential Decrees and the passing of several Republic Acts that took direct action on solid waste management, having the most recent which is *R.A. 9003 or the Ecological Solid Waste Management Act of 2000*.

Ecological Solid Waste Management Act of 2000

RA 9003 is an act that provides an ecological waste management program to alleviate waste issues that is problematic for the country. It describes the management of solid waste as a discipline associated with the control of solid waste management, such as its generation and creation, storage, collection, transfer and transport, processing, and disposal. Such management will be performed in accordance with the best principles of public health, engineering, economics, conservation, aesthetics, public attitudes, and other environmental considerations.

The implementation and enforcement of the Act’s provisions shall be the responsibility of the LGUs or Local Government Units within their area of authority as specified in the *RA 7160, or the Local Government Code of 1991*. It’s their responsibility to practice

segregation as it is needed for facilitating the processing of wastes and greatly decrease the amount of wastes going directly to dumpsites.

Role of the LGUs

The policies and legislations empower local government units to actively pursue their own SWM or Solid Waste Management systems through preparation of a 10-year SWM plans; creation of a SWM Board responsible for the preparation and implementation of a plan for the safe and sanitary management of solid waste; mandatory segregation of waste; implementation of recycling programs; setting up a Material Recovery Facility; prohibition of open dumpsites as final disposal facility; promoting the establishment of multipurpose environmental cooperatives and associations responsible for undertaking SWM activities or projects; provision of monetary and other rewards and incentives to entities that have undertaken outstanding and innovative SWM programs; encouragement of LGUs to impose fees sufficient to pay the cost of preparing and implementing their SWM plans; creation of a local SWM fund from donations, collection of fines and fees, and allocation from the development fund; and definition of prohibited acts, penalties, suits and other legal actions concerning R.A. 9003.

The LGU should put emphasis on the application and implementation of feasible, logical, and environmentally sound techniques of waste reduction such as reusing, recycling, and composting programs on their SWM plan. It must identify the amount of landfill and transformation capacity needed for solid waste that cannot be re-used, recycled or composted.

Defining Human Practices in relation to Waste Management

Human Practice, by definition, is the application of human beings of an idea, belief, or method and performed repeatedly as a norm applied to everyday life. Humans have been actively performing their own practices towards waste management, which is relative to the area they are in. The actions people take towards their wastes greatly depends on different variables and factors. Depending on the scale of the issue in an area, the resources they currently have, and the type of locale the area is, the way people manage or mitigate the wastes differs.

People in developed areas depend on a more organized waste system, with the usage of modernized garbage bins, garbage trucks, and a more industrialized waste disposal mechanisms and factories. Due to the large population present, they need a more systematic and efficient way of management in order to control the large waste content produced by the huge population. The collected garbage are directed to large incineration sites, where a large scale burning process occurs, sometimes also used to create energy, and large dumpsites, where garbage that cannot be burned are kept, waiting for other purposes or to decompose, although it may take a long time.

In rural or underdeveloped areas, people tend on more basic ways of management, such as the collection of waste and forming basic landfills or performing basic incineration or burning of wastes. Due to inaccessibility to technology for efficient waste management unlike those in developed places, they tend to perform their own, mostly uncoordinated waste disposal. These places also perform similar practices of disposal, like landfills and incineration, although these are not effectively controlled which greatly dangers the surrounding environment.

Although wastes both concern developed and underdeveloped areas, it tend to endanger the underdeveloped areas more, and they don't have the right capacity or capability to mitigate the effects of their waste management. This reason makes management in rural or underdeveloped areas important, for the impacts of waste could greatly affect them. This in turn could also damage the area surrounding it or even also the country, as other areas also depend on other areas in resources, which wastes could easily affect, disrupt, and destroy.

Related Literature

Foreign

Waste Management poses a major challenge in society because performing any activity or process in our daily lives produces wastes. This is a worldwide issue that is hard to manage as it is continuous as we modernize.

The *World Bank* (1993) released a report regarding to the amount of wastes produced in developing countries. According to their estimates, between 0.7 and 1.8 Kg per capita of waste is being produced every day in developed countries' urban areas and approximately 0.4 to 0.9 kg is produced in the cities of developing countries. It is to be expected that from 1993 up to this day, the amount of wastes increases and will continue to increase as the world countries develop. Waste generation tends to increase as population and economic growth increases which adds up to the problem of waste management. This could pose significant environmental problems worldwide.

Managing these wastes especially solid waste is generally considered a local issue, however, the central government along with the national institutions of the country also have the responsibility to manage the whole system of municipal waste management. The

relationship between the central and local government is an important connection for having the proper governance of municipal solid waste management, relating to laws and policies related to waste management and funds allocation. According to *Kironde* (1999), “it is where decentralization of power from the central governments to local authorities and within local authorities themselves becomes viable.”

Mungure (2008) stated that as environmental problems are mostly related to the effect of waste pollution, it could also pose health problems. Open landfills, blocked drainage systems, and incineration of wastes exposes the public to deadly health problems due to the toxins and contaminants present or produced by such. Many municipalities from developing and underdeveloped countries lack the sufficient techniques and materials to be able to combat such issues, which result to an increase in dumpsites and abandoned waste deposits in streets and open areas. Those uncollected waste piles become the breeding grounds for insects that carry severe diseases such as cholera and malaria.

Okpala (1996) stated that knowledge and attitudes are factors that control the practices of people. There is need for people to change and have an environmentally sound attitude in every section of society. Education plays a big part in this. When developing educational programs to motivate changes in behaviour, it is important for their success to include stakeholder input and to understand in-depth behavioural aspects. The process and method will differ in relation to the sociocultural value content of each community and nation.

Nsirimovu (1995) stated that the management of wastes and issues surrounding it are closely associated with the society, its beliefs, and its attitudes. The course of waste from its origin to the area of disposal shows human dimensions along with the application of technology, given the idea of a city or region functioning as an anthroposphere. Effective

resource management must be stipulated to fit societal norms and values of the people. Human rights and individual liberty, within the limits imposed by democratic principles, must also be respected.

Local

The book entitled *“The Garbage Book: Opportunities for Change”* assessed the implementation of the RA 9003 at the barangay level. It states that, “while the extent of formal recycling through local government initiatives has been limited, informal and private sector recycling is extensive, at all points from waste generation through to final disposal. Scavenging forms a significant element of this activity.” It is found out that an insignificant amount of 10% of waste is only recycled. More so, it assessed that “community-based initiatives involve waste segregation at source, recycling, and composting. Programs have been attempted in many barangays throughout Metro Manila—some have succeeded, others have failed for one reason or another. Leadership is the key factor in successful programs. In most cases, the initiative is led by the Barangay Captain or nongovernment organization aligned with the zero waste movement.”

