THE PERFORMANCE OF SELECTED MUNICIPALITIES IN THE PHILIPPINES ON THE SOLID WASTE MANAGEMENT PROGRAM

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Abstract— *This study determined the Performance of the Municipalities in the First Congressional District of Camarines Sur on the Solid Waste Management Program in Fiscal Year 2019. A descriptive-evaluative method of research was used in this study. The respondents were the 355 from the households, Office Heads, and Office Staffs of Municipal Solid Waste Management Officesin the First Congressional District of Camarines Sur. Results revealed that the municipalities performed and implement different programs related to solid waste management and there is a strong correlation between the performance and the implementation of the Solid Waste Management Program to support the implementation of Republic Act 9003.With this, it is recommended that the LGU and its supporting agencies should continuously conduct different strategies, projects that are supported by policies and ordinances by allocating budget, facilities, and advocacies to reduce environmental degradation in the rural and urban areas covered by this study.This study could contribute to the body of knowledge enhancement by proposing a set of activitiesto practically manage waste that would be beneficial in all areas in the country.*

Keywords*: RA 9003, Solid Waste Management Program, Municipalities, First Congressional District of Camarines Sur*

1. INTRODUCTION

Due to rapid urbanization and population growth in the Philippines, Republic Act (RA) 9003- or also known as Ecological Solid Waste Management (ESWM) Act of 2000 of the Philippines was enacted to set the mandate and framework for solid waste management in the country that emphasizes the local government unit concerning its implementation and institutional arrangements. The RA 9003 mandates every local government units to establish their own Materials Recovery Facilities for segregation, waste reduction throughcomposting, recycling, and energy productions.

However, after almost two decades of its implementation, various problems were encountered by the LGUs and communities on the implementation of solid waste management like the majority of local government units in the country do not have a comprehensive monitoring scheme of dumpsites and landfills that exposes the communities to health risks (Felisilda, Asequia, Encarguez, & Galarpe, 2018; Galarpe, 2017). (Azuelo, Maria Cristina C & Menda, Luz, 2016) emphasized that better solid waste management can be only attained through the involvement of the communities, political will,

and commitment of LGUs on the implementation of RA 9003 through undertaking and initiatives. Furthermore (V de Paz, 2020) emphasized the change of behavior within households on recycling through resource planning and proper waste segregation that can be achieved through the reduction of the quantity of household consumption, reduction of expenditures and changing of household budget consumptions and decisions (Gatpolintan & Avila, 2019), and financial literacy of households especially of the business owners(Gonzalvo & Avila, 2019).Improving the student's awareness on the waste segregationespecially on how they practice their knowledge on 3Rs (Reuse, Reduce and Recycle) (Trondillo, Mark Jude F., Amaba, Jeneley A., Lyndelle Ann D. Paniza, 2018)by adopting Eco-Eskwela project (Matsumoto & Saizen, 2017) and by using innovative technologies like the use of podcasts in teaching environmental science (Avila & Lavadia, 2019) and through public-private partnerships in Higher Education Institutions(Gequinto, 2017).

In the other countries, they found out that relevant policies should be appropriately implemented to reduce the volume of waste going to landfills through educating the citizen, waste segregation and establishment of waste separation system(Yukalang, Clarke, & Ross, 2018) since failure to have a waste separation plans before garbage collection may contaminate the water sources(Vahidi, Nematollahi, Padash, & Sadeghi, 2017). Also, aside from the households, the majority of the common sources of waste problems came from slaughterhouses, industrial premises, and healthcare facilities that are aggravated by corruption, unavailability of human resources, and suitable facilities (Abbas, Chaaban, & Shaar, 2017). Thus, to support the practice of recycling waste and segregating the same can be donethrough effective policies and regulations to support solid waste management in all levels of governance (Zhou, Shen, & Xu, 2019) especially on the riverine and coastal communities (Callahan, Wynne, Nieves, Vulava, & Qirko, 2017).

Thus, the study would like to know how the municipalities in the First Congressional District of Camarines Sur follows, supports and excels in the criteria set by the LGU code or R.A. 7160 of 1991; the PD 856 of 1975 and the Pollution Control Act (PD 984 of 1978) in support to Republic Act 9003.Also, this study determined which municipality highly implements Solid Waste Management Programs to improve their practices to improve the delivery of the SWM services to the constituents since the current environmental problem is happening within the community, the municipality, and the Philippines as a whole.

