

# Students' Perception towards the School's Level of Implementation of Ecological Solid Waste Management

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## ABSTRACT

Students must be aware that the world generates 2.01 billion tons of municipal solid waste annually, with at least 33 percent of that not managed in an environmentally safe manner. In the Philippines, the same trend is observed. Contributing factor is the school's Ecological Solid Waste Management (ESWM). In this paper, the level of awareness, respondents' practice and the problems encountered by the respondents in R.A. 9003 Act are evaluated. One hundred forty-seven (147) Grade 12 General Academic Strand students were surveyed using validated structured questionnaires. Scores were validated and recorded. Weighted Mean to describe the ESWM implementation was employed in this study. Results revealed that the respondents are moderately aware (WA=3.20) of the program, they always practiced segregation and proper solid waste disposal but are sometimes did recycling practices (WA=2.32); Minor problems (WA=2.45) on cooperation and self-discipline but in dire need of waste segregation supplies. Since ESWM is everybody's concern, further dissemination and information drive are required for its effective and improved implementation. It is also recommended to conduct school-wide and further environmental awareness campaign at school.

**KEYWORDS:** R.A. 9003 Ecological Solid Waste Management Act of 2000, Solid Waste Segregation

## INTRODUCTION

Humans produce large number of wastes brought about by the daily activities they do whether in their households, offices, schools, streets, and some others. These wastes are all disposed in the environment

thus the need for proper management to prevent future problems and calamities. Improper wastes disposal, inefficient wastes collection and lack of disposal facilities are among the dominant concerns in the country's solid waste management. To respond to this, the angle on the protection of the environment particularly on the proper segregation of garbage and waste disposal must be addressed. The state has to promote the policy on the adoption of systematic, comprehensive, and ecological waste management program and to address and strengthen the state's policy, Republic Act 9003 or Ecological Solid Waste Management of 2000 was adopted. The law ensures the protection of public health and environment which could be done by proper garbage

segregation and encourage cooperation and self-regulation on waste generation.

As a response to this national law, every local government unit is required to implement the same in different areas of the community. One of the implementers of the law is Agusan del Sur National High School. This paper focuses on the policy making process particularly the policy implementation and policy evaluation processes. It looks into the effectiveness of the policy on Ecological Solid Waste Management as viewed by the respondents. The study makes use of the Six Stages Approach to understand and analyze the Ecological Solid Waste Management as implemented by schools in response to R.A. 9003 or Ecological Solid Waste Management Act of 2000. As used in the study, stages include: the problem formation or the issue formulation, the government agenda, policy formulation, policy adoption, policy implementation, and policy evaluation.

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## METHODOLOGY

The study is a descriptive research which looks into the views and opinions of the respondents particularly in the implementation of the Ecological Solid Waste Management in Agusan del Sur National High School. The respondents of the study are the Grade 12 General Academic Strand students of Agusan del Sur National High School S.Y. 2017-2018. The population of the GAS students S.Y. 2018-2019 is two hundred thirty (230) and using Slovin's formula with 0.05 margin of error, the sample size is one hundred forty-seven (147). For selecting the respondents, the researcher used the stratified sampling where the list of all members of the population is arranged by level and are randomly picked. The randomization technique insures validity

of the data gathered. Structured questionnaires are used to gather the primary data in attaining the objectives. The questionnaire for the respondents comprised of three (3) parts: (I) The level of awareness of the respondents regarding the Solid Waste Management Act of 2000; (II) The respondent's practice on the Ecological Solid Waste Management; (III) The problems encountered in Solid Waste Management Service. In data gathering procedure, validated questionnaire was distributed to the respondents with the permission of teachers and school administrator. The questionnaire was retrieved personally so that 100% of the questionnaire are collected. Weighted Mean is then employed in analyzing the data. Tables are used in presenting the findings of the study.

