

# **REPUBLIC ACT 9003: ITS IMPLEMENTATION IMPACT TO THE COMMUNITY**

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**ABSTRACT** This study aimed to determine the impact of implementation to the community of Republic Act 9003. An experimental research design was utilized using the 24 barangay officials as subjects where the total population was taken. A researcher-made questionnaire was used in gathering the data needed. It was found out that the residents had a low level of practice of RA 9003 as to source reduction, to a high level as to segregation and to a moderate level as to processing before the conduct of the study.; after the conduct of the study, the residents had improved level of practice of RA 9003 whereas to source reduction and processing, were to high level and for segregation to a very high level; before the conduct of the study, the impact of the implementation of RA 9003 on processing was to a great extent; the impact of the implementation of RA 9003 on processing after the conduct of the study was to a very great extent; there is a significant difference in the level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before and after the conduct of the study; and there is a significant difference in the extent of the implementation of RA 9003 on processing before and after the conduct of the study.

**Keywords:** Republic Act 9003, impact, Guimaras

## **INTRODUCTION**

### **Background of the Study**

Guimaras, a province known to be “the island that fits your taste” is a lone district which is composed of five municipalities namely: Buenavista, Jordan, Nueva Valencia, San Lorenzo, and Sibunag where Jordan serves as the capital town. It is located southeast of Panay and northwest of Negros Island in Western Visayas, Philippines. The island is separated from Panay by the 1.5 nautical mile long strait and acts as a natural breakwater for Iloilo. The 6 nautical mile Guimaras strait likewise separates the province from Negros.

Anchored on agriculture for its economy, Guimarasnons derive their livelihood from the bounties of the land and its surrounding seas. Farm of agri-tourism destination is being set by the province of Guimaras for its definitive tourism image in Western Visayas by diversifying its agriculture and introducing tourism-related activities supplementary or enhancing agricultural areas.

Guimaras is known for its mango plantations, clean beaches, and scenic landscape and its identity festival, Manggahan sa Guimaras where for the past 3 years the number of visitors arrivals reached to 333, 243 in 2013 with 4% increased 347, 148 in 2014 with 4.17% increased and 402, 185 in 2015 with 16% increased. (Provincial Tourism Office, Guimaras).

The study of Sollano and Gabion (2014) on the Extent and Effectiveness of Solid Waste Management Program in Buenavista revealed that out of 36 barangays in Buenavista the program is implemented only in 12 barangays considered as pilot barangays. In the 24 non-pilot there are historical sceneries located.

A place is attractive if its surroundings are clean which can be noted through the proper implementation of RA 9003 on the Ecological Solid Waste Management. Thus, the tourism industry would improve. For this, the study will be conducted.

Objectives:

This study aimed to determine the impact of implementation to the community of Republic Act 9003. Specifically to determine the:

1. level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before the conduct of the study.
2. level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing after the conduct of the study.
3. extent of impact of the implementation of RA 9003 on processing before the conduct of the study.
4. extent of impact of the implementation of RA 9003 on processing after the conduct of the study.
5. difference in the level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before and after the conduct of the study difference in the extent of impact of the implementation of RA 9003 on processing before and after the conduct of the study.

## METHODOLOGY

### Materials:

Old Sacks  
Old Corrugated Tin Sheets  
Bamboo Slots  
Vegetable Seeds  
Biodegradable Materials  
Materials

### Procedure:

1. Identify the subjects of the study through coordination with the barangay captain for the experimental group.
2. Determine the level of practice as to RA 9003 for source reduction, segregation, and processing of the subjects of the study using the survey questionnaire.
3. Determine the extent of impact of the implementation of RA 9003 on processing using the survey questionnaire.
4. Implementation of RA 9003 as to source reduction, segregation and processing to the experimental barangay for one (1) year.
5. Monitor the implementation of RA 9003 on the practice of source reduction, segregation and processing once every two weeks for one (1) year.
6. Assess the level of practice of the subjects of the study using the survey questionnaire.
7. Evaluate the extent of impact of the implementation of RA 9003 on processing using the survey questionnaire.

