

Level of Compliance of the Local Government Units (LGUs) in the Implementation and Enforcement of R.A. 9003 (known as Ecological Solid Waste Management Act of 2000) in CALABARZON

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Abstract - This study used the descriptive research method to determine the level of compliance, implementation, enforcement, and problems encountered in the implementation and enforcement of Republic Act No. 9003 in Cavite, Laguna, Batangas, Rizal, and Quezon (CALABARZON). Purposive sampling technique was used to identify the 148 respondents from City Environment and Natural Resources Office/Municipal Environment and Natural Resources Office (CENRO/MENRO) and Department of Interior and Local Government (DILG) in CALABARZON. The frequency, percentage, and mean were used to treat the data gathered. The study revealed that the Local Government Units (LGUs) fully comply to R.A. No. 9003 as they create a Solid Waste Management Board (SWMB) at provincial, city/municipal, and barangay; prepare; and submit a 10-year Solid Waste Management Plan (SMWP). The LGUs implement and enforce R.A. No. 9003 in CALABARZON. Uncooperative residents and strict implementation and enforcement of R.A. No. 9003 by LGUs are the serious problems encountered in the implementation and enforcement of R.A. No. 9003.

Keywords – CALABARZON, Compliance, Ecological Solid Waste Management, Enforcement, Implementation, Republic Act No. 9003

INTRODUCTION

A Filipino generates between 0.3-0.7 kilogram (kg) of waste daily and the annual waste generation was estimated at 10 million tons in 2000 with an expected rise by 30% in 2010 (Premakumara et al., 2013). The National Solid Waste Management Commission (NSWMC) reports that the country's solid waste generation per day is at 30,000 tons, including 73% from households; 26% from commercial establishments, institutions, and industries; and 1% from healthcare facilities. Waste generation rate from 10.6 tons in 2012 is projected to double by 2025 (Galarpe, 2017).

In other countries as in China, municipal solid waste growth in 2004 even surpassed the United States where waste generation was the largest. The United States generated about 250 million tons of trash, and recycled and composted almost 87 million tons in 2011 where

the recycling rate was 34.7 percent. 1.53 pounds of waste was recycled and composted on average where 4.40 pound per person per day was the individual waste generation (Yasmin et al. 2014).

Magante and Domingo-Almase (2013) have said that, when waste and garbage are disposed of without discipline and in violation of the rules and regulations, they pose a significant threat to health, sanitation, and environmental security.

The Local Government Units (LGUs) are recognized as the lead implementers of R.A. No. 9003. The Act mandates the creation of Solid Waste Management Board (SWMB) from the national, provincial, city/municipal, down to barangay, the lowest-level political and administrative body in the Philippines. LGUs are mandated to develop their own Solid Waste Management Plans (SWMPs), based on the

assessment of their local Solid Waste Management (SWM) situation and a characterization of their waste. They are required to achieve an initial 25% waste diversion target through a combination of waste reduction, recycling, and composting programs.

In fact, the Ecological Solid Waste Management Act was approved in 2000 by the former President Gloria Macapagal Arroyo in response to the critical condition of solid waste management problem and on the threat it poses to the environment and human health. However, there are still issues with its implementation and enforcement. Most local governments' solid waste management has not been a key priority (Sapuyay, 2014). As Paul (2009) pointed out, in many LGUs, the enforcement and compliance with R.A. No. 9003 remains ineffective due to technological, organizational, and financial deficiencies of government institutions and LGUs tasked with enforcing the law.

When the government lacks funds, it cannot cope with the increasing volume of waste. A related problem is scavenging by poor people whose health is at risk due to the effects of improper waste management (Reyes and Furto, 2013). Just like in other developing countries, waste management has become a major problem in the Philippines for the past decades (Premakumara et al. 2013; Ballados, 2010). In fact, many of the developing countries are continuously facing serious problem when it comes to waste and garbage management disposal.

In the Philippines, aside from the insufficiency of funds, the LGUs incur financial gap in the implementation of the whole system (Pagunsan and Shimada, 2012). However, the LGUs have several funding arrangements and options for the establishment of the solid waste management system. The sources of funds for the LGUs include the following: (a) general budgetary appropriations, (b) external sources, (c) cost recovery mechanisms such as collection of waste fees and fines from waste violations, and (d) National Solid Waste Management Fund (Pagunsan and Shimada, 2012). It is clearly stated in Section 37 of R.A. No. 9003, known as

Ecological Solid Waste Management Act of 2000, that within three (3) years after its approval, every LGU shall convert its open dumps into controlled dumps and no controlled dumps shall be allowed five (5) years after its effectivity. The Ecological Solid Waste Management Act of 2000, Section 10, hereby specifies the Role of LGUs in Solid Waste Management that the segregation and collection of solid waste shall be conducted at the barangay level, specifically for biodegradable, compostable, and reusable wastes. Provided, that the collection of non-recyclable materials and special wastes shall be the responsibility of the municipality or city. The findings of the study conducted in Cebu City, Philippines, suggests that the impact of the national mandate under the R.A. No. 9003 is achievable if the LGUs assure supportive institutional mechanism, strong political commitment, innovative program and local strategies, partnership building, capacity development, adequate financing / incentives, and continual monitoring and evaluation of performance (Premakumara et al. 2013).