## RESULTS

**Table 1 Awareness of the Respondent of the Program**

	Weighted Mean	Qualitative Description
1. I am aware of the program about R.A 9003 or Ecological Solid Waste Management Act.	3.29	Extremely Aware
2. I am aware that the school is responsible for the implementation of the Act.	3.32	Extremely Aware
3. I am aware that our school is complying to the R.A 9003 or Ecological Solid Waste Management Act of 2000.	3.20	Moderately Aware
4. I am aware on how to segregate proper waste disposal in our school.	3.22	Moderately Aware
5. I am aware that biodegradable, non –biodegradable, recyclable and special waste are collected in our school every day until 5:00 pm.	3.10	Moderately Aware
6. I am aware that our school has garbage truck that collects our solid waste	3.11	Moderately Aware
7. I am aware of the Ordinance or program of Agusan del Sur National High School under this R.A 9003.	3.19	Moderately Aware
Overall Weighted Mean	3.20	Moderately Aware

*Not aware (1.00-1.75); slightly aware (1.76-2.51); moderately aware (2.52-3.28); extremely aware (3.29-4.00)*

The table shows that in terms of Awareness of the Respondent to the ESWM Program, the highest weighted mean of 3.32 that equivalents to Extremely Aware is the second item where the respondents are aware that the schools is responsible for the implementation of the Ecological Solid Waste Management Act. The second item with the qualitative description of extremely aware is "I am aware of the program about R.A 9003 or Ecological Solid Waste Management Act." "I am aware that our school is complying to the R.A 9003 or Ecological Solid Waste Management Act of 2000." got a weighted mean of 3.20. The fourth item has a weighted mean of 3.22. The fifth item got a 3.10 weighted mean.

While the sixth item got 3.11 as its weighted mean. And lastly, the seventh item has a weighted mean of 3.19. The items from 3 to 7 means that the respondents are moderately aware.

**Table 2 Students' Practices of the Ecological Solid Waste Management**

	Weighted Mean	Qualitative Description
1. I am practicing the R.A 9003 or Ecological Solid Waste Management Act of 2000.	2.42	Always
2. I am segregating my waste.	2.44	Always
3. I am disposing my waste properly.	2.34	Always
4. I am recycling my waste.	2.25	Sometimes

5. I am reusing old stuffs.	2.20	Sometimes
6. I am reducing my waste.	2.23	Sometimes
7. I am complying with the schedule of garbage collection in our school.	2.38	Always
Weighted Mean	2.32	Sometimes

*Never (1.00-1.66); Sometimes (1.67-2.33); Always (2.34- 3.00)*

It is shown that majority of the students practice ecological solid waste management while the rests only do it sometimes. The item with the highest weighted mean of 2.44 is the second one where the respondents properly segregated their waste. It is followed with the weighted mean of 2.42 that states “I am practicing the R.A 9003 or Ecological Solid Waste Management Act of 2000.” which is also always practiced. Items three and seven are always practiced as well where the respondents dispose (2.34) and comply with the schedule of garbage collection (2.38). Moreover, results show that the following are sometimes practiced: recycling with a weighted mean of 2.25, reusing old materials with a weighted mean of 2.20, and lastly, reducing waste has a weighted mean of 2.23. The overall weighted mean of the practices done by the respondents is 2.32 which means it is sometimes practiced. This further tells that students are still in need of awareness campaign in 3 Rs – the reduce, reuse and recycle.

**Table 3 Problems Encountered in Solid Waste Management Services**

Problems Encountered in Solid Waste Management Services	Weighted Mean	Qualitative Description
1. Lack of administrative financial support	2.40	Minor
2. Poor cooperation of the students	2.45	Minor
3. Poor self-discipline of the students	2.00	Minor
4. Lack of garbage bins	2.56	Moderate
5. Lack of garbage bags	2.55	Moderate
6. Lack of signage of the do's and don'ts regarding waste segregation	2.76	Moderate
Weighted Mean	2.45	Minor

*Not (1.00-1.75); Minor (1.76-2.51); Moderate (2.52-3.28); Serious (3.29-4.00)*

In the problems encountered in solid waste management services, there only moderate to minor issues which ranged from 2.00-2.76 and an overall of minor (2.45) problems. Specifically, the most minor problem is the poor self-discipline of the students (2.00). The second one with a weighted mean of 2.40 is the lack of administrative financial support. And the least minor problem is the poor cooperation of the students (2.45). The most moderate problem in terms of the Solid Waste Management Services is the lack of garbage bags (2.55). This is followed by the lack of garbage bins (2.56). And the least moderate problem is the lack of signage of the do's and don'ts regarding waste segregation (2.76).