Related Studies

Foreign

Having waste management is beneficial for the whole community. Everyone will enjoy the benefit of having it without having any additional costs to anyone. As a shared service to everyone partaking in it, it can be viewed as a public commodity. The community and the authorities are responsible for the creation of a proper management system to keep the environmental issues in control. The success or failure of waste

management of is in most cases likely reflected on different variables that affect the community and its people.

Oelofse and Godfrey (2008) pointed out that a lack of funding is not the underlying problem, but the result of a number of inter-related sub-problems, – capping of municipal budgets, ineffective cost recovery for disposal, delays in finalizing municipal budgets, theft of infrastructure, and reduction of operational waste budgets – increasing opportunity costs and manifesting in the ineffective utilization of funds. Misused funds could greatly affect the work productivity of an area towards waste management and it could disrupt the rhythm of management, making people less and less willing to act. As long as the funds are misused, there would never be a proper management of waste, which in turn will greatly affect the behaviour of the residents partaking in managing the wastes. They would be less active in taking action due to ineffective funding that makes waste management difficult.

According to *Atienza* (2011), good governance in an area could also help in lessening the waste problem of an area. With good political officials that could manage and guide their supervised area, wastes could be fully contained and controlled, which would avoid further issues. With this type of governance, together with the collaboration with other stakeholders, effective information dissemination to the public, sharing of innovative ideas, and the usage of proper technology, waste management of wastes would be sustained. Proper governance is needed to lead residents in an area into proper waste management. Leading them sufficiently will increase resident morale and will drastically affect the attitude and behaviour of a resident into performing.

Local

Sumalde (2004) indicates that the insufficient amount of funds could be considered as one factor as it prevents the initiation of activities. Alongside this are the LGUs, which are incurring financial gap to the creation of the system. Despite the authority given to the LGUs, they are still in a quandary about its implementation. Specifically, it is not clear how they can best finance the implementation of R.A. 9003. These scarcity of funds might cause negative effects to the area in consideration, as insufficient funding can lead to diminishing ways of action which will greatly affect the behaviour of a person to act for the environment. Limited funding causes for people to have limited options that would hinder the progression of the process.

Cabañog (2008) states that the lack of environmental awareness of the community hinders the success of the solid waste management programs when conducted a survey on the selected three cities in Misamis Occidental. In addition to that, the author stated that the inadequacy of funds and lack of political will from the local officials influence the implementation of the solid waste management programs. The lack of environmental awareness and knowledge completely limits what a person is capable to do in managing wastes. Waste management would be difficult to solve as effective solutions will not be conceptualized by people lacking of awareness and knowledge towards the issue.

Synthesis

The researchers and authors on related literature and studies present the issue of waste management in different perspectives and shows that there are numerous variables to be stated and considered in order for people to perform proper waste management. The literatures and studies present that the issues of funding, environmental knowledge and attitude, beliefs, and political aspects can affect an area's procedure or practice towards waste management greatly (*Oelofse and Godfrey, 2008; Okpala, 1996; Nsirimovu, 1995; Atienza, 2011*). If a municipality will be able to manage and control these variables, they would be able to manifest a proper way of managing wastes. A major distinction of this study from the other previous related studies is that other than focusing on a situation which then a solution or conclusion is formed, this research will synthesize all those variables from the results of their previous works in order to create on a more in-depth research in an area which is Brgy. Mojon-Tampoy. Considering the results of other studies, there should be ways to handle and evaluate the situation of Brgy. Mojon-Tampoy accordingly.

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Chapter III

Research Methodology

This chapter presents a description of the research design selection and description of respondents, research instruments, data collection procedure and statistical treatments used.

Research Design

To thoroughly understand the issue in hand, this study utilized the descriptive survey method of case study. It involves an in-depth examination and investigation of a certain topic of interest, whether it is a single person, a group, or an event over a period of time. The case study method often involves simply observing what happens to, or reconstructing ‘the case history’ of a single participant or group of individuals. Case studies allow a researcher to investigate a topic in far more detail than might be possible if they were trying to deal with a large number of research participants (nomothetic approach) with the aim of ‘averaging’ (McLeod, 2008). The researchers chose this since the current aim is to have a detailed analysis of the issue with the waste management system of the barangay.

Respondents of the Study

The target population of this study are the residents of Brgy. Mojon-Tampoy. The respondents were chosen with the use of the convenience sampling technique, due to the convenient accessibility of the chosen respondents and the given limited time. The respondents consisted of residents from ten different households. The selected respondents for the research are adults, ranging from young adults to seniors.

Research Locale

The study was conducted in Brgy. Mojon-Tampoy, San Jose, Batangas, specifically at Purok 4, since the selected respondents are residents of the Barangay. The barangay is notable for their various agriculture, with numerous vegetation present in the vicinity. The residents are also horticulturists, with various gardening plants, ranging from potted plants up to fruit bearing plants such as dragon fruits, which is prominent in the barangay. As of 2015, there are approximately 2,355 residents present in the area. The latest census figures in 2015 denote a positive growth rate of 4.59%, or an increase of 495 people, from the previous population of 1,860 in 2010 (*Philippine Statistics Authority*, 2016).

Research Tools and Instruments

The proponents used the school provided questionnaire and interview conduction for gathering the information on the topic. The questionnaire was divided into two parts: the first part included questions allowing them to choose from the options, and the second part which included open-ended questions. These are used to obtain more textual information for exploring the qualitative and in-depth aspects of the issue.

Data Gathering Procedure

The researchers personally organized and administered the distribution of the research instruments to the respondents of each household. The study uses a semi-structured questionnaire and interview as ways to gather data. The asked questions are all the same for each resident and it revolved around the family situation of the residents, the type of resources they use, their problems and how they handle those problems. The respondents were given prior knowledge about the significance of the study before giving them ample

time to provide answers to the questionnaires. An unstructured interview was also conducted per respondent to gather additional data.

Aside from questionnaires and interviews on the area, the researchers also utilized the usage of the internet as a way of data gathering. Data found and gathered that are reliable and valid are accepted by the researchers. These data are used for analysis and interpretation.

Ethical Consideration

This study does not subject anyone to harm anyone in any way. Full consent was secured from the respondents during the data collection, and all confidential data are ensured in privacy. The anonymity of the participants is respected and ensured. The information incorporated in this research is the pure truth, disregarding any type of misleading data and any forms of deception. Affiliations in any forms, as well as any possible conflicts of interests are declared in this study, with no exceptions.

Chapter IV

Discussion of Results and Findings

This chapter presents the results of the collection and analysis of data gathered in the form of a questionnaire and transcribed interviews following Open Coding and Axial Coding, where in the data and connections are analysed and tabulated. In addition, this chapter presents the researchers interpretation and evaluation of each coding done to have a better understanding of it. This chapter also presents the overall idea or the interpretation of the gathered data from the respondents, through Selective Coding.

Open Coding

The responses of the respondents were transcribed and subjected to open coding. Questions that were encoded in the questionnaire and raised during the interview focused on the current waste management practices of the residents; the factors that affects the current waste management; the effects of the current waste management to the barangay.