In the provinces of Cavite, Laguna, Batangas, Rizal, and Quezon (CALABARZON), one of the identified research priorities and thrusts of Regional Development Research Agenda (RDRA) under the areas of Environmental Protection, Natural Resource, and Disaster Risk Reduction Management is the LGU compliance to environmental laws and policy reviews / analyses of environmental laws.

Thus, this study aimed to determine the level of compliance, implementation, and enforcement of R.A. 9003 by the Local Government Units (LGUs) in CALABARZON. Likewise, the problem encountered in the implementation and enforcement of R.A. 9003 by the LGUs in CALABARZON is also the focus of this study.

Finally, the results of this study will significantly contribute to the following: LGUs, the output of this study can be used as basis in the formulation of the programs to strictly implement and enforce the ecological solid waste management act, known as R.A. No. 9003 in CALABARZON. The community, as to the

Ecological Solid Waste Management commonly known as R.A. No. 9003, is the implementing and enforcing body in the Philippines. This is strictly implemented and enforced in some cities and municipalities and violators receive sanctions/punishments. Strict implementation and enforcement of this law is on the discretion of the city or municipal mayor. Future researchers who would like to conduct related studies may find interest in reading this to get some ideas and information from this.

OBJECTIVES OF THE STUDY

The objectives of this study are:

1. To determine the level of compliance of the LGUs to R.A. 9003 in CALABARZON;
2. To determine the level of implementation of R.A. 9003 by the LGUs in CALABARZON;
3. To determine the level of enforcement of R.A. 9003 by the LGUs in CALABARZON; and
4. To determine the problems encountered in the implementation and enforcement of R.A. 9003 in CALABARZON.

MATERIALS AND METHOD

Descriptive research method was employed to determine the compliance of Local Government Units (LGUs) to R.A. No. 9003 and their implementation and enforcement practices in Cavite, Laguna, Batangas, Rizal, and Quezon (CALABARZON). Purposive sampling technique was used in determining the respondents of this study. Using the technique, the respondents of the study are selected and identified individually or in group of individuals that are proficient and well-informed about the phenomenon of interest (Etikan et al. 2016). In addition to knowledge and experience, what is important is the availability and willingness of the respondents to participate in the study (Etikan et al. 2016). Thus, the researcher used the following fixed criteria to identify and select the respondents of this study: (1) The respondent must be involved in monitoring and supervising the implementation and enforcement of R.A. No.

9003; (2) he/she must be employed as Director, Head, Officer-In-Charge, Staff, and Designated City Environment and Natural Resources Officer/Municipal Environment and Natural Resources Officer (CENRO/MENRO) and Department of Interior and Local Government (DILG) in CALABARZON; and (3) he/she must be willing to take part in this study. There were 114 respondents from CENRO/MENRO and 34 respondents from DILG in CALABARZON. One (1) respondent from CENRO/MENRO and four (4) respondents from DILG CALABARZON did not completed answering the survey questionnaire. Thus, the researcher decided to exclude their responses in the interpretation and analysis of the data.

This study was conducted in CALABARZON, a collective term for the provinces of Cavite, Laguna, Batangas, Rizal, and Quezon, which is composed of 142 cities and municipalities. Specifically, this study was conducted in the cities and municipalities in the province of Cavite (18 out of 23 cities and municipalities), in the province of Laguna (25 out of 30 cities and municipalities), in the province of Batangas (29 out of 34 cities and municipalities), in the province of Rizal (12 out of 14 cities and municipalities), and in the province of Quezon (30 out of 41 cities and municipalities), with a total of 114 cities and municipalities in CALABARZON.

The Southern Tagalog ranks second to the National Capital Region (NCR) with the highest region in terms of waste generation. The NCR and Southern Tagalog have 23 percent and 13 percent, respectively, of the total waste generation annually. Annual waste generation is expected to grow 40 percent in the future. Improvements in recycling, collection, and disposal will become even more critical as garbage production continues to increase with population growth and economic development (National Solid Waste Management Strategy 2012-2016). The research locale was chosen by the researcher because hundreds or thousands of small, medium, and large-scale enterprises were established in CALABARZON that contributes to environmental impact in the environment.

The researcher formulated a self-made survey questionnaire based on the Ecological Solid Waste Management Act known as R.A. No. 9003 and on existing literatures and studies. The survey questionnaire was validated by the Environment and Natural Resources Officers (ENRO) in Lucena City, Quezon province and in Siniloan, Laguna.

Prior to the distribution of self-made survey questionnaire, a letter of request was sent to the Director, Head, Officer-in-Charge, and

Designated Officer of CENRO/MENRO and DILG in CALABARZON. Upon approval of the request letter, the researcher distributed personally the self-made survey questionnaire to the target respondents, together with the approved request letter. After the administration and retrieval of the accomplished questionnaires, the gathered data were collated, tallied, and tabulated for the application of basic statistical treatment.

