



STATUS OF WASTE MANAGEMENT PROGRAM IMPLEMENTATION IN BARANGAY BALZAIN EAST, CENTRO 11, TUGUEGARAO CITY, CAGAYAN

WILFREDO A. JAUCIAN, LPT, MPBM

Program Coordinator, Graduate School

Florencio L. Vargas College, Inc

Tuguegarao City Campus

Cagayan, Philippines

RONIE E. SUGAROL, MPBM

Dean, College of Education and Management

International School of the Asia and the Pacific-MCNP

Tuguegarao City Campus

Cagayan, Philippines

ABSTRACT: *Faced with the growing garbage problem in the country, Republic Act (RA) 9003, also known as the Ecological Solid Waste Management Act of 2000, was enacted by the Philippine government. Republic Act No. 9003 otherwise known as the “Ecological Solid Waste Management Act of 2000, enacted on January 26, 2001, aims to address the growing problem of solid wastes in the country. It provides the legal framework for the country’s systematic, comprehensive, and ecological solid waste management program that shall ensure protection of public health and the environment. This study assessed the status of implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. The study used the quantitative approach using a descriptive survey research design. According to Manuel and Medici, descriptive research describes what is which involves the description, recording, analysis, and interpretation of the actual nature, composition, or processes of phenomena. The main data source was based on the survey questionnaire where respondents of this study were taken by random sampling and targeted method. As the questionnaire used was a structured questionnaire, this was attempted with 15 respondents and the target participants who actually took part in the survey. It is concluded that the interviewed households in the Barangay are determined to*



actively participate in the waste management program if regular orientation is to be carried out in Barangay, as indicated by their responses, as the main proposed action to make Barangay Balzain East, Centro 11 as a healthy environment to live in and free from diseases caused by waste.

KEYWORDS: *waste management, RA 9003, material facility recovery, recycling, sanitary landfill, composting, waste reduction, waste segregation, disposal, garbage collection, waste reduction*

INTRODUCTION

All dumped home and commercial garbage, non-hazardous institutional and industrial waste, street sweepings, construction waste, agricultural waste, and non-hazardous/non-toxic solid waste are all classified as solid waste. Materials and garbage from a variety of sources, including residences, enterprises, commercial institutions, manufacturing, and industrial facilities, and biomedical sources including hospitals and clinics.

The natural starting point for proper solid waste management, according to UNEP (2005), is to reduce the amount of garbage managed either informally at the producer's site or formally (externally) by another body once the waste is disposed of by the producer. This decreases the amount of waste that needs to be collected or managed.

Past and current research on solid waste in countries without an adequate waste management system, such as most developing countries, has focused more on appropriate collection and disposal options than on waste generators, storage, or even a waste reduction pathway that helps when reused and recycled, leaving large gaps. These are issues that must be addressed in order to ensure the long-term management of solid waste created while avoiding environmental concerns. An economically developing country fails to pay sufficient attention to solid waste disposal in order to accelerate its industrial development. Failure to do so later results in serious consequences, including the waste of



reusable resources and far-reaching negative consequences for the environment. (Singhal & Pandey, 2001)

As mentioned above, most developing countries are plagued by waste management problems that deteriorate the urban environment and pose a serious threat to natural resources, thus impeding development (Sujauddin., M., et al. 2008). Solving this problem requires knowledge about the amount of waste per capita, the composition and also the attitude towards waste. The authors found that there are many variables affecting the composition and amount of waste generated, including population growth, socioeconomic factors (income, education, age, land ownership), which is reversed in most developed countries.

“Solid waste management is everyone’s business. Ensuring effective and proper solid waste management is critical to the achievement of the Sustainable Development Goals,” said by Ede Ijjasz-Vasquez, Senior Director of the World Bank’s Social, Urban, Rural and Resilience Global Practice. “Left unmanaged, dumped or burned, waste harms human health, hurts the environment and climate, and hinders economic growth in poor and rich countries alike. According to Sameh Wahba, World Bank Director for Urban and Territorial Development, Disaster Risk Management and Resilience, “Poorly managed waste is contaminating the world’s oceans, clogging drains and causing flooding, transmitting diseases, increasing respiratory problems from burning, harming animals that consume waste unknowingly, and affecting economic development, such as through tourism,”.

Solid waste management is critical to increasing sustainable development since it prevents environmental degradation and enhances people's quality of life. Furthermore, as an industry, it may employ more people and encourage tourism. Solid waste management is a global issue that affects both developing and developed countries. According to the Asian Development Bank (ADB), solid waste management is a concern in many cities throughout many developing countries.



According to Mmereki et al. (2016), the growing diversity of waste characteristics and the lack of effective implementation of consistent waste policies, combined with changing lifestyles, increased production processes, and rapid urbanization, are the primary causes of solid waste (SW) management challenges around the world. Solid waste management in developing and developing countries is inefficient and poorly established. These studies are comparable to the one underway currently to determine the efficacy of municipal solid waste management (MSWM). Ahluwalia and Patel (2018) also agree when they state that the present system is focused on collection and transportation of largely mixed unsegregated waste. Rules have now been put in place for sustainable solid waste management, but the capacity to plan and manage the system and ensure the enforcement of the rules is a major challenge.

Faced with the growing garbage problem in the country, Republic Act (RA) 9003, also known as the Ecological Solid Waste Management Act of 2000, was enacted by the Philippine government. Republic Act No. 9003 otherwise known as the “Ecological Solid Waste Management Act of 2000, enacted on January 26, 2001, aims to address the growing problem of solid wastes in the country. It provides the legal framework for the country’s systematic, comprehensive, and ecological solid waste management program that shall ensure protection of public health and the environment. It also provides for the necessary institutional mechanisms with the creation of the National Solid Waste Management Commission (NSWMC) which shall oversee the implementation of solid waste management plans and prescribe policies as well as incentives to achieve objectives of the Act. (Department of Environment and Natural Resources, 2019)

The ecological solid waste management program is expected to assist Local Government Units in implementing RA 9003 or the Ecological Solid Waste Management Act particularly in the development of their 10 yr. SWM Plan, closure and rehabilitation of dumpsites, establishment of Materials Recovery Facilities, and an environmentally sound disposal system. (Senate Economic Planning Office, 2017)



According to Jonas Leones of DENR, the Solid Waste Management or RA 9003, is a good law. Among these technologies are waste-to-energy projects, which Leones said are in place in other countries. However, such technology has yet to be allowed in the Philippines, which he says has been facing an alarming surge in garbage generation during the raging health crisis as medical wastes in particular pile up steadily. (Pilar,2021)

