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IMPLEMENTING THE ECOLOGICAL SOLID WASTE MANAGEMENT ACT OF 2000: CHALLENGES AND OPPORTUNITIES IN A PHILIPPINE MUNICIPALITY

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ABSTRACT

This study focused mainly in measuring the practices, awareness, and implementation of the Ecological Solid Waste Management Act of 2000 in Gerona, Tarlac. It was represented in by MENRO officials, barangay captains, and resident respondents. This study utilized the Cross-Sectional Survey Research Design that intends to conduct an examination of the characteristics of varied groups of samples in a population.

The findings showed that the most common practices of the residents regarding the solid waste management are converting biodegradable wastes into useful products, throwing waste matters in public places, dumping of garbage in public places or in the rivers, and open burning of waste. The residents are only slightly aware of the said law. Moreover, it is slightly implemented based from the residents, much implemented based from the barangay captains, and very much implemented based from the MENRO officers. There is no significant relationship between the level of awareness of the residents and the level of implementation of the law in Gerona, Tarlac.

Scholarly recommendations are offered like the local government of Gerona should post infographics and practices on strategic places that focus on a dense presence of people that aim to inform the public how they could process their household wastes. To improve the awareness of the residents on the law, it is recommended that a jingle be composed and played in the garbage truck of the municipal office about the solid waste management. When assemblies are already allowed, the barangay captains are recommended to inform the public regarding the scores in handling cases related to solid waste management.

KEY WORDS: ***Ecological Solid Waste Management Act, Awareness, Practices, and Implementation***

INTRODUCTION

Solid waste management is the term that is used for the collection, transport or disposal, and treatment of waste materials. This relates to solid materials produced for human activitiees, and generally the process is undertaken to withstand its health, cultural, and aesthetic effects. In today's contaminated environment it has become important to learn the appropriate methods of managing the produced waste. (Marello and Helwege, 2014) Moreover, solid waste management is the activity and action required to manage solid waste from its inception to its final disposal. These solid wastes are the unwanted materials or substances that are left or discarded after use, also included are by-products of process lines or materials that may be required by law to be disposed. (Okecha, 2000)

As stated by the International Criminal Police Organization (INTERPOL), every day environmental crimes can put our health and safety at risk. Illegally discarded waste can contaminate the soil where food is grown, hazardous chemicals can leach into water sources and environmental offenders can contaminate even the air we breathe. Moreover, illegally dumping hazardous materials like electronic waste, chemicals and industrial waste is an easy alternative for criminals due to the cost of responsible waste disposal, differences in legislation between countries and weak enforcement systems. Unlike the illegal trade in drugs and other illicit goods, natural resources are finite and cannot be replenished in a laboratory. As such, there is a sense of urgency to combat environmental crime.

Consistent with this research, several fields of studies for the protection of our environment have been promulgated accordingly in every state and country all over the world to address the issues concerning the painful and devastating treatment in the environment. Oladipo (2006) asserted that only proper awareness can bring about improvement of people wellbeing, their environment, strengthen their values, knowledge and technology as well as motivate them to create changes in the society. Awareness serves as base of people's attitude, behavior and disposition towards a course or issue. It serves as an eye

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opener in things in and around an individual, group of people, community or nation.

Meanwhile, in Phnom Penh, Cambodia's capital city, the Municipal solid management system (MSWM) is lacking in control, households generally burned, buried or discarded about 361 000 tons of Municipal waste in the year 2008 up until 2015. (Seng B., Fujiwara T., Spoann V., 2018). Similar case happened in Thailand where open dumping carried out over 60 percent of the final solid waste disposal. In addition, there were hundreds of disposal sites during 2004 where most of the open dumps and most disposal sites received about 25 tons of waste per day, while only Bangkok's landfills received about thousands of tons a day. (Chiemchaisri et al, 2007)

Philippines is one of the world's 17 "mega-diversity" countries (those that hold the highest biodiversity indices, with a significant number of endangered species); as it comprises two-thirds of the global biodiversity. The inability to control this extraordinary diversity has led the country to be identified as having 70-80 percent of the world's endangered species. In addition, because of the high degree of threat to their diversity, the Philippines is among the top priority hotspots for global conservation. There are several activities carried out in the Philippines that pose a danger to the degree of biodiversity referred to above. Which include the unsafe disposal of waste, the use of chemicals that contain hazardous materials has resulted in air pollution, littering and so on. (Rico, 2006)

Republic Act No. 9003 was conceived in response to the growing issues of garbage in the country. The Ecological Solid Waste Management Act of 2000 declares the policy of the state to implement a comprehensive, comprehensive and ecological solid waste management program that ensures the protection of public health and the environment and proper segregation, collection, transport , storage, treatment and disposal of solid waste by formulating and implementing best environmental practices. It also reveals the ability and benefits of recycling not only in addressing waste management problems but also in poverty alleviation. The Act provides for a comprehensive ecological solid waste management system through the establishment of the required institutional frameworks and incentives, allocation of funds, declaration of prohibited such activities, and sanctions.