RESULTS AND DISCUSSION

Table 1 shows the respondents' level of compliance to Republic Act No. 9003 in CALABARZON. The survey findings reveal that item 1, *creates a Solid Waste Management Board (SWMB) at provincial, city/municipality, and barangay*, obtained the highest weighted mean of 3.77, which corresponds to verbal interpretation of *fully comply*, for CENRO / MENRO respondents. This result implies that CENRO/MENRO-respondents of the study fully comply with the creation of SMWB at provincial, city/municipality, and barangay in CALABARZON as the LGUs in CALABARZON have established a SMWB. On the other hand, item 8, *establishes the Multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of Republic Act No. 9003*, obtained the lowest weighted mean of 2.38, which corresponds to verbal interpretation of *partially comply*. This result implies that few of the cities and municipalities in CALABARZON establish multi-purpose cooperative or association to promote recycling and reuse of biodegradable wastes.

Likewise, it was also revealed that items 4 and 10, *provides incentive programs to encourage the participation of concerned sectors for the implementation and enforcement of R.A. 9003*, and *establishes Material Recovery Facilities (MRF) in each barangay to increase resource recovery and composting*, obtained weighted means of 3.20 and 3.04, respectively, which correspond to verbal interpretation of *comply*. This implies that incentive program is provided

in some cities and municipalities in CALABARZON to encourage the residents/communities to participate in the implementation and enforcement of Republic Act No. 9003. However, few of the cities and municipalities in CALABARZON comply with the establishment of MRF in each barangay to increase resource recovery and composting.

Under the DILG respondents, the results show that item 1, *creates of Solid Waste Management Board (SWMB) at provincial, city/municipality, and barangay*, obtained the highest weighted mean of 3.91, which corresponds to verbal interpretation of *fully comply*. This result implies that the DILG and CENRO/MENRO respondents have the same view with regard to the creation of SMWB at provincial, city/municipality, and barangay in CALABARZON.

However, items 8 and 10, *establishes the Multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of R.A. No. 9003, and provides incentive programs to encourage the participation of concerned sectors for the implementation and enforcement of R.A. No. 9003*, obtained the lowest weighted means of 2.79 and 2.97, respectively, which correspond to verbal interpretation of *comply*. The result implies that few of the cities and municipalities in CALABARZON comply with the establishment of Multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of Republic Act No. 9003. However, few CENRO / MENRO -

respondents provide incentives programs to encourage the participation of concerned sectors for the implementation and enforcement of Republic Act No. 9003 in CALABARZON.

Furthermore, the study reveals that items 6, 3, and 4, *conducts the segregation and collection of solid waste at barangay level, establishes mandatory solid waste diversion, and establishes Material Recovery Facilities (MRF) in each barangay to increase resource recovery and composting*, obtained weighted means of 3.16, 3.20, and 3.22, respectively, which correspond

to verbal interpretation of *comply*. This implies that DILG respondents have different views with the CENRO/MENRO respondents with regard to the conduct of segregation and collection of solid waste at barangay level and establishment of mandatory solid waste diversion. But, the DILG and CENRO/MENRO -respondents have the same view with regard to the establishment of Material Recovery Facilities (MRF) in each barangay to increase resource recovery and composting.

Table 1. Level of Compliance of Local Government Units (LGUs) to R.A. No. 9003 in CALABARZON

Items	CENRO / MENRO		DILG		GM	VI	R
	M	VI	M	VI			
1. Creates a Solid Waste Management Board (SWMB) at provincial, city/municipality, and barangay.	3.77	FC	3.91	FC	3.84	FC	1
2. Prepares and submits a 10 – year Solid Waste Management Plan (SWMP).	3.71	FC	3.69	FC	3.70	FC	3
3. Establishes mandatory solid waste diversion.	3.28	FC	3.20	C	3.24	C	7.5
4. Establishes Material Recovery Facilities (MRF) in each barangay to increase resource recovery and composting.	3.20	C	3.22	C	3.21	C	9
5. Initiates closing the opening dumpsites, and establishing sanitary landfills.	3.40	FC	3.35	FC	3.38	FC	5
6. Conducts the segregation and collection of solid waste at barangay level.	3.32	FC	3.16	C	3.24	C	7.5
7. Provides vehicle for transportation of solid waste.	3.71	FC	3.70	FC	3.71	FC	2
8. Establishes the Multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of R.A. 9003.	2.38	PC	2.79	C	2.59	C	11
9. Educates the public / citizen about solid waste reduction, recycling, and composting.	3.56	FC	3.59	FC	3.58	FC	4
10. Provides incentive programs to encourage the participation of concerned sectors for the implementation and enforcement of R.A. 9003.	3.04	C	2.97	C	3.01	C	10
11. Establishes guidelines for the accurate characterization of wastes, including determination of whether or not wastes are compatible with containment features and other wastes.	3.31	FC	3.32	FC	3.32	FC	6
General Mean	3.34	FC	3.36	FC	3.35	FC	