This study utilized the experimental research design, according to Kerlinger experimental research is a design in which an "investigator manipulates and controls one or more independent variables and observes the dependent variable or variables". The subjects of the study were the 24 barangay officials where the total population was taken.

Table 1. Distribution of the Subjects

| Barangay Officials     | N  | Percent (%) |
|------------------------|----|-------------|
| Barangay Captain       | 1  | 4.17        |
| Barangay Secretary     | 1  | 4.17        |
| Barangay Treasurer     | 1  | 4.16        |
| Barangay Kagawad       | 7  | 29.17       |
| Barangay Health Worker | 7  | 29.17       |
| Barangay Tanod         | 7  | 29.16       |
| TOTAL                  | 24 | 100         |

The statistical tools used in this study were mean, percent, standard deviation, and T-test.

## RESULTS AND DISCUSSIONS

### Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation, and Processing Before the Conduct of the Study

Data in Table 2 reveal that the residents in the barangay had low level of practice for source reduction with mean of 2.49) and SD .90 before the conduct of the study. Furthermore they had moderate level on practicing recycling, reusing and reducing of wastes ( $M=3.08$ ), buying products with simpler and less packaging ( $M=2.71$ ) and reusing back pages of used papers ( $M=2.67$ , while for segregation, with mean 3.85 and SD .75, was to a high level. They had high level of practices on following the rules and policies about solid waste management to help in proper waste disposal. Moreover, in terms of processing, they had moderate level of practice of RA 9003 in the barangay with a mean of 3.12 and SD of .36. They have a very high level of practices on item that states "Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.

**Table 2. Level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before the conduct of the study**

|   | N  | Mean | SD   | Remarks              |
|---|----|------|------|----------------------|
| <b>Source Reduction</b>   |    |      |      |                      |
| Buying Products with simpler and less packaging.  | 24 | 2.71 | 1.16 | To a moderate level  |
| Making Decorative items out of used papers, plastics, and other waste materials.            | 24 | 2.13 | 1.39 | To a low level       |
| Repairing old clothes and selling them to earn additional income.                           | 24 | 1.88 | 1.19 | To a low level       |
| Practicing recycling, reusing, and reducing of wastes.                                      | 24 | 3.08 | 1.02 | To a moderate level  |
| Reusing back pages of used papers.  | 24 | 2.67 | 1.27 | To a moderate level  |
| Total   | 24 | 2.49 | .90  | To a low level       |
| <b>Segregation</b>  |    |      |      |                      |
| Segregating garbage from source as to biodegradable, non-biodegradable and recyclable.      | 24 | 3.08 | .88  | To a moderate level  |
| Following rules and policies about solid waste management to help in proper waste disposal. | 24 | 3.50 | 1.10 | To a high level      |
| Participating in the clean and green program of the Barangay/ municipality.                 | 24 | 4.17 | .92  | To a low level       |
| Value the importance of clean surrounding and protection of health.                         | 24 | 4.50 | .93  | To a high level      |
| Do not throw non-biodegradable wastes in the sanitary landfill.                             | 24 | 4.00 | 1.38 | To a high level      |
| Total   | 24 | 3.85 | .75  | To a high level      |
| <b>Processing</b>   |    |      |      |                      |
| Recovering recyclable materials from the Materials Recovery Facility                        | 24 | 2.33 | .87  | To a low level       |
| Bringing sorted waste materials to second hand buyers.                                      | 24 | 2.79 | .78  | To a moderate level  |
| Do not dump all waste materials (biodegradable and non-biodegradable) in one compost pit.   | 24 | 2.29 | .91  | To a low level       |
| Practicing composting.  | 24 | 3.29 | 1.04 | To a moderate level  |
| Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.  | 24 | 4.88 | .45  | To a very high level |
| Total   | 24 | 3.12 | .36  | To a moderate level  |

Scale: 4.20-5.00 (very high level) 3.40-4.19 (high level) 2.60-3.39 (moderate level) 1.80-2.59 (low level) 1.00-1.79 (very low level)

### **Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation, and Processing After the Conduct of the Study**

Table 3 shows the data which reveal that practice in the barangay after the conduct of the study on source reduction with mean 3.93 and SD .37 is to a high level. The result on practicing recycling, reusing and reducing of wastes got higher from moderate level to a very high level. As to segregation, they had a very high level of practices with mean of 4.27 and SD of .42. As to processing, the overall results was high level of practices with mean=4.03 and S= .54. This implies that the conduct of the study of RA 9003 was successfully implemented.