2. OBJECTIVES OF THE STUDY

The study determined the Performance of the Municipalities in the First Congressional District of Camarines Sur on the Solid Waste Management Program. Specifically, it determined the Performance of Municipalities in the Solid Waste Management Program along: a) Recovery, b) Recycling/Reuse, c) Energy Production; and the level of implementation of the Solid Waste Management Program along a) Classifying Waste, b) Collecting and Transferring Waste, c) Recycling and Recovering and d) Advocacies; and the correlates between the Performance and Level of Implementation of Solid Waste Management Program per municipality.

3. MATERIALS AND METHODS

This study employed descriptive-evaluative methods of research design to determine the Performance of the Municipalities in the First Congressional District of Camarines Sur on the Implementation of the Solid Waste Management Program. Quantitative data was gathered using survey questionnaires to find out the level of implementation and performance using descriptive research design. To have an independent result, the researcher used Purposive Sampling.

Respondents

To determine the Performance of the Municipalities in the First Congressional District of Camarines Sur on Solid Waste Management Program, a total of 355 respondents comprised of ten (10) personnel and one (1) office head of the Municipal Solid Waste Management Office, ten (10) office heads of various LGUs and fifty (5) households from each municipality of Del Gallego, Ragay, Lupi, Sipocot and Cabusao that were coded using randomly chosen number in the different tables.

Data Gathering Instrument

The instrument that was used in gathering the data was a structured researcher-made-questionnaire checklist and structured-interview guide. Part I was about the performance on the Implementation of the Solid Waste Management Program and Part II was on the implementation of every municipality on the Solid Waste Management Program. A total of 70 questions were included in this study. The questionnaire was proofread by an English Instructor and has been validated by five (5) personnel from the Municipal Solid Waste Management Office of Libmanan. The reliability of the instrument has been tested after the validation. Suggestions and recommendations on each item if the questionnaire has been acquired for the improvement of the instrument.

Data Analysis

The weighted mean and rank were used to quantify the performance on the implementation of the Solid Waste Management Program in the First Congressional District of Camarines Sur. Results were interpreted using the following scale:

a. Performance on the Solid Waste Management Program

Scale	Numerical Rating	Descriptive Rating
4.50-5.00	5	Highly Performed
3.50-4.49	4	Moderately Performed
2.50-3.49	3	Performed
1.50-2.49	2	Rarely Performed
1.00-1.49	1	Not at all

b. The implementation of the Solid Waste Management Program

Scale	Numerical Rating	Descriptive Rating
4.50-5.00	5	Highly Implemented
3.50-4.49	4	Moderately Implemented
2.50-3.49	3	Implemented
1.50-2.49	2	Rarely Implemented
1.00-1.49	1	Not at all

c. The significant relationship was computed using Spearman Rank Order Correlation.

4. RESULTS AND DISCUSSION

4.1The Performance of Municipalities on Waste Management in the First Congressional District of Camarines Sur

This part discussed the performance of municipalities in Recovery, recycle and reuse, and energy production.

Table 2. Recovery

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Collects garbage in all barangays concerned	2.95	2.50	3.00	4.10	1.36	2.78	P	5.5
Collects garbage thrice a week	3.70	2.20	2.54	4.60	1.00	2.81	P	4
Returns or refrains from collecting in all barangays with no proper segregation of wastes	2.45	2.05	2.00	4.10	1.00	2.32	RP	10
Schedules a garbage collection in all barangays	3.00	2.55	3.00	3.75	1.54	2.77	P	7
Creates separate dumpsites for three types of waste.	1.95	2.60	1.27	2.85	1.36	2.01	RP	9
Provides an adequate number of the garbage truck and purchase the same it found inadequate	2.70	1.80	2.63	3.20	1.09	2.28	RP	8
Requests barangays to enact ordinances to limit the accumulation of garbage	3.80	2.40	3.45	3.55	1.54	2.95	P	3
Hires street sweeper to maintain the cleanliness of public places	4.25	2.50	3.27	4.20	3.72	3.59	MP	1
Local Government Unit and Sangguniang Bayanallocate funds for the construction of material recovery facilities	4.45	2.50	2.63	3.65	2.45	3.14	P	2
Spearheads clean-up drives within sea and river banks quarterly	4.25	2.80	2.18	2.50	2.18	2.78	P	5.5
Mean	**3.35**	**2.39**	**2.60**	**3.65**	**1.72**	**2.74**	**P**	
Interpretation	**P**	**RP**	**P**	**MP**	**RP**			