Legend: WM – Weighted Mean VI – Verbal Interpretation R – Ranking
 FC – Fully Comply C – Comply LC – Least Comply NC – Not Comply

Comparing the views of the CENRO/MENRO and DILG respondents, it can be observed that item 1, *creates of Solid Waste Management Board (SWMB) at provincial, city/municipality, and barangay*, obtained the highest weighted means of 3.77 and 3.91, respectively, which correspond to verbal interpretation of *fully comply*. It implies that CENRO/MENRO and DILG respondents have the same view with regard to the creation of Solid Waste Management Board (SWMB) at provincial, city/municipal, and barangay. However, the CENRO/MENRO and DILG - respondents have different view with regard to item 8, *establishment of Multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of R.A. 9003*, which obtained the lowest weighted mean of 2.38, which corresponds to verbal interpretation of *partially comply* for CENRO/MENRO - respondents. But for DILG - respondents item 8, *establishment of Multi-purpose Environmental*

Cooperative or Association in every LGU to promote the implementation of R.A. No. 9003, obtained the lowest weighted mean of 2.79, which corresponds to verbal interpretation of *comply*.

In totality, the result of the study further implies that the compliance of LGUs to R.A. No. 9003 in CALABARZON needs to be continued and maintained as improvement on the level of compliance to *establish the multi-purpose Environmental Cooperative or Association in every LGU to promote the implementation of R.A. No. 9003* obtained *partially comply* for CENRO/MENRO-respondents.

In general, the results of the study reveal that CENRO/MENRO and DILG-respondents fully comply with the Ecological Solid Waste Management Act known as R.A. No. 9003, having a general mean of 3.35 and verbal interpretation of *fully comply*. It implies that LGUs in CALABARZON fully comply with the R.A. No. 9003.

Table 2. Level of Implementation of R.A. No. 9003 by the Local Government Units (LGUs) in CALABARZON

Items	CENRO / MENRO		DILG		GM	VI	R
	M	VI	M	VI			
	1. Wastes characterization for initial source reduction and recycling.	3.32	FI	3.22			
2. Collection and transfer of solid waste from residents to Sanitary Landfills.	3.20	I	3.45	FI	3.33	I	2
3. Existing markets for recyclable materials.	3.22	I	3.07	I	3.15	I	4
4. Establishment of LGU Materials Recovery Facility (MRF).	3.57	FI	3.29	FI	3.43	FI	1
5. Inventory of existing markets and demands for composts.	2.81	I	2.80	I	2.81	I	9
6. Inventory of waste disposal facilities or sites.	3.07	I	3.07	I	3.07	I	5
7. Issuance of permit for solid waste management facility construction and expansion.	2.94	I	2.93	I	2.94	I	8
8. Incentive programs to encourage the participation of concerned sectors for the implementation and enforcement of R.A. 9003.	2.97	I	3.00	I	2.99	I	6
9. Collection of fees to the residents (source of waste) for solid waste management.	2.48	PI	2.41	PI	2.45	PI	10
10. Fines and penalties for person/entity that	2.97		2.94				

violated the prohibited acts stipulated in Section 48 of R.A. 9003 are collected.	I	I	2.96	I	7
General Mean	3.07	I	3.00	I	3.04
Legend:	<i>M – Mean</i>	<i>VI – Verbal Interpretation</i>		<i>R – Ranking</i>	
	<i>FI – Fully Implemented</i>	<i>I – Implemented</i>			
	<i>PI – Partially Implemented</i>	<i>NI – Not Implemented</i>			

Table 2 shows the respondents' implementation of R.A. No. 9003 by the LGUs in CALABARZON. The survey findings reveal that items 4 and 1, *establishment of LGU Materials Recovery Facility (MRF)*, and *waste characterization for initial source reduction and recycling*, obtained the highest weighted mean of 3.57 and 3.32, respectively, which correspond to verbal interpretation of *fully implemented*, respectively, for CENRO / MENRO - respondents. This result implies that CENRO / MENRO - respondents of the study fully implement the establishment of LGU Materials Recovery Facility in their city/municipality. MRF receives mixed waste for final sorting, segregation, composting, and recycling.

The study also reveals that CENRO/MENRO respondents gave item 9, *collection of fees to the residents (source of waste) for solid waste management*, the lowest weighted mean of 2.48, which corresponds to verbal interpretation of *partially comply*. It implies that collection of fees is conducted in some cities and municipalities in CALABARZON. It usually occurs in subdivisions and commercial establishments.