**Table 3. Level of practice of the residents in the barangay of RA 9003 on source reduction, segregation and processing after the conduct of the study.**

|   | N                    | Mean | SD   | Remarks              |
|---|----------------------|------|------|----------------------|
| <b>Source Reduction</b>   |                      |      |      |                      |
| Buying Products with simpler and less packaging.  | 24                   | 3.88 | .54  | To a high level      |
| Making Decorative items out of used papers, plastics, and other waste materials.            | 24                   | 4.08 | .83  | To a high level      |
| Repairing old clothes and selling them to earn additional income.                           | 24                   | 3.17 | 1.01 | To a moderate level  |
| Practicing recycling, reusing, and reducing of wastes.                                      | 24                   | 4.38 | .71  | To a very high level |
| Reusing back pages of used papers.  | 24                   | 4.13 | .68  | To a high level      |
| Total   | 24                   | 3.93 | .37  | To a high level      |
| <b>Segregation</b>  |                      |      |      |                      |
| Segregating garbage from source as to biodegradable, non-biodegradable and recyclable.      | 24                   | 4.29 | .62  | To a very high level |
| Following rules and policies about solid waste management to help in proper waste disposal. | 24                   | 4.42 | .65  | To a very high level |
| Participating in the clean and green program of the Barangay/ municipality.                 | 24                   | 4.38 | .65  | To a very high level |
| Value the importance of clean surrounding and protection of health.                         | 24                   | 4.33 | .92  | To a very high level |
| Do not throw non-biodegradable wastes in the sanitary landfill.                             | 24                   | 3.92 | 1.14 | To a high level      |
| Total   | 24                   | 4.27 | .49  | To a very high level |
| <b>Processing</b>   |                      |      |      |                      |
| Recovering recyclable materials from the Materials Recovery Facility                        | 24                   | 4.17 | .87  | To a high level      |
| Bringing sorted waste materials to second hand buyers.                                      | 24                   | 3.38 | 1.25 | To a high level      |
| Do not dump all waste materials (biodegradable and non-biodegradable) in one compost pit.   | 24                   | 3.92 | 1.14 | To a high level      |
| Practicing composting.  | 24                   | 3.88 | 1.03 | To a high level      |
| Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.  | 24                   | 4.79 | .41  | To a very high level |
| Total   | 24                   | 4.03 | .54  | To a high level      |
| <b>Legend:</b>  |                      |      |      |                      |
| Scale   | Descriptive          |      |      |                      |
| 4.20-5.00   | To a very high level |      |      |                      |
| 3.40-4.19   | To a high level      |      |      |                      |
| 2.60-3.39   | To a moderate level  |      |      |                      |
| 1.80-2.59   | To a low level       |      |      |                      |
| 1.00-1.79   | To a very low level  |      |      |                      |

### **Extent of Impact of the Implementation of RA 9003 on Processing before the Conduct of the Study**

Data in Table 4 show that the economic impact with a mean of 2.63 and SD .71 is to a moderate extent. The use, produce and compost to fertilize their plants and earning income from the plants fertilized by compost has a great impact of the implementation of RA 9003. Furthermore, as to values impact with a mean of 3.73 and SD .39 describes as to a great extent. Moreover, majority of the respondents implement RA 9003 as they regularly clean their surroundings and understand that proper waste management was their responsibility which describes as to very great extent.