Waste management measures, according to CHR spokesperson Jacqueline de Guia, would not only improve environmental sustainability and health results, but will also undoubtedly contribute to the full enjoyment of basic human rights. She also stated that environmental deterioration might result in serious and ongoing human rights violations. In addition, poor waste and hazardous material disposal can have a significant impact on people's health, food and water safety, housing, and overall well-being. 2021 (Kabagani)

Crispian Lao, president of the Philippines Alliance for Recycling and Materials Sustainability (PARMS), stated that while plastic packaging has been blamed for the marine pollution crisis, no other material is as effective in ensuring the safe transportation of food, and if there is packaging that meets the demand for food safety and accountability in an archipelagic country like the Philippines, where food must be transported from one island to another. For the time being, he continued, the most essential thing is to guarantee that no waste enters the environment. (2020, Fernando)

According to Bijan et al. (2016), not all houses receive government-provided rubbish collection and street sweeping services. As a result of the rapid expansion in population and economic growth, there should be a greater geographic coverage of door-to-door collection and street sweeping services. The Philippines is confronting a tremendous difficulty in managing its expanding municipal trash effectively. Furthermore, Galarpe (2017) believes that the government lacks a systematic monitoring scheme for dumpsites and landfills. The environmental risk that disposal sites may pose as a result of hazardous compounds seeping from disposed materials. The health dangers that communities are exposed to are also examined. Propose a mechanism to improve the solid waste disposal system to meet the policies of RA 9003 (Solid Waste Management Act). Sapuay et al. (2016), Wynne et al.



(2017), Beloy (2016), and Vivar et al. (2015) studied the RA 9003 and found that the global trend in solid waste management is toward resource recovery rather than waste disposal. Tins, glass, paper, plastic, and rubber are no longer the only recyclable materials that can be recovered. All solid waste materials, including residual trash, are now recovered as part of resource recovery. Ineffective solid waste management is a sociological, environmental, economic, and political problem. Conclusion: Better solid waste management can only be fully realized via the involvement, political will, and commitment of the implementers in the implementation of democratically passed resolutions and the implementation of their ideas that would stimulate the waste management system.

Our government has struggled with the inefficient disposal and collecting of our waste. We are accumulating more rubbish than we can adequately dispose of as society advances. Waste that has not been properly processed or disposed of can cause major health problems for everyone. Furthermore, according to the Bureau, a polluted environment reduces our surroundings' aesthetic potential. In exchange, RA 9003 establishes a systematic and comprehensive Ecological Solid Waste Management (ESWM) program that can be adopted and implemented by all sectors of society. ESWM refers to the systematic management of operations that ensure source separation, separate transit, storage, transshipment, processing, treatment, and disposal of solid waste, as well as any other waste management activity that does not harm the environment.

The basic policies of RA 9003:

1. Ensure the protection of public health and environment;
2. Utilize environmentally sound methods that maximize the utilization of valuable resources and encourage resources conservation and recovery;
3. Set guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures, including composting, recycling, re-use, recovery, green charcoal process, and others, before collection, treatment and disposal inappropriate and environmentally sound solid waste management facilities in accordance with ecologically sustainable development principles;



4. Ensure the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of the best environmental practices in ecological waste management excluding incineration;
5. Promote national research and development programs for improved solid waste management and resource conservation techniques, more effective institutional arrangement and indigenous and improved methods of waste reduction, collection, separation and recovery.
6. Encourage greater private sector participation in solid waste management
7. Retain primary enforcement and responsibility of solid waste management with local government units while establishing a cooperative effort among the national government, other local government units (LGUs), non-government organizations and the private sector;
8. Encourage cooperation and self-regulation among waste generators through the application of market-based instruments;
9. Institutionalize public participation in the development and the implementation of national and local integrated, comprehensive and ecological waste management programs; and
10. Strengthen the integration of ecological solid waste management and resource conservation and recovery topics into the academic curricula of formal and non-formal education in order to promote environmental awareness among the citizenry.

Under RA 9003, a National Solid Waste Management Commission has been established to oversee the implementation of the SWM plans and to prescribe policies to achieve the objectives of this Act. The Commission is composed of 14 members from the government sector and 3 members from the private sector. Article 4 Section 32 of the RA 2003 provided the facility of LGU MRF may be barangay owned leased land or any suitable open space designed to receive, sort, process and store compostable and recyclable material in an efficient and environmentally sound manner can be.

The facility must make considerations such as: B. The layout of the building and/or property and the equipment must be designed to allow efficient and safe material handling,



movement and storage and the building designed to allow efficient and safe external access is possible and internal flow is possible. A successful MRF has five key elements of ESWM, which are; 1) technically reasonable processing equipment, sound design and technically feasible and environmentally sound recycling and reuse process; 2) Educational promotional, informational and educational campaign on separation, collection and compliance with regulations; 3) Enforcement Regulations with IRRs that enable and empower enforcers and implementers; 4) Environmental organization supports ESWM board and LGU, adequate information on LGU profile and waste characterization for effective planning and forecasting; 5) Equity fundable management and operations from production to commercialization, availability of support and seed capital.

This environmental governance, according to Atienza (2009), refers to the procedures and mechanisms that combine the many parts of waste management, such as: B. In developing countries, such as the Philippines, political regulators, diverse organizations, the community, and technology are required to implement sound waste management. Transparency, participation, and accountability of diverse stakeholders, as well as their conscious effort to help address problems, are all characteristics of good governance. Effectiveness, sustainability, and reproducibility are all characteristics of good waste

The study by Atienza's (2011) shows that solving a gigantic waste problem cannot be solved by government alone. The creation and implementation of policies is an important element in dealing with the various issues and concerns in solid waste management. Guidelines are required for the planning, design and implementation of solid waste management programs.

In Cagayan Province, the problem of waste management is a constant problem, especially in Tuguegarao City, the most populous city in said province with an estimated population of about 250,000 people. In 2007, the city of Tuguegarao generated a total of 1,012 m³ of municipal solid waste weekly, which corresponds to a rate of 0.5 kg/capita/day and 0.42 kg/capita/day for urban and rural barangay, respectively.



The Tuguegarao Municipality has expanded the execution of Republic Act 9003, popularly known as the Solid Garbage Management Act of 2003, to handle these expanding waste challenges. The TiponTipansa PIA Forum is an advocacy campaign that encourages inhabitants in the city's 49 barangays to keep the waste sorting system going. Households, schools, and companies have also been encouraged to set up sorting stations so that garbage collectors can distinguish between biodegradable, non-biodegradable, and recyclable waste.