The solid waste management system in the Philippines has been advancing steadily following the passage of RA 9003 in 2011.The scheme faces many problems and obstacles, such as inadequacy of funds, lack of political will on the part of local authorities, inadequate segregation at root and lack of household environmental knowledge. As projected, the country's waste generation increase from 37, 427. 46 tons per day in 2012 to 40, 087. 45 tons in 2016. As expected, the National Capital Region (NCR) created the largest volume of waste in the last five years due to its population size, greater number of enterprises and advanced and modern lifestyle. Metropolitan Manila, with an estimated population of 12 million people, produced 9,212.92 tons of waste per day in 2016. It is accompanied by Region 4A with 4,440.15 tons of waste generation each day (11.08 percent), and Region 3 with 3,890.12 tons each day (9.70 percent). (Atienza, 2011; NSWMC, 2016)

The Supreme Court affirmed the right to a healthy environment as an enforceable right. Addressing the issue of whether the right to the environment is a valid cause of action, the Supreme Court ruled that the right to a safe and healthy ecosystem entails a correlative obligation to refrain from destroying the environment. (Oposa vs. Factoran, 224SCRA805) There are several environmental regulations in the Philippines to tackle a wide variety of environmental issues ranging from forest degradation, loss of biodiversity, water pollution, air pollution, and hazardous waste management among others, and most importantly, the Solid Waste Management. The goal of environmental criminal law is to establish sufficiently severe sanctions for committing environmental crimes so as to deter potential offenders. (Brisman, 2008)

Unfortunately, even current laws are in effect, Philippines still produces more solid waste as the population grows, people's lack of knowledge, living standards are increased and urban and rural areas grow. Sumalde (2004) discovered that the MENROs suffered a significant fiscal difference between the earned income and the sum required to fund the solid waste program. The households' awareness about solid waste management is relatively small.7

Similarly, Gerona 's municipal government, Tarlac was granted a failing grade by the state auditors for their weak implementation of their 2015 solid waste management programme. In the 2016 report of the Commission on Audit (COA), the municipality failed to implement a systematic, comprehensive and environmentally sustainable solid waste management plan that would ensure adequate segregation, collection, transportation , storage, treatment and disposal of solid waste. Moreover, auditors said the above findings revealed that the Municipality was not effective in enforcing Republic Act 9003, and its solid wastes continued to pose present and future environmental and public health hazards.

Given the implementation of a law dealing with solid waste management problems, this statute has still never seen the light of the day and remains reckless with litter ending up on roads, ponds, canals and other waterways. Among other factors, this phenomenon can be attributed to the lack of implementation of orders in some LGUs, the lack of citizen involvement in promoting solid waste management, and the inadequate awareness of waste disposal and segregation among the general public.

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Having all these said, the researcher is convinced that the conduct of this study is deemed timely and relevant for the Municipality of Gerona. Although many studies have examined RA 9003, there is a lack of research regarding the assessment of its implementation. In fact, there was no research made regarding the implementation of RA 9003 in Gerona, Tarlac since the time of its implementation.

Theoretical Framework

This study is anchored on Social Learning Theory by Bandura (1977), Waste Management Theory by Pongracz (2004), Deterrence theory that can be traced to the early works of classical philosophers such as Thomas Hobbes (1588-1678), Cesare Beccaria (1738-1974) and Jeremy Bentham (1748-1832), Social Control Theory by Travis Hirschi and Routine Activity Theory by Marcus Felson and Lawrence Cohen.

Objectives of the Study

This study aimed to determine the implementation level of Ecological Solid Waste Management (ESWM) Act of 2000 in Gerona ,Tarlac:

Specifically, this study aimed to determine the following :

1. The practices of the residents on Solid Waste Management (SWM).
2. Level of awareness of the residents in the Ecological Solid Waste Management (ESWM) Act of 2000 in Gerona Tarlac.
3. Level of implementation of ESWM Act of 2000 in Gerona Tarlac.
4. To propose measures to enhance the level of implementation of ESWM Act of 2000.