Table 2 presents the performance of the Municipalities in the First Congressional District on Waste Management in Recovery wherein it revealed that hiring street sweeper to maintain the cleanliness of public places, Local Government Unit, and Sangguniang Bayan allocate funds for the construction of material recovery facilities were the highest performed indicators while separate dumpsites for three types of waste as well as returning or refraining from collecting in all barangays with improper segregated wastes were the Rarely Performed indicators. The average weighted mean of the ten indicators arrived at 2.74 or verbally interpreted as Performed. Thus, it implies that the different municipalities in the First Congressional District of Camarines Sur perform different activities related to waste recovery.

Table 3. Recycling and Reuse

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Have a separate recycling unit and team in the Solid Waste Management Department	3.35	2.75	2.72	2.90	1.63	2.67	P	1
Acquires facilities and equipment intended for waste recycling	2.75	2.65	2.72	3.00	1.72	2.57	P	2
Automatically shred papers and metal scrap collected	2.20	2.40	2.00	2.15	1.18	1.99	RP	7
Have a separate team that develop bags, shoes and other products out of scraps	2.60	2.05	2.00	2.05	1.18	1.98	RP	8
Develops organic fertilizers out of vermicomposts	2.75	2.85	2.36	1.70	2.45	2.42	RP	3
Develops urban and container gardening as part of recycling used tires and plastic containers	3.10	2.60	2.54	1.55	2.16	2.39	RP	4
Coordinate with beverage companies in reusing glass and plastic bottles	2.65	2.20	2.00	1.50	2.18	2.11	RP	5
Coordinates with Medical Laboratories in recycling mercury-based thermometer and medical syringe	2.35	1.45	1.63	1.55	1.27	1.65	RP	10
Develops large scale nets intended to collect plastic wastes in the rivers and seas	2.15	2.15	2.00	1.55	2.27	2.02	RP	6
Utilizes bioremediation in healing contaminated polluted places	2.45	2.20	2.00	1.20	1.72	1.91	RP	9
Mean	**2.64**	**2.33**	**2.20**	**1.92**	**1.78**	**2.17**	**RP**	
Interpretation	**P**	**RP**	**RP**	**RP**	**RP**			

Table 3 shows the performance of the municipalities covered by this study on the Recycling and Reuse aspect of waste management. It can be gleaned that there is a separate recycling unit or team in the Solid Waste Management Office and acquires facilities and equipment intended for waste recycling were the highest-rated indicators with the corresponding verbal interpretation of Performed. Moreover, the least ranked that ranked ninth was the utilize bioremediation in healing contaminated polluted and coordinates with medical laboratories in recycling mercury-based thermometer and medical syringe gathered that were rated as Rarely Performed. With such, the average weighted mean of Recycling and Reuse was 2.17 which can be verbally interpreted as Rarely Performed. Thus, there is a need to have a separate recycling unit and team in the solid waste department because it is the way to collect the waste that can be recyclables and the other unitscollect the waste that can be disposed. Coordination with medical laboratories in recycling mercury-based thermometer and medical syringe is least performed because medical waste materials from the institutions are not the mere obligation of municipalities but the obligation of the waste generators.