This policy establishes identifying the likely sources of waste generation, their impacts, and disposal methods, and then recommends a waste management strategy for waste management, offering a likely solution for waste management through: avoidance, reduction, and beneficial use through the 3Rs of Waste Management, and the development of legislative, legislative, and legislative regulations for waste management in Tuguegarao City, Cagayan Province.

The clean-up effort included all city administration staff, who were responsible for cleaning the designated sites. Furthermore, the city government has ordered all barangay authorities and citizens to clean up after themselves. The city government actively participates in regular clean-ups to maintain city cleanliness and to teach all Tuguegarao City inhabitants about the necessity of living in a clean and tidy environment. Mayor Atty. prioritizes cleanliness and environmental conservation. Specifically, the waste management program of Jefferson P. Soriano.

With the preceding textual story of whether the Tuguegarao city local government unit program is substantial, the barangays have conducted waste management programs and formed a barangay-level waste management policy. The researcher's goal is to bring this study to Barangay Balzain East, Centro 11, which is one of Tuguegarao's barangays. The researcher chose said barangay as a study subject since he is an actual resident of said barangay, with the goal of measuring the extent of waste management program execution in terms of education, funding, facilities, human resources, and politics. Hence, this study is



titled Status of Implementation of Waste Management Program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan.

STATEMENT OF THE PROBLEM

This study assessed the status of implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. Specifically, it sought to answer the following:

1. What is the profile of the respondents have in terms of:

- 1.1. Year/s of Residency
- 1.2. No. of Family Members
- 1.3. Monthly Income
- 1.4. Source of Income
- 1.5. Waste Materials Produced
- 1.6. Dumping system of waste materials
- 1.7. Duration of dumping garbage
- 1.8. Fees paid for garbage collection
- 1.9. Time duration of dumping waste materials

2. To what extent do the household survey assess the status of the implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan in terms of information efforts, funding, facilities, personnel, and policies?

3. What are the respondents' suggestions to improve the implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan?

4. What action plan can be developed to improve the waste management program of Barangay Balzain East, Centro 11, Tuguegarao City?

RESEARCH METHODOLOGY

The study used the quantitative approach using a descriptive survey research design. According to Manuel and Medici, descriptive research describes what is which involves the description, recording, analysis, and interpretation of the actual nature, composition, or



processes of phenomena as established by Aquino, who says descriptive research is fact-finding with appropriate interpretation.

The study was conducted at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. Although it is called Centro 11 of the city of Tuguegarao, this barangay is inhabited by 550 households who actually reside on various main streets such as E. Panaga, Eusebio Liban, Servando Liban, and Soriano Streets, as well as Macapagal Avenue and Balzain Hi-Way, all of whom are bona fide households or residents who produced waste materials or garbage. The main data source was based on the survey questionnaire where respondents of this study were taken by random sampling and targeted method. As the questionnaire used was a structured questionnaire, this was attempted with 15 respondents and the target participants who actually took part in the survey. The instrument used to collect data for the study was the researcher-constructed survey questionnaire, which consists of two (2) parts. Part I contains the basic information of the respondent profile and Part II is the household respondents' assessment of the implementation of the waste management programs in Barangay major. The following adverbial and descriptive values were arbitrarily assigned when using the 5-point scale:

<u>Scale</u>	<u>Numerical Value</u>	<u>Descriptive Interpretation</u>
5 -	4.20-5.00	Outstanding (O)
4 -	3.40-4.19	Very Extensive (VE)
3 -	2.60-3.39	Extensive (E)
2 -	1.80-2.59	Fairly Extensive (FE)
1 -	1.00-1.79	Not Extensive (NE)



RESULTS AND DISCUSSIONS

Table 1a: Frequency and Percentage Distribution of the Respondent's Profile as to the Year/s of Residency

Year/s of Residency	Frequency	Percentage
1 - 10 years	75	32.33
11 - 20 years	53	22.84
21 – 30 years	27	11.64
31 – 40 years	22	9.48
41 – 50 years	20	8.62
51 - 60 years	18	7.76
61 – 70 years	9	3.88
71 - 80 years	8	3.45
81 years - above	0	0.00
Total	232	100.00

Table 1a shows the frequency and percentage distribution of the respondent profile in relation to the year(s) of residence, that of 232 households surveyed, 75 or 32.33% had a residence of 1-10 years; 53 or 22.84% have residency from 11 to 20 years; 27 or 11.64% are residents aged 21 to 30; 22 or 9.84% are residents aged 31-40; 20 or 8.62% are residents aged 41-50; 18 or 7.76% are residents aged 51-60; 9 or 3.88% are residents aged 61-70; 8 or 3.45% are residents aged 71-80, and none of the households surveyed lived longer than 81 years.

The majority of households surveyed at 75 out of 232 respondents have resided from 1 to 10 years and the fewest have resided from 71 to 80 years with only 8 households surveyed. This further implies that since the founding year of Barangay Balzain East, there are many people establishing residence, most of the households surveyed are new residents at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. This is also an indication of the increasing population in said barangay. This can be the result of the intermarriage of the children and children of the children of the old family members.



**Table 1b: Frequency and Percentage Distribution of the Respondent's Profile
as to the No. of Family Members**

No. of Family Members	Frequency	Percentage
1 – 5 members	129	55.60
6 – 10 members	92	39.66
11 – 15 members	11	4.74
16 members & above	0	0.00
Total	232	100.00

Table 1b shows the frequency and percentage distribution of the respondent profile regarding the number of family members, to 232 households surveyed, 129 or 55.60% were households with 1-5 members; 92 or 39.66% households have had members; 11 or 4.74 households have 11-15 member, and smallest family members of the households surveyed have 11-15 members. None of them have 16 members or more. The majority of households surveyed have 1-5 family members, which represents an ideal number of family members, including parents and children. But the families of 11 households surveyed have 11-15 members. This is because in a household there are 2 or 3 families living in one house. The result generated above also coincides with the survey conducted by the Philippine Statistics Authority that according to the 2020 population census, the average size of households in the Philippines was 4.1.