## DISCUSSION

This study investigated the perception of the students with the school's implementation of Republic Act No. 9003 Ecological Solid Waste Management in Agusan del Sur National High School. 147 respondents were surveyed and the result of data analysis showed that majority of the respondents are aware, practicing, and have no minor problems of the Republic Act No. 9003. As seen in the first table, although majority of the respondents are aware of the school's responsibility to implement this act, the the mean score shows that respondents are only moderately aware of the program. This indicates that they are informed about the Solid Waste Management Act of 2000 but the program still needs a better integration among students for them to be fully aware. This outcome is comparable to the result of Lee and Williams (2001), Chi-Chung Ko and Chi-Kin (2003), Pulkkinen (2003), and Eguabor (2006), as cited in Dong et. al. (2017), where there is a lack of

awareness among instructors that resulted to challenges in the implementation of environmental education. Moreover, the respondents generally sometimes practice this act. Because of this, the result specifies that there should be more motivation for the students to practice segregation, disposal, and to comply with the garbage collection schedule. This will provide a better result for the environment similar to the result of Dong et. al. study in 2017 where students are identified to be willing to contribute in order to provide solutions for the environment. Furthermore, there are only of minor problems identified in this act. Hence, this indicates that the ESWM Program is well implemented but still needs focus and attention to eliminate these problems. This outcome is supported by the result of Debrah et. al. (2021) that government, stakeholders, and other concerned organizations must consider long-term development efforts in schools for students to have a cleaner and greener environment. Overall, the

implementation of the Ecological Solid Waste Management Program is working in Agusan del Sur National High School. Minor issues and concerns may have resulted from students who are unwilling to participate but majority are aware, practicing, and complying to the program in order to strengthen and support Republic Act 9003 as it ensures the protection of public health and environment, and to promote cleaner and greener surroundings.

## CONCLUSION

It can be concluded that majority of the Grade 12 General Academic Strand (GAS) are generally moderately aware, sometimes practicing, and have minor problems of the program about R.A 9003 or Ecological Solid Waste Management Act regarding the Solid Waste Management Act of 2000. The results showed that the students are extremely aware of the program and school's advocacy of helping our environment. The respondents are moderately aware of the compliance, segregation, schedule of garbage collection, garbage truck collection, and ordinance. Moreover, most of the students also sometimes practice actions stated in the Ecological Solid Waste Management Act of 2000 manual like recycling, reusing materials, and reducing wastes. Actions such as practicing this act, segregating, disposing, and complying with the schedule of garbage collection in the school are always practiced. Also, there are minor problems in poor self-discipline of the students, lack of administrative financial support, and poor cooperation of the students. On the other hand, there were moderate problems in the lack of garbage bags, garbage bins, and signage of the do's and don'ts regarding waste segregation. Since waste segregation or Ecological Solid Waste Management are everybody's concern there's a need a further dissemination and information drive and even effective implementation of such law. It is also recommended that further assessment of students in ASNHS is required to determined all-encompassing understanding of their awareness, knowledge and practices for waste and waste management.

## RECOMMENDATIONS

It is recommended to strengthen the awareness of the students about 3Rs- Reduce, Reuse and Recycle, conduct seminar-workshop that will enhance their recycling skills. The school is also recommended to continue supporting the ecofriendly activities by providing every classroom the necessary eco waste materials such as garbage bins. Moreover, school-wide research to determine the status of implementation of ESWM in a larger scale is recommended.

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