Table 4. Energy Production

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Have a separate facility intended by bioenergy production.	1.90	2.50	1.63	1.10	1.36	**1.70**	**RP**	**2**
Acquires facilities and equipment intended for methane gas collection	2.20	2.10	1.27	1.10	1.09	**1.55**	**RP**	**5**
Develops indigenous solar panel from collected scrap materials	2.15	2.10	1.27	1.10	1.27	**1.58**	**RP**	**4**
Encourages development of indigenized methane gas collection facilities	2.15	2.50	1.00	1.10	1.18	**1.59**	**RP**	**3**
Coordinate with NGOs on product development of materials intended for biomass production.	3.00	2.50	2.00	2.15	3.00	**2.53**	**P**	**1**
Mean	**2.28**	**2.34**	**1.43**	**1.31**	**1.58**	**1.79**	**RP**	
Interpretation	**RP**	**RP**	**NAA**	**NAA**	**RP**			

It can be gleaned that the municipalities in the First Congressional District of Camarines Sur Rarely Perform different activities related to the energy production component of the waste management program. As revealed, they coordinate with Non-Government Organizations on product development of materials intended for biomass production, followed by having a separate facility intended by bioenergy production. While are developing indigenous solar panels from collected scrap materials and acquires facilities and equipment intended for methane gas collection. The average of all indicators was 1.79 or interpreted as Rarely Performed thus, policies should be recommended to address the low performance under this aspect of waste management to ensure sustainability and production of energy.

4.2The Implementation of Waste Management Program in the First Congressional District of Camarines Sur

This part discusses the Implementation of Solid Waste Management Program of the Local Government Units in the First Congressional District of Camarines Sur along collection, disposal, transfer, recovery, and recycling of the accumulated wastes of the households and business establishments in Del Gallego, Ragay, Lupi, Sipocot, and Cabusao to highlight the cleanliness and waste reduction activities of the said municipalities covered by this study.

Table 5 Classifying of Waste

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Installs marker on proper segregation of waste in every barangay	2.8	3.5	3.45	4.55	1.72	**3.20**	**I**	**2**
Reminds constituent to segregate waste as a requirementfor collection of the same	2.9	2.9	3.18	4.1	2.09	**3.03**	**I**	**3**
Uses color coding trashcan	1.95	3.3	1.18	2.3	1.1	**1.97**	**RI**	**6**
Implements Material Recovery Facilities (RMF) in every barangay	2.3	3.15	2.9	3	1.6	**2.59**	**I**	**5**
Takes different type of garbage separately	2.9	2.85	2.45	3.8	1.8	**2.76**	**I**	**4**
Encourages constituents to do composting at home	3.9	2.75	3	4.25	3.18	**3.42**	**I**	**1**
Mean	**2.79**	**3.08**	**2.69**	**3.67**	**1.92**	**2.83**	**I**	
Interpretation	**I**	**I**	**I**	**MI**	**RI**			

Table 5 shows that the different municipalities in the First Congressional District of Camarines Sur implement solid waste management along classifying waste. Further, the indicators that were mostly implemented were about encouraging constituents to do composting at home, installing markers on proper segregation of waste in every barangay; reminding constituents to segregate waste as a requirement for collection; then take a different type of garbage, and implement Material Recovery Facilities. The general average weighted mean of six indicators arrived at 2.83 and verbally interpreted as Implemented. It implies that encourage constituents to do composting at home that can be made if they segregate their trash eventually. Therefore, composting and proper segregation of solid wastes may pave the way for the low generation of waste in the First Congressional District.

Shown from Table 6 is theImplementation of waste management program along Collecting and Transferring Waste.

Table 6. Collecting and Transferring Waste

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	I	Rank
Inform the barangay regularly on waste collection/scheme	2	4.5	2.81	3.1	1.36	**2.75**	**I**	**1**
Collects non-biodegradable waste only	2.85	3.25	3.18	2.3	1	**2.52**	**I**	**3**
Purchases additional garbage truck	2.9	2.15	3.27	2.65	1	**2.39**	**RI**	**4**
Purchases additional place as a dumpsite	2.35	1.45	3.72	2.9	1	**2.28**	**RI**	**5**
Have a separate facility for human and animal waste	2.15	1.6	2.36	2.35	1.6	**2.01**	**RI**	**9**
Collects medical wastes carefully and dumping of the same in a scientific way	2.7	2.05	2.18	2.55	1	**2.10**	**RI**	**7**
Collects worn out batteries and dumping of the same in a distant location from water bodies	2.05	2.35	2.18	2.65	1.2	**2.09**	**RI**	**8**
Requires permits on the construction of sewerage and similar activities	2.75	3.5	2.18	2.65	1.6	**2.54**	**I**	**2**
Requires hospitals and medical laboratories to properly collect their syringe, swabbing, mercury thermometer, and medical equipment	2.25	3	2.18	2.15	1.45	**2.21**	**RI**	**6**
Mean	**2.44**	**2.65**	**2.67**	**2.59**	**1.25**	2.32	**RI**	
Interpretation	**RI**	**I**	**I**	**I**	**NA**			

