



“A Case Study of Solid Waste Management in the Central Business District of La Trinidad, Benguet”

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Abstract

Continuous trash creation is an environmental crime necessitating effective waste management, according to green criminology. The goal of this study is to investigate solid waste management in La Trinidad's Central Business District (CBD) in Benguet. It specifically endeavored to identify the infractions, examine them, and recognize the actions the Barangay Local Government Unit had taken to solve the citizens' waste management infractions. The five barangay chairmen, four barangay councilors, and one authorized waste management officer of the MENRO-La Trinidad were all interviewed by the researcher. Twelve collecting stations were also observed by the researcher. The investigation found that residents' most frequent violation was untimely garbage disposal. As soon as there is a violation, the Bantay Basura Personnel will issue a citation ticket to the violators caught.

Keywords: Green Criminology, Bantay Basura, waste management violations, Barangay Local Government Unit Actions

1.Introduction

A broad phrase for criminology that addresses the dismissal of environmental concerns and the integration of green viewpoints into traditional criminology is "green criminology." It allows for an interdisciplinary and multidisciplinary approach, reframing criminology as being concerned with more than only crimes or social harm that fall under the purview of criminal justice systems. On the definition of "green crimes," the type of criminality

at issue, potential problems to be solved, and the nature, scope, and priorities of policy, academics, politicians, and practitioners frequently disagree.

Due to unchecked and undisciplined trash generation, the globe is currently dealing with an environmental crime or crisis. According to the World Bank, the global annual production of municipal solid trash is 2.01 billion tons, with at least 33% of that not being handled in an environmentally responsible way. Daily trash production per person fluctuates greatly from 0.11 to 4.54 kilos, with an average of 0.74 kilograms.

The Philippines now produces substantially more waste, with plastic pollution being a big issue. Institutional sources make up 12.1%, industrial or manufacturing sources 4.1%, and commercial sources make up 27.1%. Of MSW, biodegradable wastes make up 52.31%. 17.98% of the MSW that is produced, or residuals, is made up of waste and inert materials.

The Philippines has passed legislation establishing environmental quality standards, advancing environmental policies and programs, and safeguarding natural resources. To comply with RA 9003, the EMB-CAR office in the Cordillera has created its own 10-year solid waste management program.

The potential of Benguet's Material Recovery Facilities (MRFs) was described by Dwight Daodao, Senior Environmental Management Specialist at EMB-CAR. However, the management of these facilities is not being utilized to its fullest potential. He pointed out that the government's competence and political will may not be sufficient to manage the region's expected 7,600 tons of rubbish each day. The seminar-workshop was put on by the Benguet Environment and Natural Resources Office and the Solid Waste Management and LGU Relations Section of EMB-CAR.

In La Trinidad, Benguet, the Bantay Basura program was put into place to stop inappropriate garbage storage, burning of trash, non-segregation, open dumping, and incorrect waste disposal. As waste management is crucial to life, health, and wellbeing, the researcher's results will be helpful to society. Knowing about household waste management infractions and the BLGU's response promotes improvement and inspires more households to adopt sound waste management practices.

The researcher studied solid waste management in La Trinidad's Central Business District in Benguet, identified common household waste management violations there, and the actions the Barangay Local Government Units took to address the residents' violations.

2. Objectives

This study aims to analyze the practice of Solid Waste Management in the Central Business Districts of La Trinidad and address the specific question of what are the common waste management violations of households in the Central Business District of La Trinidad and the actions taken by the Barangay Local Government Units to address the violations of the residents.

3. Materials and Methods

To look into solid waste management in La Trinidad, Benguet, the researcher employed the case study research methodology. Based on their understanding of trash management and the circumstances in their barangays, study participants were selected. A Central Business District with a high population density, Balili, Betag, Pico, Poblacion, and Puguis, was selected as the ideal location for the study. According to Urban Scaling Theory, there is a super-linear link between crime rates and city size.

4. Results and Discussion

The following are the Common Waste Management Violations observed in the Central Business District of La Trinidad

Untimely Disposal of Waste

Untimely garbage disposal is the first identified violation in the Central Business District of La Trinidad. The waste collection scheme under Municipal Memo No. 05A-2011 is 5 A.M. to 7 A.M., but some are not following it. Passersby often dump their garbage without even bothering to fix it, leading to street sweepers having to sweep them out. Despite knowing the waste disposal time and the fact that it was posted on the disposal sites, many still violate it.