**Table 1c: Frequency and Percentage Distribution of the Respondent's Profile
as to the Monthly Income**

Monthly Income	Frequency	Percentage
Php 1,000 – 5,000	38	16.38
Php 5,001 – 10,000	189	81.47
Php 10,001 – 15, 000	5	2.16
Php 15,001 – above	0	0.00
Total	232	100.00



Table 1c shows the frequency and percentage distribution of the respondent's profile in terms of the monthly income of 232 households surveyed, 38 or 16.38% of households surveyed were households having a monthly income bracket of Php 1,000 to 5,000; 189 or 81.467% have a monthly amount of Php 5,001 to 10,000; 5 or 2.16% with a monthly income of Php 10,001 to 15,000; and none of the households surveyed have a monthly income bracket of more than Php 15,000.00.

This means that the majority of households surveyed live within the average monthly income bracket of Php 5,001 to Php 10,000. The lowest monthly income bracket ranges from Php 10,001 to 15,000 with only 5 households surveyed. The result shows that majority of the respondents have a monthly family income below the poverty line based on the National Economic Development Authority bulletin of information. Further, Caritas Manila executive director Fr. Anton Pascual stated in article published in the Philippine Star dated June 8, 2018, the living wages for a family to be considered "out of poverty should be P20,000.00 a month and from an article written by Venus Zoleta, it can be seen that almost all of the respondents are classified under the poor income cluster having less than P12,082 monthly income for a family of 5.

Table 1d: Frequency and Percentage Distribution of the Respondent's Profile as to the Source of Income

Source of Income		Frequency	Percentage
Employment		100	43.10
Government	28		
Private	52		
Family Business	20		
Farming		10	4.31
Self-Employed		110	47.41
Overseas Workers		12	5.17
Pursuit of Profession (CPA, MD, Dentist, etc)		0	0
Total		232	100.00

Table 1d shows the frequency and percentage distribution of the respondent profile in terms of source of income, of 232 households surveyed, self-employed got the highest



frequency of 110 or 47.41 percent, followed by those who are employed in the private sector with a frequency of 52 or 22.41 percent, farming, on the other hand, got the lowest frequency of 10 or 4.31 percent. None of the households surveyed indicated that their source of income was from their profession (CPA, MD, dentist, etc.)

This further implies that the majority of the households surveyed are self-employed and the lowest source of income of the households surveyed is agriculture. In fact, many reputable households live behind the commercial establishments and as one of the residents of Barangay Balzain East, Centro 11, few of the original residents are involved in farming and most of them are small business temporary contractors belonging to the underworld economy, without authorization or legal documents to conduct their personal businesses such as fish sales on a commission basis, vegetable vendors and meat vendors in the Don Domingo public market near their residences on Soriano, E. Panaga, Servando, Liban and E. Liban Streets and Macapagal Avenue. The data further affirm the findings related to the family income, wherein the majority belongs to the below the poverty line as seen in the source of income.

Table 1e: Frequency and Percentage Distribution of the Respondent's Profile as to the Waste Materials Produced

Waste Materials Produced	Frequency	Percentage
Biodegradable	0	0.00
Non-biodegradable	0	0.00
Mixed (biodegradable and non-biodegradable)	232	100.00
Total	232	100.00

Table 1e shows the frequency and percentage distribution of the test person profile with regard to the waste produced, that all 232 households surveyed produced a mixture of biodegradable and non-biodegradable waste in their daily lives. No household respondents who exclusively produced neither biodegradable nor non-biodegradable waste.

This further implies that the house holds surveyed produce all waste materials that come from the food and other products they have bought for household or daily consumption.



**Table 1f: Frequency and Percentage Distribution of the Respondent's Profile
as to the Dumping System of Waste Materials**

Dumping System of Waste Materials	Frequency	Percentage
Throwing on the street	0	0.00
Throwing in the canal	0	0.00
Throwing in the trash bin	0	0.00
Place in the garbage bag and place outside the building for collection	232	100.00
Total	232	100.00

Table 1f shows the frequency and percentage distribution of the respondents' profile regarding the waste disposal system, that of 232 households surveyed, all the waste produced was thrown into the garbage bag and placed outside the building for collection.

None of the households surveyed throws rubbish on the street, in the sewer or in the rubbish bin. In their respective homes, respondents have their plastic bags in which they have placed their waste materials, which they make available outside their building (homes) for collection at the time set by the barangay garbage collectors. The Barangay garbage truck is scheduled every day to collect the waste materials or garbage from the households. The respondents are fully aware that segregating the waste is also part of waste management (Perez 2011). Also, they are aware that one way to lessen the garbage problem in their community is to avoid having trash and use environment-friendly materials to solve the problem of waste disposal.

**Table 1g: Frequency and Percentage Distribution of the Respondent's Profile
as to the Duration of Garbage Dumping**

Duration of garbage dumping	Frequency	Percentage
Everyday	232	100.00
2x a week	-	-
3x a week	-	-



4x a week	-	-
5x a week	-	-
6x a week	-	-
Total	232	100.00

Table 1g shows the frequency and percentage distribution of the respondents' profile on the duration of land filling that all of the 232 households surveyed dispose of their rubbish every day. No households surveyed dispose of their waste 3x, 4x, 5x or 6x a week. This further implies that all households surveyed dislike storing waste materials produced every day because they want to keep their household clean and free from dirt.

Table 1h: Frequency and Percentage Distribution of the Respondent's Profile as to the fees paid for garbage collection

Fees Paid for Garbage Collection	Frequency	Percentage
Yes	0	0.00
No	232	100.00
Total	232	100.00

Table 1h shows the frequency and percentage distribution of the respondents' profile regarding the duration of landfilling that out of 232 households surveyed indicated that they all do not pay money for the collection of their household waste at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. None of the households surveyed said that they pay garbage fees. This further implies that it is the barangay who are shouldering the expenses incurred in collecting garbage from households at Barangay Balzain East, Centro, 11, Tuguegarao City, Cagayan.

Table 1i: Frequency and Percentage Distribution of the Respondent's Profile as to the Time Duration of Garbage Dumping

Time duration of Dumping Waste Materials	Frequency	Percentage
Morning		
5:00	0	0.00
6:00	152	65.52



7:00	73	31.47
8:00	0	0.00
9:00	0	0.00
10:00	0	0.00
11:00	0	0.00
12:00	0	0.00
Afternoon		0.00
1:00	0	0.00
2:00	0	0.00
3:00	0	0.00
4:00	0	0.00
5:00	0	0.00
Evening		0.00
6:00	0	0.00
7:00	7	3.02
8:00	0	0.00
9:00	0	0.00
10:00	0	0.00
11:00	0	0.00
12:00	0	0.00
Others	0	0.00
Total		100.00

Table 1i shows the frequency and percentage distribution of the respondents' profile on the duration of a landfill of 232 households surveyed, the duration of landfills of 152 or 65.52% of respondents was at 6:00 am, and 73 or 31.47% of respondents, who also dumped their trash at 7:00 a.m. No household respondents disposed of their garbage at other times in the morning, also in the afternoon from 1:00 p.m. to 5:00 p.m.