The highest in rank was informing the barangay regularly on waste collection/scheme, followed by the requiring permits on the construction of sewerage and similar activities.Subsequently, the least in rank were requires hospital and medical laboratories to properly collect their syringe, swabbing, mercury thermometer, and medical equipment; collecting medical wastes carefully and carefully dumping of the same; have a separate facility for human and animal waste. The reason why it is lowest in ranked Because of some equipment is expensive and there is no budget allocated in separating facilities for human and animal sewerage.Therefore, this finding can improve the knowledge of the municipalities in doing a waste collection to have a cleaner and healthier environment to live in.

Shown from Table 7 is the implementation of waste management along with recycling and recovery.

Table 7. Recycling and Recovery

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Trains barangay on vermicomposting and similar activities	3.3	2.4	3.45	2.95	2.81	2.98	I	2
Trains barangay constituents on recycling of factory returnable materials	3.25	2.8	3.09	3.1	2.63	2.97	I	3
Requires barangays to construct material recovery facilities	2.8	3.5	3.27	3.15	2.08	2.96	I	4
Uses bokashi(Mabuhay) balls in recovering polluted rivers and stream	2.25	2	2.27	2.05	1.53	2.02	RI	10
Monitors the E. coli and water particulates in freshwaters sources	2.75	1.65	2.54	2.1	1.5	2.11	RI	9
Gives incentives to junkshops and welding facilities that implement recovery efforts of metal scraps	3	2	2.54	2.2	1.91	2.33	RI	7
Requires barangays to install public compost pits	3.5	3.75	3	2.35	2	2.92	I	5
Requires barangays to develop organic farms	3.5	3.35	3	3.3	3	3.23	I	1
Bans plastic products in public markets and stores	3.2	4	1.09	3.3	1.54	2.63	I	6
Gives incentives to business establishments that adopt “no plastic policy’’	3.45	2.5	1.9	2.3	1.18	2.27	RI	8
Mean	3.1	2.8	2.6	2.7	2.0	2.64	I	
Interpretation	I	I	I	I	RI	I		

It revealed that the municipalities involved in this study implement different activities to support recovery and recycling like requiring barangays to develop organic farms, training barangays on vermicomposting and similar activities, and train barangay constituents on recycling of factory returnable materials. However, the respondents revealed that the municipalities rarely implement the giving of incentives to business establishments that adopt ‘’no plastic policy’’, monitoring of the E. coli and water particulates in freshwaters sources, and the use of bokashi (Mabuhay) balls in recovering polluted rivers and stream. Finally, the average weighted mean of the ten indicators arrived at 2.64, thus, it can be verbally interpreted as Implemented.

The reason why the LGUs require barangays to develop organic farms comes first in rank because every barangay needs to develop organic farms for the additional supply of goods and recover nature from hazardous waste. While using bokashi (Mabuhay) balls in recovering polluted rivers and stream got lowest

in rank because the respondents are not familiar with bokashi (Mabuhay) balls aside from it is expensive to purchase. Thus, they cannot use itin cleaning the rivers and streams.

Table 8. Advocacy

Indicators	Municipality					Total		
	1	2	3	4	5	AWM	Int.	Rank
Advocate the use of paper bags and the same in business	3.7	4.2	1.3	3.2	1.4	**2.75**	**I**	**6**
Utilize bamboo charcoal in cleaning polluted water pathways	3.2	2.5	1.8	2.6	1.0	**2.20**	**RI**	**8**
Give lectures in public schools about recycling	2.2	3.3	3.4	4.4	4.1	**3.46**	**I**	**3**
Tap stakeholders in the planting activities	3.3	2.8	3.5	4.4	4.1	**3.62**	**MI**	**1**
Train livestock enterprise on odorless animal production	3.1	3.1	2.6	2.2	2.4	**2.68**	**I**	**7**
Train barangays on ecological tourism	3.6	2.9	2.6	2.9	2.4	**2.85**	**I**	**5**
Coordinate with DA and DepEd on GulayansaPaaralan project	3.8	3.3	3.2	3.3	4.3	**3.56**	**MI**	**2**
Implement the search for the best organic GulayansaPamayanan project	3.6	2.5	2.7	3.3	4.1	**3.22**	**I**	**4**
Mean	**3.31**	**3.06**	**2.64**	**3.25**	**2.95**	**3.04**	**I**	
Interpretation	**I**	**I**	**I**	**I**	**I**			