Dumping of Garbage at Night

The researcher observed that many residents threw their garbage at night between 7 P.M. and 10:30 P.M., even though it is not allowed. In an interview with seven random violators, four answered that throwing at night is more convenient, while three answered that it is hard to wake up early just to throw the garbage. However, it becomes chaotic due to not properly fixing and putting their garbage inside the collection area, causing dogs to scatter along the roads or around the garbage site. Additionally, some travelers from the different municipalities would dump their sacks of garbage at the garbage collection points, especially along the highway.

It is prohibited to throw out the garbage at night due to the dogs, so it is supposed to be done 5 A.M. Most of the violations are the untimely disposal of waste, as some brought out their garbage at night or even in the morning not following the proper time to dispose their garbage. The most important details in this text are that the concept of Green Criminology emphasizes the importance of self-discipline in order to protect the environment. This includes following the schedule for bringing out the garbage after properly sorting or segregating wastes at home, separating bio-degradable garbage together, non-biodegradable together, and separating recyclables.

Additionally, the positivist perspective in criminology looks at internal or external influences on individuals as the primary cause of criminal behavior, which assumes that changing underlying social conditions will reduce or prevent criminal behavior. Whether or not to bring out the garbage beyond the prescribed time depends on the person's internal influences, which is their discipline powered by the external influences, such as a reprimand or when someone would stop them or an enforcer would apprehend them.

Throwing of Unsegregated Non-biodegradable Wastes

The researcher observed twelve collection points in La Trinidad, Philippines, where wet wastes such as kitchen wastes, vegetable trimmings, and fruit peelings were properly separated and secured in separate plastic bags. However, many were not further segregated when it came to the non-biodegradables. According to five dumpers interviewed, they segregated their wastes according to biodegradables and non-biodegradables because it is a practice mandated to them, but they do not further segregate their non-biodegradables because it is already complying with the mandate on waste segregation. Many individuals dumped their garbage, which was separated according to biodegradable and non-biodegradable, but the non-biodegradables were not further segregated. This case implies that residents comply in good faith with segregation but are not further segregating their non-biodegradables according to whether it is residual or recyclables because, to them, that is already complying with the mandate on waste segregation.

The Central Business District in Metro Manila has a large population density, making it difficult to monitor every individual and household. This can lead to waste crimes, which refer to the trade, treatment, or disposal of waste in ways that breach international or domestic environmental legislation and cause harm or risk to the environment and human health. Community-based initiatives involve waste segregation at source, recycling, and composting,

and have been attempted in many barangays throughout Metro Manila. Swati et al. (2018) stated that landfills are receiving waste without segregation, which reduces its worth in generating energy and increases the cost of processing waste. Ahluwalia, Isher Judge, and Patel, Utkarsh (2018) explains that the inability to ensure segregation of waste leads to proper recycling, effective functioning of Biomethanation plants, and safe operation of waste to energy plants, leading to release of toxic pollutants into the atmosphere.

Throwing of Garbage in Public Places and Littering

Green crime is an illegal activity that involves the environment, biodiversity, or natural resources, and generally one of the types of major environmental crime is crimes that generate pollution. As per the researcher's observation, wastes were seen along the road, sidewalk, waiting sheds, canals, parks, and public places, especially places where tourists and people always visit. The researcher observed that wastes were scattered around the area that were not properly dumped in the designated dumping spots, and that scavengers as stray dogs scattered it more.

Green Crime is an illegal activity that involves the environment, biodiversity, or natural resources, and generally one of the types of major environmental crime is crimes that generate pollution. Littering, throwing, and dumping waste in public places, such as roads, sidewalks, canals, parks, and the establishment, is a rampant violation of Section 48, paragraph one of provision of R.A. 9003 and a violation of the Municipal Ordinance 53-98. Littering, as defined in the La Trinidad Municipal Ordinance no. 53, Series of 1998, is the act of deliberately throwing garbage either in smaller or big quantity in areas or places not designated for disposal.