In the evening schedule, there were 7 or 3.02% of the 232 households surveyed that threw out their garbage at 7:00 p.m. in the evening and none of the households surveyed threw out their garbage at other schedules.



This implies that the households surveyed at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan are on schedule to dispose of their garbage.

Waste Management Program

Table 2: Weighted Mean and Descriptive Interpretation Assessment of the Status of Waste Management Programs Implementation in Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan

WASTE MANAGEMENT PROGRAM INFORMATION DRIVE	5 (O)	4 (VE)	3 (E)	2 (FE)	1 (NE)	WM	D.V.
a. Orientation to implement comprehensive waste management information program for barangay residents and business establishments.	68	30	58	37	39	3.22	E
b. Implement change in the Barangay waste management system through extensive information dissemination	28	27	108	56	18	3.03	E
c. Introduction of waste management policy to residents, businesses, and waste management workers of both why the new system is necessary and how it will operate.	60	41	80	37	14	3.41	VE
d. Create an education program drive targeting school children about solid waste management.	59	38	92	29	14	3.43	VE
FUNDING							
a. Barangay is committed to purchase required facilities for waste segregation.	58	45	82	30	17	3.42	VE
b. Barangay allocates necessary fund for the operation of facilities use in recycling, reusing, and composing of waste materials.	59	42	82	35	14	3.42	VE



c. Barangay allocates fund to purchase gadgets like computer, printers and other equipment for high-volume applications operation for the waste management implementation and administration	60	37	81	34	20	3.36	E
d. Allocation of garbage fee collection is properly utilized to improve waste management program of the barangay.	57	41	80	38	16	3.37	E
FACILITIES							
a.Has purchased facilities for Sorting and collecting dumped garbage/waste in the street, for rivercleansing in support of barangay collection activities.	62	37	83	34	16	3.41	VE
b. Has developed and funded to purchase similar facilities in processing source-separated recyclables and organic wastes collected by Barangay workers.	54	41	88	31	18	3.35	E
c. Has developed and funded waste processing and recycling plant in processing biodegradable materials from public market waste into organic fertilizer that's could be offered for sale the processed organic fertilizer and recyclable materials to provide income to LGU.	56	40	82	33	21	3.33	E
d. Has funded to purchase vehicle use to collect waste materials or garbage as to the time and days scheduled for efficient collection.	64	40	82	33	21	3.50	VE
PERSONNEL							
a. Trained workers are employed to conduct proper waste management	54	45	84	33	16	3.38	E



program education/orientation to the residents and business establishments.							
b. Requires on-site barangay workers to make a complete Business Recycling and Waste Reduction Plan.	59	41	80	33	19	3.38	E
c. Available workers to collect waste in the street, sweeping, river cleansing, and sustained waste collection activities.	56	39	90	33	14	3.39	E
d. Deploys eco-aides who go around the barangay with carts buying recyclable items from households and business establishments.	58	38	83	35	18	3.36	E
POLICY							
a. Formulate policy or ordinance on proper waste management program in the barangay residents and business establishment.	57	45	88	33	9	3.47	VE
b. Adopt policy of continuously updating recycled-content specifications to maximum feasible levels for all products, e.g., paper.	55	43	88	29	17	3.39	E
c. Adopt policy of purchasing facilities and equipment for high-volume applications.	54	47	87	27	17	3.41	VE
d. Adopt policy of requiring residents and business establishments to practice good waste management measures.	63	39	86	35	9	3.48	VE
General Weighted Mean Average						3.38	E

Table 2 shows the weighted mean and descriptive interpretation rating of the status of implementation of waste management programs at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan based on some controllable factors highlighted as follows: Information Drive, Funding, Facilities, Personnel, and policy implementation.



As seen on the table, “Create an education program drive targeting school children about solid waste management” got the highest weighted mean of 3.43 or with a descriptive interpretation of “Very Extensive”. Just like what Evans, B.; Joas, M.; Sundback, S.; Theobald, K (2006); San Jose, A.; Nelson, K. (2007); and Wells, N.M.; Lekies, K.S. (2006) stated in their study that early childhood experiences affect children’s cognitive and emotional benefits and influence the development of lasting environmental attitudes and behaviors also according to Evans, B. et.al., children understand the ecological and human impacts on the environment from environmental problems awareness. On the other hand, “Implement change in the Barangay waste management system through extensive information dissemination” got the lowest weighted mean of 3.03 or with a descriptive interpretation of “Extensive”. Extensive information dissemination on waste management can close the gap in knowledge of the young and the old in the proper waste segregation and waste sustainability. UNESCO stated that people’s awareness about the environment and its accompanying challenges can be increased through environmental education.

Regarding the funding factor of the waste management programs, the households surveyed said that the barangay committed to purchasing the necessary facilities for waste sorting and the barangay allocates necessary funds for the operation of facilities use in recycling, reusing, and composting of waste materials got a “Very Extensive” descriptive interpretation and with a mean of 3.42. It should be noted that a national and local SWM fund is established to aid LGUs in financing their SWM related projects and activities.

Regarding the facilities used in the implementation of waste management programs at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan, the 232 households surveyed rated “Has funded to purchase vehicle use to collect waste materials or garbage as to the time and days scheduled for efficient collection” 3.41 weighted mean or a “Very Extensive” descriptive interpretation. Meanwhile, “Has developed and funded waste processing and recycling plant in processing biodegradable materials from public market waste into organic fertilizer that’s could be offered for sale the processed organic fertilizer and recyclable materials to provide income to LGU.” Got the lowest mean of 3.33 or a descriptive interpretation of “Extensive”. The result generated above adhered to the mandate of RA 9003 wherein RA 9003 spelled out the transition path to a systematic, comprehensive, and



ecologically sound waste management program through institutional augmentation, capacity building, and facility investment both at the national and sub-national levels. Identified outputs included medium to long-term planning, the establishment of solid waste management boards, and investments in material recovery facilities and engineered sanitary landfills (Sonny N. Domingo and Arvie Joy A. Manejar 2021).

Regarding the workers involved in the implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan, the 232 households surveyed rated the workers involved in the implementation of the waste management program of the said barangay as Extensive or E.

“Available workers to collect waste in the street, sweeping, river cleansing, and sustained waste collection activities.” Got the highest mean of 3.39 which only shows that the LGU’s on-ground crew are doing their job properly and efficiently.

