

EXECUTIVE SUMMARY

Title:	Factors Associated with the Compliance to Ecological Solid Waste Management Act of 2000 (RA 9003) of Inland Resort Establishments in the Province of Iloilo Inputs to Policy Enhancement
Total Number of Pages:	149
Researcher:	Tadema B. FormarejoTADEMA
Degree Program:	Doctor of Management (Tourism and Hospitality Management)
Institution:	Central Philippine University Jaro, Iloilo City Region VI

Background and Rationale of the Study

Solid waste is one of the most urgent problems affecting our society, and it is the consequence of all human activity. Due to various improper solid waste disposal, it ultimately destroys our environment and natural resources (Fernandez, 2018). The global community has recognized that solid waste management is a critical issue that has to be addressed (Castillo & Otoma, 2013). Because of improper waste disposal, several significant issues such as pollution, degradation of the natural, and ozone layer damage posed a serious threat to public health (Bagolong, 2016). Managing these solid wastes becomes necessary if we are to save the planet before it is too late for everyone to act.

According to Vivar, et al., (2015), a wide range of human activities contributes to waste generation, and if these waste products are not disposed of properly and in the appropriate place, they will pose a serious damage to people and the environment. Solid waste management is critical to the preservation of life and the environment. The worsening problem of solid waste dumping is linked by experts to the increasing human

population and rapid industrialization (Atienza, 2008 cited in Barloa, Lapie & de la Cruz, 2016). Wastes and waste, if not disposed properly, present a serious threat to public health, sanitation, and environmental security (Magante, 2013).

The Philippine legislative bodies enacted RA 9003, the Ecological Solid Waste Management Act of 2000, to address this environmental concern. This Act establishes a framework for an ecological solid waste program that ensures proper waste segregation, collection, transport, treatment, and disposal. Solid waste management is a form of waste control that involves storing, collecting, transporting, processing, and disposing of solid waste in accordance with all relevant laws, public health, economics, and other factors. As stated in the RA 7160, also known as the Local Government Code of 1991, the implementation and enforcement of the Act's provisions is delegated to the Local Government Units (LGUs) within their respective jurisdictions (Geguinto, 2017).

Despite the policies in place, poorly managed systems are still prevalent, as seen by the utilization of open landfills and dumpsites. This is due to a lack of public awareness, a lack of stakeholder participation, and a lack of policy implementation (Galarpe & Heyasa, 2017). Another example is garbage burning in the backyard, which is dangerous to human health and has a bad impact on the environment, particularly the ozone layer. The indiscriminate waste disposal anywhere is also a serious threat to global health, sanitation, and environmental sustainability. The biggest challenge for growing LGUs, according to Torres, a field engineer in Bayawan City, is to come up with solid waste and pollution control strategies that properly reduce garbage dumped into the environment. However, LGUs cannot effectively address this problem on their own; to properly implement solid waste and pollution control programs, they must combine their technical and engineering expertise, regulatory and enforcement capabilities, and public education, awareness, and involvement campaigns. He further said that a decent solid waste and pollution control strategy would never be effective until it is fully

implemented, accepted, and institutionalized by the people and institutions, which requires strong political will, not just brilliant engineering and slogans.

Inland resorts, one of the major components of the tourism industry, are absolutely dependent on nature and resources because they consume a significant amount of resources on a regular basis, which has a negative impact on the environment if wastes generated by their operations are not properly managed. The most serious problem with solid waste is plastic pollution, which is anticipated to worsen in the future and become the principal component of bodies of water around the world, displacing fish and other marine life. One of the most serious challenges among the inland resorts in the Province of Iloilo is compliance with RA 9003.

Compliance with government regulations and policies is associated with an individual's or organizations internal capacities (inland resorts) along with external environmental influences that link the individual and society. Certain factors have an effect on their compliance or noncompliance with this law. Identifying these factors makes for a greater understanding of what drives their compliance with solid waste management, allowing for the improvement of environmental regulations and measures that will result in greater compliance for environmental sustainability and human welfare (Dao, 2008).

On this assumption, the researcher conducted a study on the factors that influence inland resort establishments' compliance with SWM in the province of Iloilo. This research has looked into the factors that determine resorts' compliance with solid waste management policies. The findings and findings of this study will be used to enhance tourism policy in the province of Iloilo.

General Objective

This study determined the factors associated with the compliance to Ecological Solid Waste Management Act of 2000 (RA 9003) of the inland resort establishments in the Province of Iloilo.