Under the DILG respondents, the results show that items 2 and 4, *collections and transfers of solid waste from resident to sanitary landfills*, and *establishment of LGU Materials Recovery Facilities (MRF)*, obtained the highest weighted means of 3.45 and 3.29, respectively, which correspond to verbal interpretation of *fully implemented*. It implies that the LGUs in CALABARZON do not collect the solid wastes at source or waste generator without properly segregating the waste as the LGUs strictly implement the "No Segregation, No Collection Policy". With the proper segregation of solid waste by the waste generator, the waste collector collects solid wastes from waste generator to

sanitary landfill or controlled dumpsite. Likewise, collected wastes are transferred using a rented or own truck by the LGUs. The establishment of MRF and collection and transfer of solid wastes from residents to sanitary landfills are conducted regularly once a week. To strengthen the implementation of R.A. No. 9003, the LGUs implement the "No Segregation, No Collection Policy". Thus, collecting solid wastes from waste generator to sanitary landfill or controlled dumpsite requires proper waste segregation by the waste generator.

On the other hand, the DILG - respondents gave item 9, *collection of fees to the residents (source of waste) for solid waste management*, the lowest weighted mean of 2.41, which corresponds to verbal interpretation of *partially comply*. It implies that the DILG and CENRO/MENRO - respondents have the same view with regard to the collection of fees to the residents for solid waste management as this is usually done in subdivisions and commercial establishments.

Comparing the views of the CENRO/MENRO and DILG respondents, it can be observed that item 1, *wastes characterization for initial source reduction and recycling*, obtained the weighted mean of 3.32, which corresponds to verbal interpretation of *fully implemented* for CENRO/MENRO - respondents. But the DILG - respondents gave item 1, *wastes characterization for initial source reduction and recycling*, weighted mean of 3.22, which corresponds to verbal interpretation of *implemented*. It implies that CENRO/MENRO and DILG respondents have different views with regard to wastes characterization for initial source reduction and recycling.

Likewise, the CENRO/MENRO and DILG - respondents have the same view with regard to item 4, *establishment of LGU*

Materials Recovery Facility (MRF), which obtained a weighted mean of 3.57, corresponding to verbal interpretation of *fully implemented* for CENRO/MENRO – respondents; and it obtained a weighted mean of 3.29, which corresponds to verbal interpretation of *fully implemented* for DILG -respondents. It implies that the implementation of Materials Recovery Facility by the LGUs in CALABARZON is fully implemented as the CENRO/MENRO and DILG respondents have the same view.

In totality, the result of the study further implies that the establishment of Materials Recovery Facility (MRF) and wastes characterization for initial source reduction and recycling are fully implemented by the LGUs in CALABARZON.

Again, the CENRO/MENRO and DILG - respondents have the same view with regard to collection of fees from the residents (source of waste) for solid waste management, as they both *partially implement* it. It implies that collection of fees from the residents for solid waste management is partially implemented.

Table 3. Level of Enforcement of R.A. No. 9003 by the Local Government Units (LGUs) in CALABARZON

Items	CENRO / MENRO		DILG		GWM	VI	R
	WM	VI	WM	VI			
	1. Prohibition on the use of non-environmentally acceptable packaging.	3.20	E	3.20			
2. Prohibition against the use of open dumps for solid waste.	3.44	FE	3.44	FE	3.44	FE	1
3. Prohibition on the act of littering, throwing, dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks, and establishment, or causing or permitting the same.	3.39	FE	3.38	FE	3.39	FE	2
4. Prohibition for undertaking activities or operating, collecting or transporting equipment in violation of sanitation operation and other requirements or permits set forth in or established pursuant to this Act.	3.32	FE	3.27	FE	3.30	FE	5.5
5. Prohibition of the act of open burning of solid waste.	3.32	FE	3.29	FE	3.31	FE	4
6. Prohibition on the act of causing or permitting the collection of non-segregated or unsorted waste.	3.20	E	3.03	E	3.12	E	12
7. Prohibition of the act of squatting in open dumps and landfills.	3.29	FE	3.21	E	3.25	E	8
8. Prohibition on the act of unauthorized removal of recyclable material intended for collection by authorized persons.	3.14	E	3.21	E	3.18	E	11
9. Prohibition on the act of mixing of source-separated recyclable material with other solid waste in any vehicle, box, container or receptacle used in solid waste collection or disposal.	3.29	FE	3.26	FE	3.28	FE	7
10. Prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging materials.	3.11	E	3.06	E	3.09	E	14
11. Prohibition on the act of importation of consumer products package in non-environmentally acceptable materials.	3.04	E	3.07	E	3.06	E	15
12. Prohibition on the act of importation of toxic wastes misrepresented as “recyclable” or “with recyclable content”.	3.16	E	3.03	E	3.10	E	13
13. Prohibition on the act of transportation and dumping in bulk of collected domestic, industrial, commercial and institutional wastes in areas other than centers of facilities.	3.36	FE	3.27	FE	3.32	FE	3

14. Prohibition on the act of site preparation, construction, expansion or operation of waste management facilities without an Environmental Compliance Certificate.	3.36	FE	3.23	E	3.30	FE	5.5
15. Prohibition on the act of construction of any establishment within two hundred (200) meters from open dumps or controlled dumps or sanitary landfills.	3.25	FE	3.17	E	3.21	E	9
Total	3.26	FE	3.21	E	3.23	E	
Legend:	<i>M – Mean</i>	<i>VI – Verbal Interpretation</i>		<i>R – Ranking</i>			
	<i>FE – Fully Enforced</i>	<i>I – Enforced</i>					
	<i>PI – Partially Enforced</i>	<i>NI – Not Enforced</i>					

Table 3 shows the respondents’ assessment on the enforcement of R.A. No. 9003 by the LGUs in CALABARZON. The survey findings reveal that item 2, *prohibition against the use of open dumps for solid waste*, obtained the highest weighted mean of 3.44, which corresponds to verbal interpretation of *fully enforced*, for CENRO / MENRO - respondents. The result implies that LGUs in CALABARZON fully enforce the use of open dumpsites.