The Current Waste Management Practices of the Residents

The respondents provided various statements on what kind of waste management practice/s they currently perform in their barangay. Regarding their answers to the topic, there are two prominent ways on how they dispose their wastes in the barangay, namely, the landfilling of garbage and the incineration of waste materials.

Landfilling is the process of getting rid of large amounts of rubbish by burying it or leaving it in piles. One of the respondents said that, “*Yung basura namin ayan nasa sako*

sa labas ng bahay tapos dadalhin na lang sa balon”, showing their usage of pits as disposals of their accumulated wastes in their own residences.

Moreover, the respondents also stated that, *“Sa pagkakaalam ko ay iisa lamang (balon) para sa buong barangay”*, indicating that landfilling is already an accepted way or norm of waste disposal and also that there is a designated pit for the whole barangay for every resident’s waste to be accumulated.

Incineration, or simply the burning of wastes, is considered one of the most used waste management procedures that is accessible to the barangay residents. The respondents states that *“Kalimitan sinusunog na lang namin”* and *“Kaya minsan iniwan na lang namin naka-imbak tapos sinusunog”*, showing that this is the most frequent way of eliminating the wastes after disposing them into landfills.

This method of burning wastes is done by the great majority of the residents of the barangay, if not all, as stated by the respondents, *“Ayun magsusunog na lamang kami dun sa balon, gaya ng iba”* and *“Oo kaso wala naman kaming ibang paraan na maisip kaya nagsusunog na lang din kami ng basura.”* These statements confirms that: (1) residents of the barangay turn to incineration as they see it as the only method available and (2) their fellow residents are also doing the same method. These statements may also suggest a possibility of conformity among some residents.

Conformity, according to *McLeod* (2007), is a type of social influence involving a change in belief or behavior in order to fit in with a group. People act in the way that would be accepted in the conventional social norm, which leads to them conforming into the group. Researchers have found that there are numerous reasons why people conform. The

research of *Deutsch and Gerard* (1955) identified two key reasons why people conform: due to (1) informational conformity, and (2) normative conformity.

Informational conformity happens when people change their behavior in order to be correct (*McLeod*, 2017). This usually occurs when people don't have the right amount of knowledge in order to make a committed decision, which makes them look to other people who they consider more knowledgeable to make the decision, which then they will follow.

Normative conformity, on the other hand, happens when people want to avoid punishments and get rewards, by following what is the standard norm of the society surrounding them.

In making decisions, there is always a degree of risk and uncertainty (*Beresford & Sloper*, 2008). There is a chance that one would be named as foolish for doing unorthodox methods, which leads people to conform to the norms of the society. Informational conformity is a possibility for there people in the area doesn't know what other possible alternatives to use, which makes them follow those who knows what they are doing, leading them to landfilling and incineration. This is could be proven with their statements, "*gaya ng iba*" and "*oo wala na kaming maisip na ibang paraan eh*", saying that they do this because this is what others do, and also, that they lack the knowledge for alternative options.

Normative conformity is also a possibility, as people would likely avoid doing something that might result themselves to being punished or persecuted. One of the respondents said, "*Baka naman mapabarangay ako kapag nagsabi ako na may problema dito*", which suggests a normative behavior towards the problem of the barangay, wanting to avoid punishment from the higher ups.

Listed on the table below are the responses to questions regarding on their current waste management with their corresponding open codes:

STATEMENT	OPEN CODE
<i>“...Kaya minsan iniwan na lang namin naka-imbak tapos sinusunog.”</i>	Landfilling and incineration
<i>“...Yung basura namin ayan nasa sako sa labas ng bahay tapos dadalhin na lang sa balon...”</i>	Use of pit for landfilling
<i>“...Sinusunog ng barangay...”</i>	Burning
<i>“...Ayun magsusunog na lamang kami dun sa balon, gaya ng iba...”</i>	Proliferation of the incineration method
<i>“...Oo kaso wala naman kaming ibang paraan na maisip kaya nagsusunog na lang din kami ng basura...”</i>	Incineration as only method of disposal
<i>“...Kalimitan sinusunog na lang namin...”</i>	Frequent burning
<i>“...Sa pagkakaalam ko ay iisa lamang (balon) para sa buong barangay ...”</i>	Unified landfilling
<i>“...oo wala na kaming maisip na ibang paraan eh ...”</i>	No alternative
<i>“...Baka naman mapabarangay ako kapag nagsabi ako na may problema dito...”</i>	Normative attitude

Table 1: Open Coding for Research Question 1

Factors that Affect the Current Waste Management

The respondents opened up to the researchers that there are several factors which are the main causes for them doing their current practices.

The prominent factor of their current waste practice is due to the lack of wide roadways. One of the respondents stated, “*Siguro dahil medyo mahirap makapasok dito sa lugar namin,*” indicating the presence of constricted streets and roads that prevent and limit the vehicles like garbage trucks that will collect the wastes of the barangay. Because of this, there are little to none garbage transporters that will remove their garbage, which results to frequent landfills and burning in the area.

Moreover, the distance between the area and the main dumpsite is also another problem stated by some of the respondents. The respondents replied with “*Yun na nga, masyadong malayo (main dumpsite)*” and “*Minsan nakakapagod na din kasi gawa ng malayo ang mga junk shop sa lugar namin*”, which shows that there is indeed possible to transport the wastes outside of their barangay, but the far distance of the dumpsite/s and junk shop/s from the barangay adds up to the problem of transporting. These two combined makes the transport of waste materials a much less viable option for the barangay residents.

The odor of the waste materials is another reason on why they incinerate their wastes. A respondent said, “*Baka mabulok tas mamaho pa diyan eh*”, which points out the smell coming from the landfills of the barangay. This is mostly due to the biodegradable wastes which has a faster decomposition rate than non-biodegradable wastes. As the barangay embraces the agricultural lifestyle in the area, there are guaranteed biodegradable byproducts to be produced.

Another factor is that there are no alternative methods of disposing fast and efficient. As stated by the respondents, it is possible to transport the wastes into other areas, but this method is inefficient and difficult to perform. One stated, “*Minsan nga kahit alam naming masama ay napipilitan na lamang kami na sunugin ito*”, which shows that they don’t have

choice so they burn it even if it brings negative effects. This lack of options may be because of the lack of barangay resources and also, the topography of the travel area.

It could be concluded, as seen from the given data, that the residents would tend to look more into convenient methods, the ones which could be accessed easily, rather than safer and efficient methods. This relates to the George Kingsley Zipf's idea of human effort, *the Principle of Least Effort*. In a brief explanation, this postulates the idea that everything, from animals, humans, and even to machines, will naturally choose the path of least resistance (Zipf, 1949).

By this definition, regarding it to the situation of Brgy. Mojon-Tampoy, the residents are performing methods such as incineration and landfilling as it is the most convenient action to perform that will take the least resources, energy and time from them. The problem with this is that these methods have terrible effects to themselves and to their barangay, unlike other alternatives which does take more effort to do, but has more benefits.