Methodology

This study utilized Cross-Sectional Survey Research Design. It is a descriptive survey research that intends to conduct an examination of the characteristics of varied groups of samples in a population. This design is needed in this study because the residents, the barangay captains of Gerona, Tarlac , and the MENRO officers served as the primary sources of data gathering.

This study was performed in Gerona, Tarlac which was represented in by the MENRO officials, all the barangay captains from its total of 44 barangays, and the resident respondents from the strategic places within the municipality, which to wit are Poblacion 3 and Tagumbao.

The instrument that was used for this study is a questionnaire which is designed to gather information regarding the practices of residents on Solid Waste Management and their level of awareness on Republic Act No. 9003 and the level of implementation of MENRO-Gerona on the said law. The questionnaire was based on the provision of RA 9003, specifically Chapter VI, Sec. 48 (Prohibited Acts). Said instrument was validated by three (3) experts which include (1) Doctor in Criminology (Ph.D Crim.), (2) Philippine National Police (PNP) Officer and (3) Municipal Environment and Natural Resources Office (MENRO) officer.

The participants' rights to privacy and rights for non-participation or withdrawal from the data gathering procedure were observed in the study. The rights to privacy were observed through the coding of participants during the data processing stage. Permission in the use of recording devices was also observed during the data gathering stage. Furthermore, prior to the data gathering proper, participants were informed about their rights to withdraw.

RESULTS AND DISCUSSION

Practices of the Residents on Solid Waste Management

Table 1
Practices of the Residents on Solid Waste Management

$N = 259$

Practices	F	%	Rank
Converting biodegradable wastes into useful products such as organic fertilizers	159	61	1
Littering or throwing waste matters in public places	158	61	2
Dumping of garbage in public places or in the rivers	153	59	3
Incineration or open burning of solid waste	146	56	4
Burying of hazardous wastes underground	116	45	5
Selling recyclable wastes to junk shops or regular collector instead of throwing it anywhere	105	44	6
Practicing 3R's of Waste Management (Reduce, Reuse and Recycle)	73	28	7
Segregating biodegradable and non-biodegradable wastes properly	71	27	8

It is shown on the table the leading practices of the respondents on solid waste management. While expectedly that every household produces their own biodegradable wastes duly extracted from their kitchens, it was found out that only half (61%) of them convert their biodegradable wastes into useful products such as organic fertilizers. Consequently, it was found out that the other half of the households either dumps their biodegradable wastes irresponsibly anywhere or would include

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such wastes for pick-up by the garbage truck of the municipality. It is further discovered in this study that extremely foul smelling biodegradable household wastes such as poultry gizzards and pet wastes are even sacked for pick-up by the garbage collectors of the municipality. This implies that the local government needs to be creative enough in introducing innovative ways to be introduced to the public regarding how the other half of the households could process their biodegradable wastes into useful forms. This could be supported by implementing demonstration practices on processing biodegradable wastes of the marketplace that, in turn, could be seen and adopted in by the observing public. Furthermore, Cabañog (2008) found out that lack of environmental knowledge of the community hinders the success of the solid waste management programs when conducted a survey on the selected three cities in Misamis Occidental. The result of the previous study jives to the results of the present study that has been conducted in Gerona. While both studies are conducted on geographically and socio-culturally varied settings, the results remained consistent.

Level of Awareness of the Residents in the Ecological Solid Waste Management (ESWM) Act of 2000 in Gerona, Tarlac

Table 2
Level of Awareness of the Residents in the Ecological Solid Waste Management (ESWM) Act of 2000 in Gerona, Tarlac

$N = 259$

Statements	Mean	Level of Awareness
Open dumping, burying of biodegradable or non-biodegradable materials in flood prone areas is prohibited.	3.54	Much Aware
Littering, throwing, dumping of waste matters in public places or causing or permitting the same is prohibited.	3.46	Slightly Aware
Causing or permitting the collection of non-segregated or unsorted wastes is prohibited.	3.27	Slightly Aware
No importation of consumer products packaged in non-environmentally acceptable materials.	3.14	Slightly Aware
No mixing of source-separated recyclable material with other solid waste in any vehicle, box, container or receptacle used in solid waste collection or disposal.	2.57	Slightly Aware
Unauthorized removal of recyclable material intended for collection by authorized persons is prohibited.	2.32	Slightly Aware
No manufacture, distribution or use of non-environmentally acceptable packaging materials.	1.62	Not Aware
No establishment or operation of open dumps.	1.26	Not Aware
No open burning of solid waste.	1.10	Not Aware
Results	**2.48**	**Slightly Aware**