The study also reveals that CENRO/MENRO - respondents gave items 3, 13, and 14, *prohibition on the act of littering, throwing, dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks, and establishment, or causing or permitting the same; prohibition on the act of transportation and dumping in bulk of collected domestic, industrial, commercial, and institutional wastes in areas other than centers of facilities; and prohibition on the act of site preparation, construction, expansion or operation of waste management facilities without an Environmental Compliance Certificate*, the weighted means of 3.39, 3.36, and 3.36, respectively, which correspond to verbal interpretation of *fully enforced*. The result implies that LGUs in CALABARZON fully enforce the prohibition on the act of littering, throwing, and dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks, and establishment. In fact, some cities and municipalities have ordinance regarding anti-littering and dumping/throwing/littering of garbage, refuse, filth, and other kinds of wastes in public places, canals, rivers, drainage, and other waste outlets. In some cities and

municipalities, there are ordinances strengthen the implementation and enforcement of R.A. No. 9003. They require securing Environmental Compliance Certificate before the start of site preparation, construction, expansion or operation of waste management facilities. Furthermore, the study reveals that the CENRO/MENRO respondents gave items 4 and 5, *prohibition on undertaking activities or operating, collecting or transporting equipment in violation of sanitation operation and other requirements or permits set forth in or established pursuant to this act, and prohibition on the act of open burning of solid waste*, weighted means of 3.32 and 3.32, respectively, which correspond to verbal interpretation of *fully enforced*. This implies that CENRO/MENRO - respondents fully enforce the prohibition on the act of open burning of solid waste.

On the other hand, the CENRO/MENRO - respondents gave item 11, *prohibition of the act of importation of consumer products package in non-environmentally acceptable materials*, the lowest weighted mean of 3.04, which corresponds to verbal interpretation of *enforced*. This implies that CENRO/MENRO - respondents only enforce prohibition on the act of importation of consumer products package in non-environmentally acceptable materials. It means that not all cities and municipalities enforce and implement the “Zero Plastic Policy”.

The study also reveals that CENRO/MENRO - respondents gave items 10 and 8, *prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging*

materials, and prohibition on act of unauthorized removal of recyclable materials intended for collection by authorized persons, obtained the weighted means of 3.11 and 3.14, respectively, which correspond to verbal interpretation of *enforced*. This implies that CENRO/MENRO - respondents only enforce prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging materials, and prohibition on the act of unauthorized removal of recyclable materials intended for collection by authorized persons.

Under the DILG - respondents, the results show that item 1, *prohibition against the use of open dumps for solid waste*, obtained the highest weighted mean of 3.44, which corresponds to verbal interpretation of *fully enforced*. It implies that DILG respondents enforce the prohibition on the use of open dumps for solid waste.

The study also reveals that DILG - respondents gave items 3 and 5, *prohibition of the act of littering, throwing, dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks; and establishment, or causing or permitting the same; and prohibition on the act of open burning of solid waste*, weighted means of 3.38 and 3.29, respectively, which correspond to verbal interpretation of *fully enforced*. Furthermore, the study reveals that DILG - respondents gave items 4 and 13, *prohibition for undertaking activities or operating, collecting or transporting equipment in violation of sanitation operation and other requirements or permits set forth in or established pursuant to this Act; and prohibition on the act of transportation and dumping in bulk of collected domestic, industrial, commercial, and institutional wastes in areas other than centers of facilities*, weighted means of 3.27 and 3.27, respectively, which correspond to verbal interpretation of *fully enforced*. This implies that CENRO/MENRO respondents fully enforce the prohibition on the act of open burning of solid waste in CALABARZON.

On the other hand, the study reveals that DILG - respondents gave items 6 and 12, *prohibition on the act of causing or permitting the collection of*

non-segregated or unsorted waste; and prohibition on the act of importation of toxic wastes misrepresented as “recyclable” or “with recyclable content”, the lowest weighted means of 3.03 and 3.03, respectively, which correspond to verbal interpretation of *enforced*. This implies that not all LGUs in the cities and municipalities in CALABARZON enforce the prohibition on the act of causing or permitting the collection of non-segregated or unsorted waste, and prohibition on the act of importation of toxic wastes misrepresented as *recyclable* or *with recyclable content*.