Table 8 gives the implementation of a waste management program in terms of Advocacy. The survey floated that some indicators were moderately implemented like tapping stakeholders in the planting activities; coordinating with the Department of Agriculture (DA) and Department of Education (DepEd) on the Gulayan sa Paaralan project. Consequently, training on livestock enterprise on odorless animal production, utilizing bamboo charcoal in cleaning polluted water pathways were also implemented but at the least level. The average of all indicators was 3.04 or verbally interpreted as Implemented. Therefore, relevant policies should be implemented to improve this condition.

4.3 The test of the significant relationship on Level of Implementation and Performance on the Solid Waste Management Program in the First Congressional District of Camarines Sur

The significance of the relationship on the Level of Performance and Implementation of Solid Waste Management in First Congressional District of Camarines Sur was reflected in Table 9 obtained from the data of the generated response of respondents and statistically treated using Spearman Rank Order Correlation.

Table 9. The correlates of the Implementation and Performance on Waste Management

Municipality	Computed rs	Computed t	Tabular Value at 0.05	Decision on H_0	Verbal interpretation
1	0.87	15.37	1.73	Rejected	With Significant relationship
2	0.917	9.72	1.73	Rejected	With Significant relationship
3	0.89	17.97	1.73	Rejected	With Significant relationship
4	0.26	1.93	1.73	Rejected	With Significant relationship
5	0.684	4.03	1.73	Rejected	With Significant relationship

It is reflected on this table that the summation of the Rank of X and Y from the Sum of Square of Difference 0.25, 110.5, 150.256, 98.95, and 420.5 for Municipalities 1-5 with corresponding computed rs of 0.87, 0.917, 0.89, 0.26, 0.684, respectively. Its corresponding t-value of 15.37, 9.72, 17.97, 1.93, and 4.03 which were higher than the chi-square tabular value set at 0.05. Therefore, The null hypothesis was rejected in favor of the alternative hypothesis which means that there was a significant relationship between the performance and implementation of waste management programs in the different municipalities in First Congressional District Of Camarines Sur that were covered by this study.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The Performance on the Waste Management Program in the First Congressional District was affected of the limited hiring of street sweeper to maintain the cleanliness of public places; no separate recycling unit for the entire district; and all of them lack equipment due to its expensiveness, making it difficult for them to separate wastes, thus, no production of methane as a source of fuel was observed; The Implementation of the Municipalities in the First Congressional District on Waste Management along composting at home is highly performed since the constituents usually do compost at home since the locale is in the rural area. While informing the barangay regularly on waste collection/scheme was highly

observed since the signage about it was set in the public; while organic farms for the supply of goods and recover nature from hazardous waste were highly introduced in the communities. While tree planting is implemented in every barangays; and there was a significant relationship between the Level of Implementation and Performance on Solid Waste Management in First Congressional District of Camarines Sur due to high coordination among the constituents and MSWMOs since a higher level of performance on Solid Waste Management means a higher level of implementation.

5.2 Recommendation

It is therefore recommended that all employees of the Solid Waste Management Offices in the First Congressional District of Camarines Sur should regularly monitor their practice as well as the implementation of the R.A. 9003 of in their respective jurisdictions to minimize the production of waste. They should not rely on the current performance of solid waste management since better performance on implementing waste management will result in a low accumulation of waste materials. Also, different Municipalities in the First Congressional District of Camarines Sur should monitor the performance of waste management offices to maintain the cleanliness of their areas covered. Furthermore, Department of Environment and National Resources (DENR), Department of Health (DOH) and Department of Interior and Local Government (DILG) should monitor and support the policies of LGUs on Solid Waste Management in the rural and urban places to reduce the possibility of extreme pollution of all forms (air, water, and soil pollution) in the country will be minimized.

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