Another problem related to the dumping of garbage along the road is dumping in the outskirts of La Trinidad, either waste from the adjacent or neighboring municipality or city. Neighborhood watch and self-discipline are important to end these kinds of insolence because proper waste disposal is everybody's concern for the good of everybody and the environment. Ariel San Jose (2021) explains that unplanned waste management, lack of commitment, too much freedom, and lack of self-discipline made the garbage problem a massive battle.

Actions Taken by the BLGU to Address the Violations of the Residents

Issuance of Citation Ticket to Violator thru the Bantay Basura Personnel

The Bantay Basura is the main arm of the Central Business District and La Trinidad in implementing Solid waste management. They are the proper personnel to issue citation tickets to the violators, submit the receipt to the corresponding barangay, then the barangay will be the one to transmit it to the municipality. La Trinidad Municipal

Ordinance No. 29-2018, also known as the "La Trinidad Bantay Basura Ordinance", Section 4c Number 5, gives the Bantay Basura members the mobilization and utilization power to issue citation and violation tickets to any person or entities violating the provisions of Municipal Solid Waste Management Ordinance and La Trinidad Executive Order 1 series of 2017 provides the form for Citation ticket to be issued to the violators. To fully implement the R.A. No. 9003 embodied in the La Trinidad Municipal Ordinance No. 53-98, the Bantay Basura Personnel must implement the issuance of citation tickets and see to it that no violators would get away.

The Municipal Ordinance of La Trinidad, Philippines requires authorities to implement the Municipal Ordinance strictly without fear or favor to reduce the bulk of waste that would reach the sanitary landfill. As reported on the MENRO La Trinidad Official Facebook page on October 4, 2021, the person who dumped his sacks of garbage along the first bridge of Pico-Puguis road was apprehended and was held liable for illegal dumping. The positivist perspective in criminology looks at internal or external influences on individuals as the primary cause of criminal behavior. The decision whether or not to violate the ordinance on solid waste is dependent on the internal influences of the person, such as their fear of being caught and their discipline powered by the external influences. Bantay Basura Personnel present at the sites of the twelve collection points are not issuing a citation ticket. They allowed the dumper to throw their garbage even when it was not the scheduled disposal time and as long as the biodegradables were separated from the non-biodegradables. In an interview with Bantay Basura Personnel, they shared that they were issuing citation tickets to violators before the pandemic. However, since the pandemic started, they have never issued tickets anymore. One personnel shared that as long as their garbage is segregated and the biodegradables do not smell rotten, because if so, she requires them to bring it back home and bury it somewhere else.

Barangay Assembly, Consultations, Public Orientation, and Information Dissemination

The BLGU has taken action to address the violations of the residents, specifically Untimely Disposal of Waste, Dumping at Night, Throwing of Unsegregated Non-biodegradable wastes, and Throwing of Garbage in Public Places and Littering in violation of Section 5,v. To discuss the problems and violations of waste management, nine of the ten participants have a barangay assembly and consultations with the household owners, also public orientation, and information drives. The discussion is done regularly to resolve, if not minimize, the violations of constituents on waste disposal. It is important for the constituents to be reminded and not violate the waste

management directives, and doing it regularly would help inculcate the importance of managing waste and create awareness on their part. Margarita C. Paghasian's study found that college students in Mindanao State University Maigo School of Arts and Trades have a high level of awareness on solid waste management and segregation of waste, which leads them to practice proper segregation.

In DC, waste segregation has been lagging due to a low level of awareness, lack of willingness, and low financing. Last March 27, 2022, the Municipality of La Trinidad initiated the 1st quarter Balili River Clean-Up Drive activity in which a total of 173 sacks of wastes with an approximated weight of 2,092 kilograms were recovered from the river. This shows that students have good practices in solid waste management in terms of segregation, and they are complying because they are aware of the solid waste management.