The DILG – respondents also gave items 10 and 11, *prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging materials; and prohibition on the act of importation of consumer products package in non-environmentally acceptable materials*, weighted means of 3.06 and 3.06, respectively, which correspond to verbal interpretation of *enforced*.

Comparing the views of the CENRO/MENRO and DILG - respondents, it can be observed that items 1 and 3, *prohibition against the use of open dumps for solid waste; and prohibition on the act of littering, throwing, dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks, and establishment, or causing or permitting the same*, obtained the highest weighted means of 3.44 and 3.39, respectively, which correspond to verbal interpretation of *fully enforced*. It implies that the CENRO/MENRO and DILG - respondents have the same view with regard to the prohibition against the use of open dumps for solid waste, and prohibition on the act of littering, throwing, dumping of waste matters in public places, such as roads, sidewalks, canals, esteros or parks, and establishment.

Likewise, both CENRO/MENRO and DILG - respondents gave items 10 and 11, *prohibition on the act of importation of consumer products package in non-environmentally acceptable materials; and prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging materials*, the lowest weighted means of 3.06

and 3.09, respectively, which correspond to verbal interpretation of *enforced*. It implies that CENRO/MENRO and DILG respondents have the same view with regard to the prohibition on the act of importation of consumer products package in non-environmentally acceptable materials, and prohibition on the act of manufacture, distribution or use of non-environmentally acceptable packaging materials is enforced in CALABARZON.

On the other hand, the views of the CENRO/MENRO and DILG - respondents are

different with regard to the general weighted mean of the enforcement of R.A. No. 9003. For the CENRO/MENRO - respondents, it obtained a general weighted mean 3.26, which corresponds to verbal interpretation of *fully enforced*. However, the general weighted mean of 3.21 for the DILG - respondents corresponds to verbal interpretation of *enforced*. It implies that CENRO/MENRO and DILG - respondents have different views with regard to the enforcement of R.A. No. 9003 in CALABARZON.

Table 4. Problems Encountered in the Implementation and Enforcement of R.A. No. 9003 by the Local Government Units (LGUs) in CALABARZON

Items	CENRO / MENRO		DILG		GM	VI	R
	M	VI	M	VI			
1. Enforcement officers not properly trained	2.43	LS	2.47	LS	2.45	LS	7
2. Local Government Units not having enough fund to support the implementation and enforcement of R.A. 9003	2.65	S	2.31	LS	2.48	LS	6
3. Strict implementation and enforcement of R.A. 9003 by Local Government Units (LGUs)	2.73	S	2.81	S	2.77	S	2
4. Uncooperative residents	3.00	S	3.00	S	3.00	S	1
5. Poor monitoring and evaluation of the waste management programs	2.55	S	2.53	S	2.54	S	4
6. Existing landfills and dumpsites	2.50	LS	2.47	LS	2.49	LS	5
7. Infrastructure for solid waste management not available	2.42	LS	2.38	LS	2.40	LS	8
8. Lack of awareness and knowledge of the residents in solid wastes management	2.50	LS	2.66	S	2.58	S	3
9. Vehicle for transportation and collection of waste not available	2.21	LS	2.03	LS	2.12	LS	10
10. Existing 10 – year Solid Waste Management Plan (SWMP)	2.16	LS	2.22	LS	2.19	LS	9
General Mean	2.52	S	2.49	LS	2.50	LS	

Legend: M – Mean VI – Verbal Interpretation R – Ranking
 SP – Serious Problems P – Problems
 LS – Least Serious NAP – Not A Problem

Table 4 shows the problems in the implementation and enforcement of R.A. No. 9003 in CALABARZON. The survey finding

reveals that items 4, 3, 2, and 5, *uncooperative residents, strict implementation and enforcement of R.A. 9003 by Local Government Units*

(LGUs), *Local Government Units not having enough funds to support the implementation and enforcement of R.A. 9003, and poor monitoring and evaluation of the waste management programs*, obtained weighted means of 3.00, 2.73, 2.65, and 2.55, respectively, which correspond to verbal interpretation of *serious*, for CENRO / MENRO - respondents. The study means that CENRO/MENRO - respondents have serious problems in the implementation and enforcement of R.A. No. 9003 such as uncooperative residents, strict implementation and enforcement, LGUs not having enough funds to support the implementation and enforcement, and poor monitoring and evaluation of the waste management programs.

On the other hand, the study reveals that item 10, *existing 10-year Solid Waste Management Plan (SMWP)*, obtained the lowest weighted mean of 2.16, which corresponds to verbal interpretation of *least serious*, for CENRO/MENRO - respondents. It implies that not all LGUs in CALABARZON have existing 10 - year Solid Waste Management Plan (SWMP).

Under the DILG - respondents, the study reveals the item 4, *uncooperative residents*, obtained the highest weighted mean of 3.00, which corresponds to verbal interpretation of *serious*. It shows that having uncooperative residents is a serious problem in the implementation and enforcement of R.A. No. 9003. Primarily, collection of wastes coming from the residents is believed to be the responsibility of the LGUs.