Listed on the table below are the responses to questions regarding on the factors that affect their current waste management with their corresponding open codes:

STATEMENT	OPEN CODE
"... <i>Siguro dahil medyo mahirap makapasok dito sa lugar namin...</i> "	Accessibility of the barangay
"... <i>Baka mabulok tas mamaho pa diyan eh...</i> "	Bad odor of the wastes
"... <i>Yun na nga, masyadong malayo...</i> "	Far dumpsite/s

“...Minsan nakakapagod na din kasi gawa ng malayo ang mga junk shop sa lugar namin...”	Distant junk shop/s
“...Minsan nga kahit alam naming masama ay napipilitan na lamang kami na sunugin ito...”	No other alternative

Table 2: Open Coding for Research Question 2

Effects of Current Waste Management to the Barangay

The responses of the residents shared some ideas on what effects their current waste disposal brings to the vicinity of the barangay and to themselves.

The bad smell or odor caused by decomposing wastes troubles the residents of the barangay. Stated by the respondents, “...medyo naka-abala naman yung masamang amoy sa mga tao dito...” and “...Yung iba nga samin sinamaan ng lasa dahil duon...” shows that the presence of the wastes in their vicinity makes the people feel uneasy, and sick. The residents are uncomfortable with landfills in their area as it bring unpleasant and discomforting feeling to them, especially those who are near the landfill/s.

Excessive smoke is also an effect of one of their methods: the incineration of wastes. The burning of wastes creates “*madaming usok na maaamoy bawat may magsusunog*” which greatly disturbs the residents of the barangay and also, puts them in the proximity of danger as the incineration of wastes produces dangerous gases and substances, depending on the waste burned. Examples of its byproducts are *carbon dioxide* (CO₂), *sulfur dioxide* (SO₂), and *carbon monoxide* (CO) which does not only affect human health, but also can contribute to environmental pollution.

Health issues are also a possible effect of landfills and burning in the area. Landfills contain numerous wastes, from biodegradable, which contains dangerous bacteria (Laitinen & Rantio, 2016), such as *brucellosis* (*Brucella* spp.), *campylobacteriosis* (*Campylobacter* spp.), *listeriosis* (*Listeria monocytogenes*), *salmonellosis* (*Salmonella* spp.), *shigellosis* (*Shigella* spp.), and *yersiniosis* (*Yersinia* spp.), to non-biodegradable, which ranges from chemical wastes to solid wastes. This also causes land pollution that can harm human health, as stated by one resident, “*Ahh oo medyo problema din naman yung basura dito kasi minsan nakakalat na lang.*” Burning wastes produces harmful chemicals due to the combustion reaction produced by the ignition of wastes. In this regard, the respondents states that “*Baka makasama sa kalusugan ng baby namin*” and “*Nakakapagdala ng sakit kasi syempre mga basura tapos kalimitan malapit na mabulok*” which show their awareness of the negative health issues of landfilling. Although they are aware of the dangers, they are sticking to the same methods as there are no available method that is safe and efficient enough for the residents.

Listed on the table below are the responses to questions regarding on the effects of their current waste management to their barangay with their corresponding open codes:

STATEMENT	OPEN CODE
“...medyo naka-abala naman yung masamang amoy sa mga tao dito...”	Disturbances due to smell
“...Yung iba nga samin sinamaan ng lasa dahil duon...”	Discomfort
“...madaming usok na maaamoy bawat may magsusunog...”	Excessive smoke

<i>“...Baka makasama sa kalusugan ng baby dito...”</i>	Hazardous to people especially infants
<i>“...Nakakapagdala ng sakit kasi syempre mga basura tapos kalimitan malapit na mabulok...”</i>	Sickness and diseases from wastes
<i>“...Ahh oo medyo problema din naman yung basura dito kasi minsan nakakalat na lang...”</i>	Pollution of environment

Table 3: Open Coding to Research Question 3

Axial Coding

After all responses were subjected to open coding, all the codes were then grouped to further elaborate the connection between each response. Through axial coding, the codes generated from the responses were linked with one another to create three main themes of the answers for each question.

Listed below this page are the codes during the axial coding stage.

OPEN CODING	AXIAL CODING
Landfilling and incineration; Use of pit for landfilling; Burning; Proliferation of the incineration method; Incineration as only method of disposal; Frequent burning; Unified landfilling; No alternative; Normative attitude	Incineration and landfilling are the most commonly practiced method by the residents.

Accessibility of the barangay; Bad odor of the wastes; Far dumpsite/s; Distant junk shop/s; No other alternative	The most convenient solution is often the least safe one.
Disturbances due to smell; Discomfort; Excessive smoke; Hazardous to people especially infants; Sickness and diseases from wastes; Pollution of environment	Health threats and environmental problems

Table 4: Axial Coding

The first set of open codes that were generated talked about the standard of waste management of the barangay, which are landfilling and incineration. Most respondents stated that they just perform the two methods as those two are the only method available for them and they just do what the others do, which is doing those methods. This points out to *Okpala's* (1996) findings, which focuses on the knowledge and attitude of a person. The residents of the barangay didn't have enough knowledge to be able to find a more efficient way of management, and they didn't have the attitude to find new ways, as they just stuck to the methods of what others do also.

Subsequently, the second main topic that was conceptualized focuses on the influences that caused the residents to perform landfilling and incineration of wastes. The responses were mostly about for the topography of the area, the distance from dumpsites and junkshops, the bad odor of wastes, and the unavailability of other methods. They stick to the current methods for the convenience of doing it, not for being the safest or most efficient. The residents perform it as it takes the least effort to do.

Incineration and landfilling was proven to be problematic by the third main topic, which states the negative effects of doing such methods. The responses of the respondents were mostly about discomfort, health issues, and hazardous byproducts such as smoke. It also causes environmental problems, ranging from land to air pollution.

Selective Coding

The axial codes were now subjected to the final stage of selective coding. The code generated will be the overall recurrent theme of the responses of the residents.

Listed on the next page is the final generated code of the axial codes.

AXIAL CODING	SELECTIVE CODING
Incineration and landfilling are the most commonly practiced method by the residents.	The current waste management system that is commonly used by the residents harm the health & environment of the barangay.
The most convenient solution is often the least safe one.	
Health threats and environmental problems	

Table 5: Selective Coding

From the responses and coding, it could be deduced that there is a problem on the current waste management that is used by the residents of the barangay. The method of incineration and landfilling is seen as problematic by the residents. The negative effects of landfilling and incineration is the main highlight of the research, which is the main cause of the problems of the residents.