**Table 4. Extent of impact of the implementation of RA 9003 on processing before the conduct of the study**

|  | N  | Mean | SD   | Remarks                |
|--|----|------|------|------------------------|
| <b>Economic Impact</b>   |    |      |      |                        |
| sell recyclable waste to junkshops   | 24 | 3.21 | 1.10 | To a moderate extent   |
| produce decorative items out of recyclable materials                               | 24 | 1.71 | 1.04 | To a very low extent   |
| use recyclable materials in beautifying our barangay                               | 24 | 1.79 | 1.06 | To a very low extent   |
| sell produced organic fertilizer from compost                                      | 24 | 2.04 | 1.20 | To a low extent        |
| use produced compost to fertilize our plants                                       | 24 | 3.50 | 1.18 | To a great extent      |
| earn income from the plants fertilized by compost                                  | 24 | 3.50 | 1.50 | To a great extent      |
| Total  | 24 | 2.63 | .71  | To a moderate extent   |
| <b>Values Impact</b>   |    |      |      |                        |
| spend time in recovering recyclable materials from the Materials Recovery Facility | 24 | 2.63 | .71  | To a moderate extent   |
| are one in support with our waste management                                       | 24 | 3.92 | .77  | To a moderate extent   |
| regularly clean our surroundings   | 24 | 4.50 | .51  | To a very great extent |
| religiously follow environmental laws by ourselves                                 | 24 | 3.46 | .78  | To a great extent      |
| segregate wastes as to biodegradable and non-biodegradable                         | 24 | 3.17 | .76  | To a moderate extent   |
| Understand and that proper waste management is everyone's responsibility.          | 24 | 4.71 | .91  | To a very great extent |
| Total  | 24 | 3.73 | .30  | To a great extent      |

Legend: 4.20-5.00 (To a very great extent), 3.40-4.19 (To a great extent), 2.60-3.39 (To a moderate extent), 1.80-2.59 (To a low extent), 1.00-1.79 (To a very low extent)

### Extent of Impact of the Implementation of RA 9003 on Processing after the Conduct of the Study

Table 5 shows data which reveal that the economic impact on processing after the conduct of the study with mean 4.16 and SD .46 is to a great extent. They have a very great extent on selling recyclable waste to junkshops, producing decorative items out of recyclable materials, using recyclable materials in beautifying their barangay and using produce compost to fertilize their plants. In terms of values impact, with mean=4.24 and S=0.80 which describes as a very great extent. This implies that implementing RA 9003 gives benefits to both respondents and environment. The extent of impact of the implementation of RA 9003 after the conduct of the study on the items that state "are one in support with our waste management", "regularly clean our surroundings", "religiously follow environmental laws by themselves", segregate wastes as to biodegradable and non-biodegradable" and "understand that proper waste management is everyone's responsibility". This implies that RA 9003 should be implemented continuously for the benefits of the environment and its people.

**Table 5. Extent of impact of the implementation of RA 9003 on processing after the conduct of the study**

|  | N  | Mean | SD   | Remarks                |
|--|----|------|------|------------------------|
| <b>Economic Impact</b>   |    |      |      |                        |
| sell recyclable waste to junkshops   | 24 | 4.50 | .59  | To a very great extent |
| produce decorative items out of recyclable materials                               | 24 | 4.54 | .51  | To a very great extent |
| use recyclable materials in beautifying our barangay                               | 24 | 4.42 | .78  | To a very great extent |
| sell produced organic fertilizer from compost                                      | 24 | 3.63 | 1.44 | To a great extent      |
| use produced compost to fertilize our plants                                       | 24 | 4.33 | .96  | To a very great extent |
| earn income from the plants fertilized by compost                                  | 24 | 3.54 | 1.44 | To a great extent      |
| Total  | 24 | 4.16 | .46  | To a great extent      |
| <b>Values Impact</b>   |    |      |      |                        |
| spend time in recovering recyclable materials from the Materials Recovery Facility | 24 | 4.08 | .78  | To a great extent      |
| are one in support with our waste management                                       | 24 | 4.33 | .82  | To a very great extent |
| regularly clean our surroundings   | 24 | 4.21 | 1.02 | To a very great extent |
| religiously follow environmental laws by ourselves                                 | 24 | 4.25 | .90  | To a very great extent |
| segregate wastes as to biodegradable and non-biodegradable                         | 24 | 4.38 | .82  | To a very great extent |
| Understand and that proper waste management is everyone's responsibility.          | 24 | 4.21 | 1.06 | To a very great extent |
| Total  | 24 | 4.24 | .80  | To a great extent      |