The study also reveals that items 3, 8, and 5, *strict implementation and enforcement of R.A. No. 9003 by Local Government Units (LGUs), lack of awareness and knowledge of the residents in solid wastes management, and poor monitoring and evaluation of the waste management programs*, obtained weighted means of 2.81, 2.66, and 2.53, respectively, which correspond to verbal interpretation of *serious*, for DILG - respondents. It implies that strict implementation and enforcement, lack of awareness and knowledge of the residents, and poor monitoring and evaluation of the waste management programs are serious problems in

the implementation and enforcement of R. A. No. 9003 in CALABARZON.

On the other hand, the study further reveals that item 9, *vehicle for transportation and collection of waste is not available*, obtained the lowest weighted mean of 2.12, which corresponds to verbal interpretation of *least serious*, for DILG - respondents. It implies that vehicle for transportation and collection of waste is not a big problem. Vehicle for transportation and collection of waste from residents to sanitary landfill is privately owned and sometimes rented by the LGUs.

Comparing the views of the CENRO/MENRO and DILG - respondents, it can be observed that item 4, *uncooperative residents*, obtained the highest weighted mean of 3.00, which corresponds to verbal interpretation of *serious*. It implies that the CENRO/MENRO and DILG respondents have the same view with regard to the problems encountered which is having uncooperative residents. Likewise, the CENRO/MENRO and DILG - respondents have the same view with regard to items 9 and 10, *vehicle for transportation and collection of waste not available, and existing 10-year Solid Waste Management Plan (SWMP)*, which obtained the lowest weighted means of 2.03 and 2.16, respectively, which correspond to verbal interpretation of *least serious*. Both observe that the two mentioned items are not that serious.

The study also reveals that the problems encountered in the implementation and enforcement of R.A. No. 9003 by the LGUs have a general weighted mean of 2.52, which corresponds to verbal interpretation of *serious*, for CENRO/MENRO - respondents. But for DILG - respondents, it has a general weighted mean of 2.49, which corresponds to verbal interpretation of *least serious*. This means that the CENRO/MENRO and DILG respondents have different views with regard to the problems encountered in the implementation and enforcement of R.A. No. 9003. For CENRO/MENRO - respondents, the problems are serious, but for the DILG - respondents, the problems are least serious. Basically, the CENRO/MENRO is the one directly responsible

in the implementation and enforcement of R.A. No. 9003 while the DILG is one responsible for

monitoring and evaluating the activities and programs of the CENRO/MENRO.

CONCLUSION AND RECOMMENDATIONS

The Local Government Units (LGUs) fully comply with the implementation and enforcement of Republic Act No. 9003. They fully implement waste characterization for initial source reduction and recycling, and establishment of Material Recovery Facility (MRF). However, they partially implement collection of fees from the residents and they enforce R.A. No. 9003. The implementation and enforcement of R.A. No. 9003 are affected by construction of sanitary landfill facilities. LGUs encounter serious problems such as strict implementation and enforcement, uncooperative residents, poor monitoring and evaluation, and lack of awareness and knowledge of the residents in solid waste management.

The researcher recommended continues fully complying with the implementation and enforcement of R.A. No. 9003. However, the LGUs need to improve their compliance on the establishment of MRF, mandatory solid waste diversion, segregation and collection of solid waste at barangay level, establishment of multi-purpose environmental cooperative or association, and providing incentives program to encourage participation of concerned sectors. The LGUs need to strictly implement and enforce R.A. No. 9003. However, resolution is needed to fully implement the collection of fees from the residents and not only for selected places. Fees are only collected from the residents residing in subdivisions and commercial establishments. Thus, collection of fees shall be recommended to the cities and municipalities as it can provide job

opportunities. Strict enforcement of R.A. No. 9003 is recommended and this can be feasible through additional manpower to enforce R.A. No. 9003. Newly hired and present enforcement officers need to undergo training in the enforcement of R.A. No. 9003. In addition, monitoring and evaluation of the performance of the enforcement officers are highly recommended. Construction of sanitary landfill facilities is highly recommended as it is mandated by R.A. No. 9003. But, for the time being, controlled dumpsite as a final disposal of solid waste is recommended. Continues information dissemination campaign must be conducted to strengthen the knowledge of the residents about solid waste management. Likewise, the enforcement officers must be strict in the implementation and enforcement of R.A. No. 9003. Thus, training program must be proposed to encourage the residents to be cooperative in the implementation and enforcement of this Act. Furthermore, City Environment and Natural Resources Office/ Municipal Environment and Natural Resources Office (CENRO/MENRO), in coordination with the Department of Interior and Local Government (DILG), must assign a person/office concerned to monitor and evaluate the implementation and enforcement of this Act. There must be continuous improvement on the compliance of the LGUs as it has relationship with implementation and enforcement of R.A. No. 9003. Eliminate the problems encountered in the implementation and enforcement of R.A. No. 9003. Somehow, by eliminating the problems encountered in

the implementation and enforcement of R.A. No. 9003, it can lead to the full

implementation and enforcement of R.A. No. 9003.

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