Verbal Warnings/Reprimand/Promissory Note

The authorities will give verbal warnings, reprimand violators, and require a promissory note from the violators caught in cases of Untimely disposal of waste under Section 7; I Paragraph C, Dumping at Night under Section 7, I, Paragraph A & C, Throwing of Unsegregated Non-biodegradable Wastes under Section 6, I, Paragraph A, and Throwing of Garbage in Public Places and Littering in violation of Section 5,V. Seven of the ten participants shared that when a violator is caught, they would also be scolded and given verbal warnings. Additionally, a promissory note may be required of the violator. The MENRO La Trinidad Official Facebook page reported on October 4, 2021, that the person who dumped his sacks of the garbage along the first bridge of Pico-Puguis road was apprehended and required to clean what he had dumped. This implies that reasonable fines and proper actions are accorded to violators; giving warnings and reprimands is important. The Barangay Ordinance No. 2 Series of 2019 of Barangay Puguis, La Trinidad, Benguet Province provides for a verbal warning from the Punong Barangay plus a promissory note by the offender not to do the same, to clear out the garbage they had dumped and to pay a fine of five hundred pesos, for a second offense, to clear out the garbage they had dumped and to pay a fine of seven hundred fifty pesos, and lastly, to clear out the garbage they had dumped and pay a fine of one thousand pesos. Section 10, II on Residential Establishments of the La Trinidad Municipal Ordinance No. 53, Series of 1998 provides for a written reprimand and a warning on every violation. The 1st offense is a fine of two hundred pesos and a written reprimand and warning from the municipal mayor, the second offense is a fine of five hundred pesos

per residential building owner, and the third offense is a maximum fine of two thousand five hundred pesos or imprisonment of five days to one month or both fine and imprisonment at the court's discretion.

Community Service, Fine or Both

The authorities would require the violators to render community service, fines, or both in cases of Untimely disposal of waste, Dumping at Night, Throwing of Unsegregated Non-biodegradable Wastes, Throwing of Garbage in Public Places, and Littering in violation of Section 5,V. The related community service or fine required of the violator “if they can’t afford to pay, they will render community service, but the thing is, they prefer to pay”. Additionally, MENRO designate said “as to penalty, we have the Municipal Ordinance as basis, we have first offense, second offense, but additionally, they are required to submit a promissory note stating that they will not do it again and are ordered to watch where their garbage is dumped”. It is beneficial for the community and the inhabitants to require the violator to render community service to compensate the community for the harm it has incurred from the violator. The Barangay Ordinance No. 2 series of 2019 of Barangay Puguis, La Trinidad, Benguet Province provides for a verbal warning from the Punong Barangay plus a promissory note by the offender not to do the same, to clear out the garbage they had dumped and to pay a fine of five hundred pesos, for a second offense, to clear out the garbage they had dumped and to pay a fine of seven hundred fifty pesos, and for a third offense, to clear out the garbage they had dumped and to pay a fine of one thousand pesos. La Trinidad Executive Order 1 Series of 2017 Section 6 provides that when the violator cannot provide the required penalty or fine, the violator should render a community service commensurate to the severity of the offense. For the first offense, it would be four hours of street cleaning or gardening; for the second offense, it would be eight hours of street cleaning or gardening; and for a third offense, it would be forty (40) hours street cleaning or gardening.

Conduct Investigation in Special Cases

An investigation is conducted when a special case happens concerning Throwing Garbage in Public Places and Littering in violation of Section 5,V.

As to illegal garbage dumping, the proper authorities will conduct investigations; whenever evidence pointing to a certain company is established, further investigation is done and eventually interrogation of the recognized violator.

This scene implies that violators can still be identified even if no one sees him/her do the actual offense through investigation and thorough analysis of the waste improperly dumped.

To sum up, in waste management, segregation and segregation at source are great practices since it helps in waste reduction.

Unfortunately, untimely disposal and dumping at night are the major violations done in the central business district.

When caught for a certain violation, Bantay Basura Personnel may promptly issue a citation ticket to the violator for proper action.

The LGU of La Trinidad is doing its part as an implementor of RA 9003 by issuing a citation ticket to violators through the Bantay Basura Personnel and having time to discuss problems in waste management with the Bantay Basura personnel and the households.

With the preceding, the LGU may still strengthen or improve its approaches in implementing the provisions of RA 9003 by revisiting its Risk Management Plan, specifically on the waste management part.

5. Conclusion

The presence of Bantay Basura personnel in the collection sites is imperative for properly implementing the waste disposal scheme as it was found out that the most violation in the Central Business District is the untimely disposal of waste which includes dumping at night.

The Bantay Basura Program is a great tool to lessen continuously, if not to maintain the waste management compliance of La Trinidad as a whole, not just the Central Business District because it helps address the untimely disposal of waste and inhibits violators.

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