It was revealed that the residents are much aware that open dumping, burying of biodegradable or non-biodegradable materials in flood prone areas is prohibited (3.54). While this was the identified result, the residents keep ignoring it because according to the previous table, still half of them dump their wastes in public places. According to some residents, illegal dumping is an easy alternative for them due to the fee or cost of responsible waste disposal. Furthermore, the residents are aware but they do not mind because it was emphasized by the MENRO officers that the residents lack the knowledge on what to do to their wastes. It is implied in this study that the lack of knowledge of the residents should be addressed by educating the masses regarding the penalties to their violations and the negative impacts of the dumping of wastes to health and environment since the residents play pivotal roles in waste prevention and proper waste management.

It can be gleaned in the table that the residents of Gerona are slightly aware on the ESWM Act of 2000 with a general weighted mean of 2.48. All these imply, particularly in the open dumping, burying of biodegradable or non-biodegradable materials in flood prone areas is prohibited, littering, throwing, dumping of waste matters in public places or causing or permitting the same is prohibited, and causing or permitting the collection of non-segregated or unsorted wastes is prohibited, that the public needs to be reviewed/educated regarding the prohibited acts. There are prohibited acts that were identified to be unaware on the part of the reside

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Level of Implementation of ESWM Act of 2000 in Gerona, Tarlac

Table 3
Level of Implementation of ESWM Act of 2000 in Gerona, Tarlac

$N = 312$

Statements	According to the Residents ($n_1 = 259$)		According to the Barangay Captains ($n_1 = 44$)		According to the MENRO Officers ($n_1 = 9$)	
	Mean	Level of Implementation	Mean	Level of Implementation	Mean	Level of Implementation
A resident who establishes or operates open dumps is reported or apprehended.	3.53	Very Much Implemented	3.99	Very Much Implemented	3.41	Very Much Implemented
A resident who imports consumer products packaged in non-environmentally acceptable materials is reported or apprehended.	3.16	Much Implemented	3.87	Very Much Implemented	3.74	Very Much Implemented
A resident who manufactures, distributes or uses non-environmentally acceptable packaging materials (e.g. plastics) is reported or apprehended.	3.07	Much Implemented	2.76	Much Implemented	3.67	Very Much Implemented
A resident who do open dumping, burying of biodegradable or non-biodegradable materials in flood prone areas is reported or apprehended.	2.26	Slightly Implemented	3.59	Very Much Implemented	3.71	Very Much Implemented
A resident who do mixing of source-separated recyclable material with other solid waste in any vehicle, box, container or receptacle used in solid waste collection or disposal is reported or apprehended.	2.45	Slightly Implemented	2.26	Slightly Implemented	3.21	Much Implemented
A resident who burns solid wastes openly is reported or apprehended.	1.41	Not Implemented	2.45	Slightly Implemented	3.17	Much Implemented
A resident who, without authority, removes recyclable material intended for collection by authorized persons is reported or apprehended.	1.54	Not Implemented	2.46	Slightly Implemented	3.24	Much Implemented
A resident who causes or permits the collection of non-segregated or unsorted wastes is reported or apprehended.	1.20	Not Implemented	3.22	Much Implemented	2.80	Much Implemented
A resident who litters, throws and dumps waste matters in public places or permits the same is reported or apprehended.	1.14	Not Implemented	2.07	Slightly Implemented	2.61	Much Implemented
Results	**2.20**	**Slightly Implemented**	**2.96**	**Much Implemented**	**3.28**	**Very Much Implemented**

From the perspectives of the 3 groups of respondents who are included to determine the level of implementation of solid waste management act, split responses were identified. The groups, to with are the residents, the barangay captains, and the MENRO officers, revealed non-unified responses regarding the implementation of the said law, the lowest assessment coming from the residents while the highest assessment coming from the MENRO officers who are the leading implementers themselves. The barangay captains are constantly in the middle of the responses.

Proposed Measures

The proposed measures are composed of specific objectives to help the Municipality of Gerona focus on a concrete target. Strategies/Activities were indicated which will serve as a guide on the necessary steps to be undertaken to achieve the objectives. Such actions/activities could not be attained by the authorities alone. Involvement and assistance from other persons and officials are also significant. Likewise, resources were included to give them idea about the necessary tools needed for the accomplishment of the said plan/activity. Some proposed measures were adopted from the best practices of other municipalities in relation to Solid Waste Management.