Specific Objectives

1. Determine the profile of inland resort establishments in the Province of Iloilo in terms of enterprise classification, resort classification, length of business operation, number of rooms, number of employees, and number of recreational facilities.
2. Describe the level of awareness of employees of inland resort establishments in the Province of Iloilo about RA 9003 when classified according to the profile of the inland resorts establishments.
3. Determine the extent of public participation of the inland resort establishments in the Province of Iloilo to RA 9003 when classified according to the profile of the inland resorts establishments.
4. Determine the level of available resources of the inland resorts establishments in the Province of Iloilo in compliance to RA 9003 when classified according to the profile of the inland resorts establishments.
5. Determine the extent of enforcement of the inland resort establishments in the Province of Iloilo when classified according to the profile of the inland resorts establishments.
6. Determine the extent of compliance with RA 9003 when classified according to enterprise classification.
7. Determine if there is a significant association between awareness and the profile of the inland resort establishments in the Province of Iloilo.

8. Determine if there is a significant association between public participation and profile of the inland resort establishments in the Province of Iloilo.
9. Determine if there is a significant association between the available resources and profile of the inland resort establishments in the Province of Iloilo.
10. Determine if there is a significant association between enforcement of the law and profile of the inland resorts establishments in the Province of Iloilo.
11. Determine if there is a significant association between awareness and compliance with RA 9003 when classified according to enterprise classification.
12. Determine if there is a significant association between public participation and compliance with RA 9003 when classified according to enterprise classification.
13. Determine if there is a significant association between available resources and compliance with RA 9003 when classified according to enterprise classification.
14. Determine if there is a significant association between enforcement and compliance with the Ecological Solid Waste Management Act of 2000 (RA 9003) when classified according to enterprise classification.
15. Determine whether a significant correlation exists between level of awareness, extent of public participation, level of available resources and extent of enforcement of RA 9003.
16. Determine the reasons for compliance and non-compliance with RA 9003 of the inland resort establishments in the Province of Iloilo.
17. Determine what inputs can be provided for the enhancement of policies of the LGUs in the implementation of RA 9003 among the tourism industries in the Province of Iloilo.

Hypotheses of the Study

- H_o1. There is no significant association between awareness and profile of inland resort establishments in the Province of Iloilo.
- H_a1. There is a significant association between awareness and profile of inland resort establishments in the Province of Iloilo.
- H_o2. There is no significant association between public participation and profile of the inland resort establishments in the Province of Iloilo.
- H_a2. There is a significant association between public participation and profile of the inland resort establishments in the Province of Iloilo.
- H_o3. There is no significant association between the available resources and profile of inland resort establishments in the Province of Iloilo.
- H_a3. There is a significant association between the available resources and profile of inland resort establishments in the Province of Iloilo.
- H_o4. There is no significant association between enforcement and profile of inland resort establishments in the Province of Iloilo.
- H_a4. There is a significant association between enforcement and profile of inland resort establishments in the Province of Iloilo.
- H_o5. There is no significant association between awareness and compliance with RA 9003 when classified according to enterprise classification.
- H_a5. There is a significant association between awareness and compliance with RA 9003 when classified according to enterprise classification.
- H_o6. There is no significant association between public participation and compliance with RA 9003 when classified according to enterprise classification.
- H_a6. There is a significant association between public participation and compliance with RA 9003 when classified according to enterprise classification.
- H_o7. There is no significant association between the available resources and

compliance with RA 9003 when classified according to enterprise classification.

H_a7. There is a significant association between the available resources and compliance with RA 9003 when classified according to enterprise classification.

H_o8. There is no significant association between enforcement and compliance with RA 9003 when classified according to enterprise classification.

H_a8. There is a significant association between enforcement and compliance with RA 9003 when classified according to enterprise classification.

H_o9. There is no significant correlation that exists between the level of awareness, extent of public participation, level of available resources, and extent of enforcement of RA 9003.

H_a9. There is a significant correlation that exists between the level of awareness, extent of public participation, level of available resources, and extent of enforcement of RA 9003.

Research Design

This is a correlational research that determined the factors associated with the compliance to RA 9003 of the inland resorts in the province of Iloilo. A survey questionnaire and checklist was used to gather data from the inland resorts identified in the province of Iloilo. Content analysis was done on the Implementing Rules and Regulations of RA 9003 or the Ecological Solid Waste Management Act of 2000 and other related policies. Total enumeration technique was used in identifying the respondents for this study.

Respondents of the Study

The managers/owners and employees of inland resort establishments in the province of Iloilo were the study's respondents. All the managers/owners of target establishments were included in the study while the number of employees taken from

each establishments was determined by the number of employees at the resort. For resorts with fewer than nine employees, two to three respondents were randomly selected while for resorts with ten or more employees, five to eight respondents were randomly selected. The questionnaires were distributed to about 34 inland resorts, but only 23 were able to answer and returned them before the Covid 19 lockdown in March. A total of 118 respondents from the 23 inland resorts have successfully returned the survey forms out of the 272 target respondents which is about 43 percent of the total population.