Regarding the barangay's customized policies for implementing waste management programs, the 232 households surveyed gave a very comprehensive or VE rating for the formulation of policies or regulations for a proper waste management program in the barangay residents with a weighted average score of 3.47; adopting a policy of purchasing facilities and equipment for high volume applications with a weighted average of 3.41, and adopt a policy that requires residents and businesses to practice good waste management practices with a weighted average score of 3.48. This only showed that the households surveyed are fully aware of the policy being implemented at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan. The City Ordinance No. 11-2000 also known as the “The Solid Waste Management Code of Tuguegarao City” provided by the Local Government Unit of Tuguegarao City mandates and monitors the proper compliance of Ecological Solid Waste Management within the city and it is an order implemented in accordance to the R.A. 9003 or the “Ecological Waste Management Act of 2000”.



Suggestions to Improve Waste Management Program Implementation

Table 3: Frequency and percentage Distribution of the Respondents in their Suggestions to improve waste management program implementation in Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan

Suggestions to improve waste management programs implementation	Frequency	Percentage	Rank
Regular face to face meeting with the constituents per Purok	100	43.10	2nd
Imposition of Penalty to Non-Complaint to policy/ordinance	4	1.72	4th
Conduct Regular Barangay Orientation on Waste Management Programs	110	47.41	1st
Placement of Signboard bearing with the policy on waste management programs	18	7.76	3rd
Others	0	0	
Total	232	100.00	

Table 3 shows the frequency and percentage distribution of respondents in their suggestions to improve the implementation of the waste management program at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan out of 232 households surveyed, "Conduct Regular Barangay Orientation on Waste Management Programs ranked first with a frequency of 110 or 47.41 percent. The respondents have seen the importance of having the right knowledge, skills, attitude, and information to have better environmental sustainability or waste management sustainability. Just like what the United States Environmental Protection Agency (EPA) considers, environmental education comprises more than only information about the environment. It rather enhances critical thinking, contributes to solving problems, and allows effective decision-making skills. Moreover, it increases public awareness, and knowledge of environmental issues, and enables individuals to provide facts or opinions on environmental matters, aiming to make responsible decisions. On the other hand, 100 or 43.10% of households surveyed were ranked 2nd and they have suggested that face-to-face meetings with the constituents per Purok should also be conducted. The



respondents are aware that educating people through information dissemination on how to handle produced solid waste has become essential (Marello&Helwege, 2014; Nolasco, Baguia, & Padua, 2019) and that poor information dissemination strategy on solid waste management will make the public less aware and less participative on the program (Nolasco, Baguia, & Padua, 2019. 18 or 7.76% of households surveyed suggested the placement of waste management program policy signs and there are). 4 or 1.72% of households surveyed suggested imposing a penalty for non-compliance with policies/regulations. Very few suggested for the imposing a penalty for compliance since the respondents know that

CONCLUSIONS

Based on the study conducted on the interviewed households, the controllable factors in the implementation of waste management programs in Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan, the interpreted description of the program is extensive, which means the waste management programs in said barangay neither good nor bad that it can still be improved by the barangay to achieve the goal of making Barangay Balzain East, Centro 11 the model barangay in the implementation of the barangay level waste management program in the city of Tuguegarao city, Cagayan.

As this barangay is considered to be one of the busiest areas with commercial establishments operating day and night, there are many commercial business establishments that can be seen and experienced working lively. Most of the commercial establishments operating at Balzain Hi-way are not actually based at Barangay East, Centro 11. They operate their business only during the day and after a few hours from 8:00 am to 5:00 am in the afternoon the owners close their shops and go to their respective houses or residences. Few of these shops, usually small businesses inside the barangay like sari-sari shops, are owned by the bona fide residents of Barangay Balzain, Centro 11, Tuguegarao City, Cagayan.



Also, it is concluded that the interviewed households in the Barangay are determined to actively participate in the waste management program if regular orientation is to be carried out in Barangay, as indicated by their responses, as the main proposed action to make Barangay Balzain East, Centro 11 as a healthy environment to live in and free from diseases caused by waste.

RECOMMENDATIONS

Based on the outcome of the assessment conducted on the households surveyed, the researcher recommended the following: Regular face to face meetings with the constituents per Purok;

1. Improve waste management programs by involving community households in planning activities.
2. Placement of Waste Management Program policy signs;
3. Imposing a penalty for failure to appeal against policy/regulation,
4. Promote waste separation into biodegradable, non-biodegradable, recyclable, and hazardous waste in households in Barangay East, Centro 11, Tuguegarao City, Cagayan and
5. Make a well-planned campaign of activities that will lead to the excellent waste management programs that will be implemented in the Barangay over the next few calendar years.
6. Aside from the above recommendations, the researcher also recommends that when preparing the barangay activity plan, the barangay officials must provide the exact date of the regular orientation on the waste management program so that the barangay people can be armed with enough information about the concerns they have can actively participate in the program implementation.

With this move, the barangay's good image will be a great morale boost not only for its residents but also for the neighboring barangays in the city of Tuguegarao, and to be proud of its achievement for other barangays to emulate the strategies and good practices



adapted, once Barangay Balzain, Centro 11 became a model barangay in the City of Tuguegarao, Cagayan Province.

REFERENCES

2000. Report on Wasting and Recycling in Metropolitan Manila, Philippines. The Institute for Local Self-Reliance Washington, DC for Greenpeace Southeast Asia Unit 326, Eagle Court Condominium #26 Matalino St., Barangay Central, Diliman, Quezon City, Philippines

2000. Report on Wasting and Recycling in Metropolitan Manila, Philippines. The Institute for Local Self-Reliance Washington, DC for Greenpeace Southeast Asia Unit 326, Eagle Court Condominium #26 Matalino St., Barangay Central, Diliman, Quezon City, Philippines

Antonio, Liza C. (2010). Study on Recyclables Collection Trends and Best Practices in the Philippines, ' in M. Kojima, ed. ERIA Research

Ahluwalia, Isher Judge; Patel, Utkarsh. (2018). "Solid Waste Management in India: An Assessment of Resource Recovery and Environmental Impact."

<http://hdl.handle.net/11540/8143>

Atienza, Villa. 2009. "Environmental Governance: In Search of Sound Solid Waste Management Strategies," Ph.D. Thesis, Graduate School of Asia Pacific Studies Doctoral Program, Ritsumeikan Asia Pacific University.

Atienza, Vella, 2010. "Sound Strategies to improve the condition of the informal sector in waste management", in Kojima, ed. ERIA research Project Report 2009, 3R, Policies for Southeast and East Asia, pp.102-142.