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Indicators	Objectives	Strategies/Activities/Actions	Resources		
			Persons Involved	Physical Facilities	Timeframe
A resident who burns solid wastes openly is reported or apprehended.	To raise the awareness of the people about the health and environmental impacts of waste burning and penalties imposed by law to violators.	The researcher with the help of the Extension Services of Tarlac State University and LGU of Gerona will conduct outreach efforts at the community level to encourage waste prevention as well as to educate the residents by introducing the **"Solid Waste Awareness and Training (SWAT) Project"** which may include series of seminars and trainings on Solid Waste Management and awareness seminar about the prohibited acts under Republic Act No. 9003 and penalties provided by law for violators to all the 44 barangays of Gerona, Tarlac. Said project shall be evaluated and monitored by them also.	TSU Extension Services Office TSU- College of Criminal Justice Education LGU-Gerona Residents	Seminar equipment (projector, laptop, flyers, white screen and others)	Quarterly
A resident who causes or permits the collection of non-segregated or unsorted wastes is reported or apprehended.	To observe proper segregation of wastes and to educate the people on proper segregation.	**SWAT Project** will be utilized as a means of informing the residents about proper segregation. Also, barangay captains should assign or employ a person around the area to consistently monitor the collection of garbage in the barangay and shall form a group of people within their barangay to lead the waste segregation.	TSU Extension Services Office TSU- College of Criminal Justice Education LGU- Gerona Residents	Monitoring Sheet, Seminar equipment (projector, laptop, flyers, white screen and others)	Quartery Weekly
A resident who, without authority, removes recyclable material intended for collection by authorized persons is reported or apprehended.	To set a secured place or container to prevent unauthorized persons in removing or collecting recyclable materials.	The barangay should provide a container for the recyclable materials that only authorize people has its key to open it. SWAT Project will be used in educating the residents about the limitless advantages of recycling of wastes.	TSU Extension Services Office TSU- College of Criminal Justice Education LGU- Gerona Residents	Container for Recyclable materials	
A resident who litters, throws and dumps waste matters in public places or permits the same is reported or apprehended.	To involve all social classes in the Conduct Mandatory Clean Up Drive and to educate them about the prohibited Act.	**SWAT Project** will be used in encouraging and involving all social classes in the clean-up drive. Children of different ages should be involved also so that they will develop the habit and behavior of cleanliness and concern for the environment. The barangay captains should strictly enforce the conduct of community service to the violators in the place where said prohibited act is committed to deter the violator himself and the general public.	TSU Extension Services Office TSU- College of Criminal Justice Education LGU- Gerona Residents	Trash bags, shovels, rakes, gloves, wheel barrows and gardening materials. Seminar equipment (projector, laptop, flyers, white screen and others)	Quarterly Weekly

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PROJECT SWAT

"**S**olid **W**aste **A**wareness and **T**raining"

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A. PROJECT RATIOALE

Project SWAT is an environmental project that intends to inform and encourage the residents of Gerona, Tarlac about proper Solid Waste Management. This project is devised to strengthen implementation of Republic Act 9003, otherwise known as the "The Ecological Solid Waste Management Act of 2000, promote environmental education and increase awareness on the garbage situation and challenges of solid waste management in the country. This project will also mobilize all sectors and social classes of society to participate in clean-up activities and reinforce the role of the LGUs down to the 44 Barangays of Gerona, Tarlac in the segregation, collection, and recycle of solid wastes.

B. OBJECTIVESS

1. To raise the awareness of the residents about the health and environmental impacts of waste burning and penalties imposed by law to violators;
2. To observe proper segregation of wastes and to educate the people on proper segregation;
3. To set a secured place or container to prevent unauthorized persons in removing or collecting recyclable materials; and
4. To involve all social classes in the Conduct Mandatory Clean Up Drive and to educate them about the prohibited Act.

C. PARTICIPANTS

- Barangay Officials (44 barangays of Gerona); and
- Residents.