As *Mungure* (2008) mentioned, the waste pollution brought by these methods poses a great health risk to every living human being. Landfilling contains numerous dangers, ranging from toxic and carcinogenic chemicals like *Lead* (Pb), *Mercury* (Hg), and *Benzene* (C₆H₆), to life threatening bacteria, from *E. coli* to *salmonellosis* (*Laitinen & Rantio*, 2016). On the other hand, incineration produces hazardous gases depending to the material burned, ranging from carbon monoxide (CO) to hydrogen chloride gas (HCl), which are incredibly dangerous to the human health, coupled with an unpleasant smell.

Although harmful, these are still found to be the common methods of waste management in the vicinity of the barangay. The barangay residents have decided that these methods are the methods they prefer as these are what others do and what is accessible to their barangay. This outcome is further suggests the ideas of conformity and *Zipf's Principle of Least Effort* (1949), as they perform what is the most convenient for them and what the majority of people do, rather than following a method that is safer and more efficient.

Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusion and recommendations of the study entitled, “*Waste Management System of the Residents of Brgy. Mojon-Tampoy: An Analysis.*” The respondents were the ten resident households, from Purok. 4, Brgy. Mojon-Tampoy, San Jose. Data was gathered through a semi-structured questionnaires and an unstructured interview, focusing on the current waste management practice/s in the barangay.

Summary of Findings

Based on the data gathered the following findings are revealed:

1. The current waste management practice/s of residents of Brgy. Mojon-Tampoy are:
 - a) the landfilling of wastes, either biodegradable or non-biodegradable, and;
 - b) The incineration of waste materials.
2. Incineration and landfilling are performed in the area due to factors which are:
 - a) The issue of accessibility in the barangay due to constricted roads that prevents any truck collect garbage with ease;
 - b) The bad odor produced by the decomposing, landfilled biodegradable waste;

- c) The long distances of main dumpsites and junk shops from the barangay proper, and;
 - d) The unavailability of other methods of waste management and disposal.
- 3. The residents are affected with negative effects caused by landfilling and incinerating, namely:
 - a) Discomfort due to the bad smell produced by the waste landfill;
 - b) Health issues that threaten human lives, and;
 - c) Pollution due to excessive smoke and garbage.

Conclusions

Based on the preceding findings of the study, the following conclusions are set:

1. After conducting the data gathering procedures such as interviews and questionnaires, it has been deducted that the current method of incineration and landfilling causes great negative health and environmental effects towards the barangay and its residents. Continuing to do these methods would be disadvantageous to the barangay for a long time.
2. There is an issue regarding environmental knowledge and attitude, as the residents tend to stick on what they know and what they believe others think are correct. This prevents them from trying new alternatives and improvements for waste management.
3. There is limited accessibility to other waste management methods due to the lack of resources needed to perform and/or implement such methods.

With this in mind, there must be improvements that must be implemented and placed in the barangay in order to ease or fix the problematic situation of waste management.

Recommendations

1. The researchers recommend either changing their current method for a safer and more efficient method, or by changing the way of approach of waste management while still using the same method.
2. The researchers also recommend the promotion of environmental awareness and knowledge, in order for the residents to be more decisive and logical on what is more beneficial for themselves and the environment. In this way, they could conceptualize alternative strategies to combat the factors that causes them to have inefficient incineration and landfilling as methods.
3. The researchers recommend the reduction of the incineration and landfilling practice to reduce the harmful effects it produces. It is also recommended to make improvements to reduce the risks brought by such methods, such as application of innovative ways and/or the use of techniques such as filtration of chemicals and toxins, and segregation of the different wastes.
4. The researchers suggest to initiate seminars and projects that will combat the problem regarding wastes. The CAPSTONE approach, brought by the De La Salle Lipa institution, is also endorsed by the researchers. This project aims to help the barangay and its residents through products that will improve their situation.

5. For future researchers, it is suggested that they should look into a more in-depth details regarding the topic, as this research did not fully address every detail present in the barangay.

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Transcription of Interviews

Interview 1:

Group: Magandang umaga po. Kami po ay mga estudyante mula De La Salle Lipa. Kami po ay nandito para mag interbyu sa inyo. Maaari po ba kaming magasagawa ng interbyu dito?

House 1: Ahhh sige sige. Anong grade niyo na ga?

Group: Kami po ay Grade 11 na. Are pong ginagawa namin ay para po sa aming CAPSTONE. Ito po ung sasagutan niyo.

House 1: Ahhhh salamat. Bat niyo naman napili ang aming barangay?

Group: Bale po inassign po kame dito para malaman ung mga problema ng barangay.

House 1: Ahhh ano ba muna gagawin dito?

Group: Isulat niyo po muna mga personal information po gaya ng pangalan. Tas after po ay may checheckan po kayo dyan batay po sa kung ano paano po ang pamumuhay ninyo.

House 1: Pahiram naman kami ballpen, utoy.

Group: Eto po. Bale kayo po una naming bahay na napuntahan. Sa tingin niyo po, may mga problema po ba kayo dito sa barangay? May mga proyekto na ba nagawa yung barangay?

House 1: Wala naman masyadong problema kasi may mga proyekto na naman yung barangay sa iba tulad ng pailaw. Sa basura naman may ginawa na sila.

Group: Ano po ginagawa nila sa basura ng barangay?

House 1: Dadalhin yung basura sa lipa.

Group: Hindi po ba mahirap? Babyahe pa po kayo ng medyo malayo

House 1: Yun na nga, masyadong malayo. Kaya minsan iniwan na lang namin naka-imbak tapos sinusunog.

Group: Ahhh ganun po ba.

House 1: Oo mga anak. Ito pala tapos na namin. Kayo ga'y mga taga saan?

Group: Ang iba po taga San Jose lang. Tas iba po ay Lipa or Quezon pom

House 1: Malalayo din pala pinanggalingan ng iba. Ay siya, are ang ballpen niyo utoy. Salamat.

Group: Salamat din po sa inyo.

Interview 2:

Group: Magandang umaga po. Kami po ay mga Grade 11 students from De La Salle Lipa. Maaari po ba namin kayong mainterbyu?

House 2: Nako oo naman. Tungkol saan ba?

Group: Tungkol po sa mga pamumuhay niyo dito sa barangay at mga problema po na kinakaharap ninyo. Ito po ung questionnaire namin.

House 2: Pede gang kayo na lang magsulat para saakin? Naiyak kasi yung bata kapag hindi karga.

Group: Ahhh sige po. Maitanong lang po namin. May mga problema po ba kayo dito sa barangay? Kahit ano pong problema?

House 2: Okay lang naman dito sa barangay namin. Wala masyadong gulo o problema.

Group: Ahhh ganun po ba. Yun po kasing unang bahay na pinuntahan namin sabi may problema daw po kayo sa basura.

House 2: Yung basura namin ayan nasa sako sa labas ng bahay tapos dadalhin na lang sa balon.

Group: Pagkatapos po dalhin sa balon? Naka-imbak na lang po dun o sinusunog din lang po?