Atienza, Vella (2011). "Review of the Waste Management System in the Philippines: Initiatives to Promote Waste Segregation and recycling through Good Governance." Kojima



and Nichida ed. Economic Integration and Recycling in Asia: An Interim Report, CHosakankyuHokokusho, Institute of Developing Economies, 2011.

Atienza, Vella. (2020). "Waste Management in the Philippines"

<https://www.igi-global.com/chapter/waste-management-in-the-philippines/240080>

Beloy, Jeffrey. (2016). "Assessment of Solid Waste Management Strategies in Camarines Norte, Philippines."

Bijan, et al., (2016). "Ecological Solid Waste Management Act and Factors Influencing Solid Waste Management in Barangay Pansol of Quezon City, the Philippines."

[https://www.researchgate.net/profile/Bijan-](https://www.researchgate.net/profile/Bijan-Maskey/publication/321781326_Ecological_Solid_Waste_Management_Act_and_Factors_Influencing_Solid_Waste_Management_in_Barangay_Pansol_of_Quezon_City_the_Philippines/links/5a318c30aca272714497f1f6/Ecological-Solid-Waste-Management-Act-and-Factors-Influencing-Solid-Waste-Management-in-Barangay-Pansol-of-Quezon-City-the-Philippines.pdf)

[Maskey/publication/321781326_Ecological_Solid_Waste_Management_Act_and_Factors_Influencing_Solid_Waste_Management_in_Barangay_Pansol_of_Quezon_City_the_Philippines/links/5a318c30aca272714497f1f6/Ecological-Solid-Waste-Management-Act-and-Factors-Influencing-Solid-Waste-Management-in-Barangay-Pansol-of-Quezon-City-the-Philippines.pdf](https://www.researchgate.net/profile/Bijan-Maskey/publication/321781326_Ecological_Solid_Waste_Management_Act_and_Factors_Influencing_Solid_Waste_Management_in_Barangay_Pansol_of_Quezon_City_the_Philippines/links/5a318c30aca272714497f1f6/Ecological-Solid-Waste-Management-Act-and-Factors-Influencing-Solid-Waste-Management-in-Barangay-Pansol-of-Quezon-City-the-Philippines.pdf)

Department of Environmental and Natural Resources (2019). "Intensified Environmental Protection: Solid Waste Management."

https://legacy.senate.gov.ph/publications/SEPO/AAG_Philippine%20Solid%20Wastes_Nov2017.pdf

Evans, B.; Joas, M.; Sundback, S.; Theobald, K. Governing local sustainability. *J. Environ. Plan. Manag.* **2006**, *49*, 849–867.

Ezeudu, Obiora B., Ezeudu, Tochukwu S. (2019). "Implementation of Circular Economy Principles in Industrial Solid Waste Management: Case Studies from a Developing Economy"

<https://www.mdpi.com/2313-4321/4/4/42>



Fadhullah, W., Imran, N.I.N., Ismail, S.N.S. et al. (2022). "Household solid waste management practices and perceptions among residents in the East Coast of Malaysia. BMC Public."

<https://doi.org/10.1186/s12889-021-12274-7>

Fernandez, Hannah Alcoseba. (2020) "Why plastic-clogged Philippines must face up to dearth of waste disposal and recycling."

<https://www.eco-business.com/news/why-plastic-clogged-philippines-must-face-up-to-dearth-of-waste-disposal-and-recycling/>

Galarpe., Van Ryan Kristopher R. (2017). "Review On the Impacts of Waste Disposal Sites in the Philippines."

https://www.researchgate.net/profile/Van-Ryan-Kristopher-Galarpe-2/publication/316598058_Review_on_the_Impacts_of_Waste_Disposal_Sites_in_the_Philippines/links/59068c76aca272116d333183/Review-on-the-Impacts-of-Waste-Disposal-Sites-in-the-Philippines.pdf

Gequinto, Amado C.. (2016). "Solid Waste Management Practices of Select State Universities in CALABARZON, Philippines."

Imaden, A. M. (2021). "Development of a Better Solid Waste Management Program for Sustainable Development in a Residential Subdivision, a study posted on International Journal of Multidisciplinary."

Kabagani, Lade Jean. (2021). "Waste management part of basic human rights protection"

<https://www.pna.gov.ph/articles/1143822>

Marello, M. and Helwege, A. (2017). Solid Waste Management and Social Inclusion of Wastepickers: Opportunities and Challenges. *Latin American Perspectives*, 45(1), 108-129.
<https://doi.org/10.1177%2F0094582X17726083>



Molina , R and Catan, I. (2021). Solid Waste Management Awareness and Practices among Senior High School Students in a State College in Zamboanga City, Philippines. Aquademia. <https://www.aquademia-journal.com/>

Mmerekli D., Baldwin A. & Li B., (2016). "A comparative analysis of solid waste management in developed, developing and lesser developed countries, Environmental Technology Reviews."

Nolasco, M., Beguia, Y. and Padua, ML. (2019). Solid Waste Management in Naga City: Its Culture of Information Dissemination. *Asia Pacific Journal of Multidisciplinary Research*, 7(4), 12-17. Retrieved from <http://www.apjmr.com/APJMR-2019.7.04.02>

Purdy, S. and Sabugal, F., (2001), Proceeding Sardinia 2001, Eighth International Waste Management and Landfill Symposium, Volume IV, pages 29-38.

Purdy, S. and Sabugal, F., (2001), Proceeding Sardinia 2001, Eighth International Waste Management and Landfill Symposium, Volume IV, pages 29-38.

San Jose, A.; Nelson, K. Increasing Children's Positive Connection To, Orientation Toward, and Knowledge of Nature through Nature Camp Experiences. *Int. J. Environ. Sci. Educ.* **2017**, 12, 933–944.

Sapuay , Grace P. . (2016). "Resource Recovery through RDF: Current Trends in Solid Waste Management in the Philippines."

<https://www.sciencedirect.com/science/article/pii/S1878029616301190>

Scheinberg A. Wilson D.C. and Rodic L. (2010). Solid Waste Management in the World's Cities, London: UN-Habitat by Earthscan

Senate Economic Planning Office (SEPO). (2017). "Philippine Solid Waste at a Glance"

<https://www.denr.gov.ph/index.php/priority-programs/solid-waste-management>



Vivar, P. C., Salvador, P., & Abocejo, F. (2015). "Village-Level Solid Waste Management in Lahug, Cebu City, Philippines. Countryside Development Research Journal"

<http://cdrj.ssu.edu.ph/index.php/CDRJ/article/view/71>

Wells, N.M.; Lekies, K.S. Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Child. Youth Environ.* **2006**, *16*, 1–24.