D. PROJECT COMMITTEES

Committee	Description
PROJECT HEAD	Over-all Chair and Coordinator of the project. (Mr. Jan Vincent S. Carmen, Researcher, PEC, TSU-CCJE)
ASSISTANT TEAM LEADERS	Assists the Project Leader (e.g. Coordination, etc.) (Ms. Lian Carla C. Luzong & Mr. Ramil M. Las-igan, Faculty members, TSU-CCJE)
SPEAKERS/TRAINERS	Conduct awareness seminar and training to the participants (TSU-CCJE Faculty, TSU Extension Services Office, PU Graduate School & MENRO-Gerona, Tarlac)
LOGISTICS	Facilitates the necessary equipment, materials, venue and other logistical requirements of the program. (TSU-CCJE and LGU-Gerona)
COMMUNICATIONS /DOCUMENTATION	Prepares the content of social media account, publicity materials such as but not limited to letters, posters, logos, tarpaulin, other printed materials, as wells as responsible to video documentation. (TSU-CCJE and LGU-Gerona)
PROGRAM /TECHNICAL	Prepares and handles the design and implementation of activities and programs and also responsible also to the technical requirements (audio, visual, etc.) of the program. (TSU-CCJE and LGU-Gerona)

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E. PROJECT TIMELINE

November 2020 to May 2021

F. PROPOSED PROGRAM CONTENT/AGENDA

I. SEMINARS/WORKSHOPS

Seminar-workshop on solid waste management as stated in R.A 9003 with a theme "Responsible Solid Waste Management" will be conducted before the participants for them to educate about the prohibited acts enumerated under the law and penalties provided to the violators. Said seminar also intends to encourage them to practice proper solid waste management.

II. TEAM BUILDING/CAPACITY BUILDING ACTIVITIES

The participants will be grouped accordingly and will endure a team building activities for them to have a deep understanding of the shared values needed in managing a project, as well as the value of Solid Waste Management, waste disposal and segregation. Stations will be set-up for each team/group to accomplish task/s. After each completion, the facilitator will process the activity to solicit answers that will highlight the shared values for that station/activity.

III. EVALUATION

The evaluation shall be evaluated by the participants to assess if the project become successful.

G. SOURCES OF FUNDS

- TSU
- LGU- Gerona

H. PROJECTED EXPENSES TO BE CONSIDERED (*Estimated Prices)

Particulars	Unit Price	Qty		Total
Training Materials and Facilities (C/O TSU, e.g. laptop, white screen, etc. ; Venue C/O LGU-Gerona)				
Transportation (C/O TSU)				
Food / Snacks / Caterer				
Speakers/Facilitators Honorarium	5,000.00		Pax	
Others				
Tokens of Appreciation (Speakers, guest, etc)	300.00		Pax	
GRAND TOTAL				

Prepared by:
(Sgd.) JAN VINCENT S. CARMEN, RCrim., PhD Crim
Researcher

CONCLUSIONS AND RECOMMENDATIONS

On the basis of the findings of the study, the following conclusions are drawn:

1. The most common practices of the residents regarding the solid waste management are converting biodegradable wastes into useful products such as organic fertilizers, throwing waste matters in public places, dumping of garbage in public places or in the rivers, and open burning of waste.
2. The residents of Gerona are only slightly aware of the Ecological Solid Waste Management (ESWM) Act of 2000.
3. There was a split point of views as to the implementation of ESWM Act of 2000 in Gerona, Tarlac. It is slightly implemented based from the residents, much implemented based from the barangay captains, and very much implemented based from the MENRO officers.
4. There is no significant relationship between the level of awareness of the residents and the level of implementation of the law in Gerona, Tarlac.

The researcher in his desire to find meaning to the effort of this study, submits the following recommendations for possible implications:

1. The researcher, as the Program Extension Chairperson (PEC) of TSU-CCJE Extension Services Unit shall initiate trainings or seminars to encourage the residents about the good practices on Solid Waste Management and likewise, the LGU of Gerona should post info graphics and practices on strategic places that focus on a dense presence of people that aim to inform the public how they could process their household wastes.
2. The researcher shall conduct Extension services by conducting awareness seminars to educate the residents of Gerona regarding the prohibited acts of the law. Also, in the garbage truck of the municipal office, it is recommended that a jingle be composed and played about the solid waste management so that the awareness of the public regarding the law could be improved.
3. Capacity building, trainings and seminars on Segregating, Recycling, and Composting should be delivered before the residents. These could be made possible by tapping educational institutions such as Tarlac State University-College of Criminal Justice Education to assist in conducting such. Also, when time comes when assemblies are already allowed, the barangay captains are recommended to inform the public regarding the scores in handling cases related to solid waste management.

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