House 2: Sinusunog ng barangay. Baka mabulok tas mamaho pa diyan eh medyo nakaka-abala naman yung masamang amoy sa mga tao dito.

Group: Ahhh bale naranasan niyo na po yung nabulok talaga yung basura tapos nangamoy?

House 2: Oo ineng. Yung iba nga samin sinamaan ng lasa dahil duon.

Group: Nako problema nga po yan. Salamat po at naibahagi niyo yan sa samin.

House 2: Walang anuman mga anak. Tapos na ba ang interbyu?

Group: Opo tita. Maraming salamat po uli.

Interview 3:

Group: Magandang umaga po. Kami po ay mga Grade 11 students from De La Salle Lipa. Andito po kami upang mag interbyu sa inyo. Maaari po ba namin kayo mainterbyu ng saglit.

House 3: Sige mga anak. Ano bang itatanong niyo?

Group: Bale may pasasagutan po kami na questionnaire sa inyo tapos kakausapin din po namin kayo.

House 3: Ahhh sige.

Group: Bale po, galing na kami sa dalawang bahay dito. Sabi po nila sa amin nung una ay wala naman daw po problema dito sa barangay ninyo.

House 3: Oo. Wala naman kasi masyadong ganap dito sa amin.

Group: Pero may concern daw po kayo tungkol sa basura dito.

House 3: Ahh oo medyo problema din naman yung basura dito kasi minsan nakakalat na lang.

Group: Sabi po sa amin nung unang dalawang bahay, sinusunog na lamang po basura ninyo?

House 3: Oo ineng gawa ng wala kasing nadaan na truck na nangongolekta ng basura dito sa amin.

Group: Nako bakit po ganon? Talagang wala po? Bakit po kaya?

House 3: Siguro dahil medyo mahirap makapasok dito sa lugar namin.

Group: Ahhh ganun po ba. Kaya po nagsusunog na lamang kayo?

House 3: Oo wala na kaming maisip na ibang paraan eh. Kaya sumusugal na lang kami sa pagsusunog ng basura.

Group: Nako. Problema nga po talaga. Sige po. Marami pong salamat sa impormasyon.

House 3: Walang anuman mga ineng at tutoy.

Interview 4:

Group: Magandang umaga po. Kami po ay mga estudyante from De La Salle Lipa po. Kami po ay kasalukuyang Grade 11, STEM strand po. Maaari po ba namin kayong mainterbyu?

House 4: Sige pasok kayo.

Group: Bale ang pokus po ng interbyu namin ay malaman ang mga problema dito sa barangay.

House 4: Wala naman masyadong problema dito. Okay naman kami.

Group: Pero batay po sa ibang mga bahay dito, may problema daw po kayo tungkol sa basura.

House 4: Para kasing walang proyekto ang barangay para dun kaya nagiging problema siya.

Group: Tapos sabi po kasi sa amin nung ibang bahay ay may pinagsusunugan po kayo ng basura? Saan po iyon?

House 4: Nag-iimbak din lang kami ng basura dun sa balon dito sa barangay. Tapos sinusunog na lang dun.

Group: Bawat pamilya po may kani-kanilang balon o iisang balon na lamang po para sa lahat?

House 4: Sa pagkakaalam ko ay iisa lamang para sa buong barangay. Siguro para mas maiwasan ung madaming usok na maaamoy bawat may magsusunog. Delikado din kasi.

Group: Ahhhh ganun po pala. Nako kahit iisa lang po ay delikado pa din.

House 4: Oo nga eh kaso wala na kaming ibang magawa. Nakasanayan na din kase.

Group: Nakooo.

House 4: Okay na ba mga anak?

Group: Opo tita. Salamat po sa oras ninyo.

Interview 5:

Group: Magandang umaga po sa inyo. Kami po ay mga estudyante galing De La Salle Lipa, seksyon S11-18. Kami po ay madaming grupo pero amin po ang na-assign dito. Maaari po ba naming mahingi ang kaunti ng inyong oras?

House 5: Okay lang mga anak. Tungkol saan ba?

Group: Tungkol po sa mga problema dito sa barangay. Maikli lamang naman po ito. May sasagutan din po kayo na questionnaire.

House 5: Ahhh sige. Galing na kayo sa ibang bahay dito?

Group: Opo. Kalimitan pong banggit sa amin ay problema tungkol sa basura. Kayo po. Problema niyo din po ba yung kung paano itinatapon yung basura ninyo?

House 5: Problema lang talaga dito sa amin ay kung paano namin itatapon ng maayos ang aming basura.

Group: Bakit po?

House 5: Pagkatapos mapuno ng sako, hindi namin alam kung saan dadalhin ito. Kaya ayun sinusunog na lamang namin dun sa may balon.

Group: Nabanggit na po sa amin iyan. So kalimitan po talaga lahat nagsusunog?

House 5: Oo eh. Kaya minsan ang iba nagkakasakit na gawa nung usok galing sa pagsusunog ng basura.

Group: Nako ang delikado nga po niyang pagsusunog na yan.

House 5: Oo nga mga anak eh pero kahit na delikado, yun lang naiisip namin na paraan.

Group: Nako gagawin po namin ang aming best para matulungan kayo dyan.

House 5: Salamat mga anak. Tapos na ba interbyu?

Group: Opo. Salamat din po.

Interview 6:

Group: Magandang umaga po sa inyo. Maaari po ba namaing mahingi ang kaunting oras ninyo?

House 6: Sige. Para saan ba?

Group: Kami po ay mga estudyante mula De La Salle Lipa. Kami po ay magsasagawa ng interbyu patungkol sa problema na nararanasan ng barangay.

House 6: Ahhh sige.

Group: May questionnaire din po kami na pasasagutan. Maikli lang naman po yan.

House: Sige, akin na. Nanggaling na ba kayo sa ibang bahay dito? Tsaka bakit pala barangay namin.

Group: Bale na-assign po ang aming grupo sa purok na ito. Tapos galing na din po kami sa ibang bahay dito.

House 6: Ano sabi nila sa inyo? Parang wala naman ako nakikitang problema.

Group: May problema daw po kayo sa basura. Yung pagsusunog niyo daw po ay deliakdo.

House 6: Ahhh oo.

Group: Pero kapag po ba nagtatapon kayo ng basura sa bahay ay maayos po? Kumbaga po ay tama yung pagtatapon ninyo ng basura, hindi po kalat.

House 6: Kapag dine sa bahay ay itinatapon namin ng maayos ang basura sa sako o kahit anong pedeng lalagyan ng basura para hindi makalat.

Group: Ahhh ganun po ba. Pagkatapos po maitapon ng ayos ay ano na po ginagawa ninyo dun?

House 6: Kaso yun nga eh problema lamang eh kung ano gagawin namin sa naipon na basura. Wala naman dumadaan na truck dito. Wala pa din naman maayos na paaran na naiisip ang barangay

Group: Ano na lang po ginagawa ninyo sa basurang naipon ninyo?