UNESCO. *Issues and Trends in Education for Sustainable Development*; Leicht, A., Heiss, J., Byun, J.W., Eds.; UNESCO: Paris, France, 2018; ISBN 978-92-3-100244-1.

Environmental Protection Agency—USA. *The Components of Environmental Education*; Environmental Protection Agency: Washington, DC, USA, 2018.

<https://www.ukessays.com/essays/environmental-sciences/literature-on-solid-waste-management-in-nigeria-environmental-sciences-essay.php?cref=1>

<https://www.ukessays.com/essays/environmental-sciences/literature-on-solid-waste-management-in-nigeria-environmental-sciences-essay.php?cref=1>

<https://www.waste-management-practices-on-the-island-of-mindanao-philippines.pdf>

<http://www.sunstar.com.ph/static/ilo/2005/12/11/news/environment.presents.ra.9003.html>

<http://www.google.com/map/tuguegarao-city>

PROPOSED ACTION PLAN OF ACTIVITIES

BARANGAY BALZAIN EAST,

CENTRO 11, TUG. CITY,

CAGAYAN

Introduction



Barangay Balzain East Waste Management Program Implementation Status Study, Centro 11, Tuguegarao City, Cagayan aims to provide household residents with immediate and responsive services in developing effective measurement to improve barangay-level waste management program implementation of the city Tuguegarao, Cagayan Province.

However, waste management programs are complex in the urban societies with a high proportion of the population, mainly non-residents of the barangay, and are often not regularly monitored by the barangay due to excessive funds or budget to properly implement the program.

The main focus of this study in the Barangay Balzain East Local Government Unit is to develop a policy reform aimed at improving the implementation of the Waste Management Program in order to improve the quality of service and make the said barangay a model barangay.

With this explanation, based on the generated data presented through the use of survey questionnaires among the residents of the household on the waste management programs as well as the proposals to improve the program implementation in the said barangay, the researcher extends these proposed intervention programs to those carried out in the study issues raised, hence this ACTIVITY PLAN for the 2017-2018 calendar year at Barangay Balzain East, Centro 11, Tuguegarao City, Cagayan.



PROPOSED ACTION PLAN OF ACTIVITIES					
BARANGAY BALZAIN EAST, CENTRO 11, TUGUEGARAO CITY, CAGAYAN					
Calendar Year 2017-2018					
By WILFREDO A. JAUCIAN, LPT, MBA, MPBM-PA					
Objectives	Key Result Area	Activities	Persons Involved	Target Date	Success Indicator
Orient the barangay folks of the waste management programs of the barangay	Barangay Gov't.	2nd Semi-Annual	Barangay Officials:		
		Barangay Orientation on Waste Management Programs in Balzain East	-Committee on Community Dev't. Chairman & Mems.		
		Centro 11, Tuguegarao City, Province of Cagayan	-Brgy. Chairman		
Instill in the mind of the barangay folks the value of waste management programs for a squalor-free barangay		Note: This activity must be conducted twice in every year	Barangay Folks	July 14, 2017	_Well-oriented
			-1st Batch	Friday	Brgy. Folks on
			Purok 1,2,3 residents	1st Batch	waste management programs
Progressively introduce principles on waste management, including enhancement of household garbage collection and disposal		The 1st Semi-Annual Brgy. Orientation shall be held on the month of January of every year.			_Good policy-abiding community folks
			- 2nd Batch	July 15, 2017	_Well-oriented
			Purok 3,4, 5	Saturday	Brgy. Folks on
Expand local government's role to provide monitoring and enforcement of required standards on waste mgmt.		Venue: Barangay Gym		2nd Batch	waste management programs
					_Good policy-abiding community folks
			- 3rd Batch	July 16, 2017	_Well-oriented
			Purok 6, 7	Sunday	Brgy. Folks on
				3rd Batch	waste management programs
					_Good policy-abiding community folks



PROPOSED ACTION PLAN OF ACTIVITIES					
BARANGAY BALZAIN EAST, CENTRO 11, TUGUEGARAO CITY, CAGAYAN					
Calendar Year 2017-2018					
By WILFREDO A. JAUCIAN, LPT, MBA. MPBM-PA					
Objectives	Key Result Area	Activities	Persons Involved	Target Date	Success Indicator
Progressively improve the barangay insitutional capacity on waste mgmt. collection and disposal systems	Barangay Gov't.	Seminar on Developing Brgy.Institutional Capacity Venue: Barangay Hall	Barangay Officials: -Committee on Community Dev't. Chairman & Mems -Brgy. Chairman		
Implement an extensive training program for staff/personnel in-charged of waste mgmt. programs operations			City Environment and Natural Resources Office of Tuguegarao _Resource Speaker _Urban Environment Dev't Specialists	August, 2017 Note: Exact date shall be determined by the brgy.officials	_Well-trained Brgy. Officials on waste management programs operations
Provide an incentive sytem to award excellence waste management programs innovator					Candidate for Search for Outstanding Brgy. Waste Management Progs. Implementor



PROPOSED ACTION PLAN OF ACTIVITIES					
BARANGAY BALZAIN EAST, CENTRO 11, TUGUEGARAO CITY, CAGAYAN					
Calendar Year 2017-2018					
By WILFREDO A. JAUCIAN, LPT, MBA, MPBM-PA					
Objectives	Key Result Area	Activities	Persons Involved	Target Date	Success Indicator
Strengthen local regulatory enforcement procedures and practices at Barangay level, including training on regulatory enforcement personnel	Barangay Gov't.	Seminar on Regulatory Enforcement of Waste Management Programs Venue; Barangay Hall	Barangay Officials: -Committee on Community Dev't. Chairman & Mems -Brgy. Chairman		
Establish and implement regulatory monitoring programs together with measurable objectives, strategies, and schedules			City Environment and Natural Resources Office of Tuguegarao _Resource Speaker _Urban Environment Dev't Specialists	September, 2017 Note: Exact date shall be determined by the brgy.officials	_Oriented Barangay Officials on Waste Management Progs. Regulatory Enforcem't
Provide adequate and sustainable funding for regulatory enforcement programs			Office of the City Urban & Rural Plann'g and Dev't. Officer Office of the City Budget Officer on Urban & Rural Plann'g and Development		_Well-trained Waste Management Progs. Regulatory Enforcers