Legend: 4.20-5.00 (To a very great extent), 3.40-4.19 (To a great extent), 2.60-3.39 (To a moderate extent), 1.80-2.59 (To a low extent), 1.00-1.79 (To a very low extent)

## Difference in the Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation and Processing Before and After the Conduct of the Study

Table 6 shows a significant difference in the level of practice of the residents before and after the implementation of the study for sources reduction with p-value .000, for segregation p= .020 and for processing with p-value .000. All the p values are less than .05, thus significant.

Table 6. Difference in the level of practice of the residents in the barangay before and after the implementation of RA 9003 on source reduction, segregation, and processing

|  | Mean | SD  | df | t ratio | p value | Interpretation |
|--|------|-----|----|---------|---------|----------------|
| Source Reduction (after) - Source Reduction (before) | 1.43 | .91 | 23 | 7.756   | .000    | Significant    |
| Segregation (after) - Segregation (before)           | .45  | .89 | 23 | 2.501   | .020    | Significant    |
| Processing (after) - Processing (before)             | .76  | .68 | 23 | 5.481   | .000    | Significant    |

$\alpha < 0.05$  level of significance

## Difference in the Extent of Impact of the Implementation of RA 9003 on Processing Before and After the Conduct of the Study

Data in table 7 show a significant difference in both economic and values impact of the implementation of RA 9003 on processing before and after the conduct of the study where p-value for economic impact is .000 and that for values impact p=.010 where both p values are less than .05, thus significant.

Table 7. Difference in the extent of impact of the implementation of RA 9003 on processing before and after the conduct of the study

|  | Mean | SD  | df | t ratio | p value | Interpretation |
|--|------|-----|----|---------|---------|----------------|
| Economic Impact (after) - Economic Impact (before) | 1.49 | .94 | 23 | 7.754   | .000    | Significant    |
| Values Impact (after) - Values Impact (before)     | .51  | .90 | 23 | 2.799   | .010    | Significant    |

$\alpha < 0.05$  level of significance

## CONCLUSIONS

1. The findings of the study imply, that before the conduct of the study, the residents in the barangay had their way of practicing RA 9003 as to source reduction, segregation, and processing, however not to the highest level yet.
2. The conduct of the study in the barangay has improved the level of practice of the residents on RA 9003 as to source reduction, segregation, and processing.
3. The implementation of RA 9003 on processing has already impacted the residents before the conduct of the study but not to the greatest extent.
4. The conduct of the study has improved the impact of the implementation of RA 9003 on processing to the residents in the barangay, reaching the greatest extent.

## Contribution of the Study

This study has extended green technology "RA 9003-Comprehensive Solid Waste Management Program" on source reduction, segregation and processing that has improved the level of practice of the residents in the Barangay San Miguel, Buenavista, Guimaras as to the implementation of the said Act. Further, it has improved the impact of the implementation as to processing to the residents.

- provided scientific data to the Local Government leaders as to how their residents practice RA 9003 being a mandate to them.
- provided opportunity to the Guimaras State College to transfer green technology to the barangay as initiative in the realization of its vision to be a "center of green technology generation".
- developed the researchers of this study to be instruments in the preservation of the Mother Earth through research.
- provided literature as a reference for other Local Government Units to assess the level of practice of their residents and the impact of the implementation of RA 9003 and for other researchers to conduct environmental research.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations are given:

The barangay officials to impose local ordinances for the implementation and sustainability of RA 9003 practices in the whole barangay, Guimaras State College through its extension program to conduct regular monitoring and evaluation of the practices of the residents for sustainability of segregation and further improvement on source reduction and processing to achieve the highest level. Guimaras State College to transfer green technology to the community for best outcomes of its vision as the "center of green technology generation". For the barangay officials to strengthen linkages with different local, national, and international sectors/organization for support in its RA 9003 program sustainability. Conduct of this study in other non-pilot barangays in the Municipality of Buenavista or even in the island of Guimaras.

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