House 6: Ayun magsusunog na lamang kami dun sa balon, gaya ng iba.

Group: Ahh kagaya din po ng iba. Mayroon po kayang pamilya na hindi nagsusunog.

House 6: Nako hindi ko lang alam.

Group: Ahhh sige po. Salamat po sa oras at pagbabahagi ninyo.

House 6: Sige mga ineng at tutoy. Ingat kayo.

Interview 7:

Group: Magandang umaga po. Mula po kami sa De La Salle Lipa at magsasagawa po ng interbyu. Maaari po bang mahingi ang oras ninyo? Mabilis lang naman po ito.

House 7: Sige, okay lang. Pasok kayo.

Group: Bale po galing na po kami sa ibang bahay dito. Ang interbyu po ay para malaman namin kung ano ang kasalukuyang problema dito sa barangay. May problema po ba kayo dito sa barangay?

House 7: Nako parang wala naman.

Group: Halos yung iba po kasi ay tungkol sa basura. May nakapagsabi po sa amin na minsan ay dinadala niyo po yung basura sa lipa.

House 7: Ayun nga, dinadala na lamang lipa o sa mga junk shop.

Group: Kayo po ba? Ginagawa ninyo yun?

House 7: Minsan nakakapagod na din kasi gawa ng malayo ang mga junk shop sa lugar namin.

Group: Ano po ginagawa ninyo sa basura kung hindi niyo dadalhin dun?

House 7: Sinusunog na lamang gaya nung iba dun sa may balon ng barangay.

Group: Ahhh pare-pareho pala po talaga.

House 7: Oo mga anak eh. Wala na kasing ibang paraan na maisip ang barangay.

Group: Nako. Sana po ay makatulong kami diyan sa problema na iyan.

House 7: Nako sana nga at matagal na namin gusto masolusyunan iyan. Labag din naman sa aming kalooban na kami ay nagsusunog.

Group: Opo, gagawin po namin ang aming makakaya.

House 7: Sige. Okay na ba?

Group: Opo tapos na po.

House 7: Sige salamat mga anak. Ingat kayo.

Group: Salamat din po. Kayo din po, ingat po.

Interview 8:

Group: Magandang umaga po sa inyo. Maabala lang po namin kayo ng saglit. Kami po ay mga estudyante mula De La Salle Lipa. Mag-interbyu lang po kami sana ng saglit sa inyo. Pede po ba?

House 8: Sige lang. Kaso ay hindi ako pedeng lumabas kaya dito na lamang ako sa may bintana. Nag-aalaga kasi ako ng bata.

Group: Sige po ayos lang po. Maikli lang naman po intong interbyu namin.

House 8: Tungkol saan ba?

Group: Sa problema po na kasalukuyang nararanasan ng barangay.

House 8: Ano ba kalimitang sabi ng iba?

Group: Tungkol po sa pamamahala ninyo ng basura. Yung pagsusunog po.

House 8: Ahhhhh.

Group: Kayo po ba ay may problema tungkol sa basura ng barangay?

House 8: Mukhang wala naman akong masyadong problema patungkol sa basura.

Group: Wala po talaga? Kahit dun po sa paraan ng pagtatapon ninyo ng basura?

House 8: Siguro nababahala lang ako dahil sa pagsusunog namin ng basura.

Group: Bakit po?

House 8: Syempre may baby kami dito sa bahay. Baka makasama sa kalusugan ng baby namin.

Group: Baka po magkasakit ang baby?

House 8: Oo, kaya minsan nababahala kami pag nagsusunog ng basura dito samin. Kaso wala kaming ibang paraan eh.

Group: Nagkasakit na po yung baby dahil sa usok galing sa pagsusunog?

House 8: Nako oo. Isnag beses nagka-ubo yung baby namin dito. Kasso wala kaming magawa tungkol diyan sa pagsusunog. Yan lang kasi paraan ng barangay.

Group: Kawawa naman po ang baby. Sa ngayon naman po, hindi pa siya nagkakasakit?

House 8: Hindi pa naman. Sana hindi na.

Group: Sige po. Maraming salamat po sa oras at pagbabahagi ninyo sa amin.

House 8: Sige salamat din.

Interview 9:

Group: Magandang umaga po. Maaari po ba namin kayong maabala?

House 9: Nako naglilinis ako eh. Para saan ba yan?

Group: Maikli lang po. Mag-interbyu lang po kami. Tungkol po sa kasalukuyang problema na nararanasan ng barangay. Kami po pala ay mula sa De La Salle Lipa.

House 9: Ahh sige okay lang. May sasagutan ba?

Group: Eto po yung questionnaire namin.

House 9: Galing na kayo sa ibang bahay dito?

Group: Opo. Pang-9 na po ata kayo na napuntahan namin.

House 9: Ano sabi nila tungkol diyan sa problema ng barangay?

Group: Pamamahala po ng basura. Pagsusunog po.

Group: Para sa inyo po, may problema po ba kayo dito sa barangay?

House 9: Wala naman problema kasi tahimik naman kami dito.

Group: Wala ba po talaga?

House 9: Baka naman mapabarangay ako kapag nagsabi ako na may problema dito.

Group: Ay, di naman po. Kailangan lang po naman naming to para sa project po.

House 9: Sige.

Group: Sa pagtatapon po ng basura, wala din po?

House 9: Kalimitan sinusunog na lang namin.

Group: Ahhh kagaya po ng iba?

House 9: Oo, kahit alam naming masama yung epekto nito kaso wala na kaming ibang maisip na madaling paraan.

Group: May nakapagbanggit din po kasi samin tungkol dyan. Sa epekto daw po.

House 9: Oo nakakabahala din kasi yung usok. Nakakapagdala ng sakit kasi syempre mga basura tapos kalimitan malapit na mabulok.

Group: Ahhh tas may mabaho pa pong amoy?

House 9: Nako, isa pa yun. Daming masasamang epekto pero ginagawa pa din namin. Parang ang gulo diba?

Group: Oo nga po eh.

House 9: Kaso ayun, wala naman kaming magawa. Sanay na sa ganung buhay.

Group: Sabi din po sa amin ng iba. Yun na daw po nakasanayan. Pero gagawa po kami paraan para masolusyunan ito.

House 9: Nako sana nga. Sige na mga anak, maglilinis pa ako.

Group: Sige po. Salamat po sa oras at pasensya po sa abala.

Interview 10:

Group: Magandang umaga po. Kami po ay mga estudyante galing De La Salle Lipa, kasalukuyan pong Grade 11. Maaari po ba namin kayong maabala? Kaunting oras lamang po.

House 10: Sige mga anak. Pasok kayo. Medyo magulo nga laang, hindi pa kasi uli ako nakakapaglinis.

Group: Nako ayos lang po.

House 10: Ano ba gagawin?

Group: Mag-interbyu po kami sa inyo. Tapos may questionnaire din po kaming pasasagutan.

House 10: Ahhh sige. Nanggaling na ga kayo sa mga naunang bahay dito?

Group: Opo.

House 10: Ahhh okay lang naman interbyu niyo sa kanila?

Group: Opo, nasagot naman po nila mga tanong namin.

House 10: Tungkol saan ba ang interbyu?

Group: Tungkol sa problema dito sa barangay. Ung nararanasan niyo po ngayon. Kalimitan po kasi ay pamamahala ng basura ang sinasabi nila na problema dito.

House 10: Ahhhhh.

Group: May problema din po ba kayo tungkol sa basura? Talaga po bang hindi umaabot pangongolekta ng basura dito sa inyo?

House 10: Mas tago kasi lugar namin dito kaya mas mahirap maabot ng nangogolekta ng basura.

Group: Paano niyo po itinatapon naipon ninyong basura?

House 10: Minsan nga kahit alam naming masama ay napipilitan na lamang kami na sunugin ito.

Group: May nakapagsabi din po sa amin tungkol diyan sa masasamang epekto. Nababahala din po kayo?

House 10: Oo naman syempre lalo na at matatanda na kami. Mas habulin kami ng sakit. Tapos yung usok pa na manggagaling sa pagsusunog ng basura. Kaya medyo nababahala talaga kami.

Group: Nako nga po. Talagang delikado nga po lalo na at may edad na kayo.

House 10: Oo kaso wala naman kaming ibang paraan na maisip kaya nagsusunog na lang din kami ng basura.

Group: Ahhhhh. Nako, gagawin po namin ang aming makakaya para masolusyunan iyan.

House 10: Oo sana nga mga anak. Salamat ha.

Group: Nako walang anuman po. Bukas po ang aming puso na makatulong sa inyo. Maraming salamat din po sa inyo.

Appendix A

DLSL - iLEAD Baseline Data Interview/Survey Questions

Brgy/Sitio _____, City of _____

Ama ng Pamilya: _____ Edad _____ Trabaho _____ Saan nagtatrabaho _____

Regular na kinikita araw-araw _____

Antas ng Edukasyon: Elementary _____ High School _____ College _____ Vocational _____

Ina ng Pamilya: _____ Edad _____ Trabaho _____ Saan nagtatrabaho _____

Regular na kinikita araw-araw _____

Antas ng Edukasyon: Elementary _____ High School _____ College _____ Vocational _____ **Mga Anak:**

Pangalan	Edad	Kasarian	Marital Status	Antas ng Edukasyon	Trabaho
			Single _____ Balo _____ Live in _____	May Asawa _____ Hiwalay _____ Elementary _____ High School _____ College _____ Vocational _____	Meron _____ Wala _____ Saan Nagtatrabaho _____
			Single _____ Balo _____ Live in _____	May Asawa _____ Hiwalay _____ Elementary _____ High School _____ College _____ Vocational _____	Meron _____ Wala _____ Saan Nagtatrabaho _____

			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____
			Single ____ Balo ____ Live in ____	May Asawa ____ Hiwalay ____	Elementary ____ High School ____ College ____ Vocational ____	Meron ____ Wala ____ Saan Nagtatrabaho _____

Tinatayang kabuuang bilang ng mga taong naninirahan sa tahanan _____
Tinatayang kabuuang bilang ng taon ng paninirahan sa Brgy _____
Tinatayang kabuuang halaga ng gastos araw-araw _____
Probinsyang pinagmulan kung meron _____

Mga dahilan ng paninirahan sa napiling Barangay

1. _____
2. _____
3. _____
4. _____
5. _____

Uri ng Bahay:

Bato/Konkreto _____ Kubo _____ Kombinasyon _____ Bungalow _____ 2 storey
_____ Row House _____

Bilang ng Kwarto:

Wala _____ Isa _____ Dalawa _____ Higit sa Dalawa (Please indicate) _____

Uri ng Palikuran

Water-sealed, sewer septic tank, sariling gamit _____
Water-sealed, other depository, sariling gamit _____
Hukay na may takip _____
Iba pang uri (Isulat) _____

Water-sealed sewer septic tank, kasalo ang ibang pamilya _____
Water-sealed, other depository, kasalo ang ibang pamilya _____
Hukay na walang takip _____
Walang Palikuran _____

Bilang ng Mga Kagamitang ginagamitan ng Kuryente:

Wala _____ Isa _____ Dalawa _____ Higit sa Dalawa _____

Mga Kagamitang pagmamay-ari ng pamilya na ginagamitan ng kuryente**Bilang/Dami**

Cellphone	_____	_____
TV Set	_____	_____
Radio	_____	_____
Sound system	_____	_____
Laptop/Computer	_____	_____
Washing Machine	_____	_____
Oven toaster	_____	_____
Rice Cooker	_____	_____
Microwave Oven	_____	_____
Flat iron	_____	_____
Iba pang Kagamitan _____		_____

Mga Sasakyang pagmamay-ari ng pamilya

Motorsiklo	_____	_____
Tricycle	_____	_____
Kotse	_____	_____
Jeep	_____	_____
Truck	_____	_____
Iba pang uri ng sasakyan _____		

Mga**Pagmamay-aring hayop ng pamilya**

Baboy	_____	_____
Manok	_____	_____

Aso	_____	_____
Pusa	_____	_____
Ibon	_____	_____
Kambing	_____	_____
Kalabaw	_____	_____
Kabayo	_____	_____

Iba pang hayop na pagmamay-ari ng pamilya _____

Pinagkukunan ng kuryente

MERALCO _____

 BATELEC _____

 SOLAR _____

Paraan ng Pagluluto

LPG _____

 Charcoal and Firewood _____

 Electricity _____

Pinagkukunan ng Tubig na inumin

Balon _____

 Poso _____

 Gripo (Water District) _____

Ilog na Protektado _____

Iba pang pinagkukunan ng tubig na Inumin _____

Paraan ng pagtatapon ng mga basura

Sinusunog _____

 Inilalagay sa balon ng sama-sama _____

Inilalagay sa balon ang magkakasamang uri _____

 May regular na humahakot _____

Itinatambak sa bakanteng lugar _____

 Dinadala sa ibang barangay _____

May sapat na kaalaman tungkol sa paggawa ng pataba sa halaman o composting. Meron _____

 Wala _____

May sapat na kaalaman sa tamang paghihiwa-hiwalay ng mga basura. Meron _____

 Wala _____

May sapat na kaalaman sa wastong pangangalaga ng kapaligiran.

Meron _____

Wala _____

PANGUNAHING SULIRANIN

Sa inyong palagay, ano ang pangunahing suliranin sa inyong barangay? _____

Bakit ninyo nasabi na ito ang pangunahing suliranin?

May mga programa bang naipatupad upang matugunan ang suliraning inyong nabanggit? _____

Sa inyong palagay, ano ang dahilan at hindi naging matagumpay ang mga programang inyong nabanggit?