Validity and Reliability of the Research Instrument

The strength of our conclusions, inferences, or statements is referred to as validity, when it measures what it is supposed to measure. A panel of experts in the areas of research, the resort industry, and environmental management was approached to evaluate the survey instrument. The jurors' comments and suggestions, particularly on technical terms related to RA 9003 was considered in the finalization of the survey instrument.

After the validity of the survey instrument was established, it was pilot tested in the three resorts in Antique (Dalaag Resort, Puntahagdan Resort and Orr Resort). Gathered data were tallied and subjected to statistical analysis and was verified with a reliability coefficient of .881 using Cronbach alpha. According to Pallant (2010 as referenced by Biton, 2018), the result of the reliability coefficient of at least 0.70 is deemed reliable.

The survey instrument was subjected to expert validity test by panel of experts composed of DENR- EMB Region 6 Solid Waste Management Specialist, research director/ research professor, resort manager, and head of the office of Provincial Culture,

Arts, History, and Tourism and solid waste management director. Results of the validity tests were incorporated in the revision of the instrument.

Plagiarism Test and Ethics Review

The researcher submitted the manuscript for plagiarism test to the Review and Continuing Education and consultancy Center (RCECC) as well as to the Ethics Review Board of the university for approval prior to the conduct of data gathering.

Data Gathering Procedure

To facilitate the data gathering among the inland resort establishments, assistance from the Office of Provincial Culture, Arts, History, and Tourism was secured especially in the distribution and collection of the questionnaires to 34 inland resorts. Informed consent form was attached to the questionnaire and an instruction about respondents' participation in the survey was included in the questionnaire. There were eleven (11) inland resorts not able to participate due lockdown, strict health protocols and travel restrictions during the heights of the pandemic.

Data Processing Technique

The filled-out questionnaire were collected, reviewed as to completeness and accuracy of responses, tabulated, and summarized using a Statistical Package for social Sciences Ver.16 (SPSS V16). Frequencies and central tendencies were generated to describe the demographic profile of the resorts. Ranks and percentages were used to determine the reasons for compliance and non-compliance of the inland resorts with RA 9003. Cross tabulation was used to determine the level of awareness, extent of public participation, level of available resources, extent of enforcement and extent of compliance with RA 9003. Gamma coefficient set at 95% level of confidence was used to determine if significant association exist among variables and correlation test was

used to determine if a significant correlation exist between compliance and awareness, public participation, available resources and enforcement. Regression test was used to determine the contribution of the level of awareness, public participation, available resources, and enforcement of RA 9003 as predictors of compliance to RA 9003.

Major Findings

1. The majority of the inland resorts in the province of Iloilo were micro enterprises with 1 to 9 employees, less than 10 rooms, and two recreational facilities that had been operating for less than 5 years without DOT accreditation.
2. The inland resorts in the Province of Iloilo are fully aware of RA 9003 especially those that belong to Class AAA and Class AA inland resorts, have been operating for 5 to 10 years, with less than 10 rooms, 1 to 9 employees, and with 2 and 1 recreational facilities.
3. There is a high (always) extent of public participation to the programs and activities related to RA 9003 especially the micro enterprise, Class AAA, resorts operating for less than five years to more than 10 years, those with less than 10 rooms, with less number and with 2 recreational facilities.
4. Inland resorts in the province of Iloilo have a high level of availability of resources (Almost always) especially those the Class AA and Class A, those operating for 5 years to more than 10 years, with less than 10 rooms, 1 to 9 employees, and 1 recreational facility.
5. There is a high extent (totally enforced) of enforcement of RA 9003 among the inland resorts in the province of Iloilo, large majority of small enterprise inland resorts, Class AA and Class A, those operating for more than 10 years, with less than 10 rooms, with 1 to 9 employees and with 2 recreational facilities.

6. There is a high level (always) of compliance with RA 9003 as evidenced by the very high ratings, especially from the small-sized inland resorts.
7. Their level of awareness of RA 9003 is significantly and strongly associated with their DOT resort classification but not on enterprise classification, length of business operation, number of rooms, number of employees and number of recreational facilities are not significantly associated with the awareness of inland resorts to RA 9003.
8. When grouped according to profile, significant association exist between public participation and enterprise classification (weak, negative), number of rooms (weak, positive), number of employees (moderate, negative) and number of recreational facilities (negligible, negative). Though, it is not significantly associated with resort classification and length of business operation.
9. Significant association exist between available resources and length of business operation (weak, positive), number of rooms (negligible, negative), and the number of recreational facilities (negligible, negative) when grouped according to their profile. However, no significant association exist between the level of available resources and enterprise classification, resort classification, and number of employees.
10. Significant association exist between enforcement and resort classification (negligible, negative), length of business operation (negligible, positive), number of rooms (negligible, negative), and number of recreational facilities (weak, negative) but not significantly associated with enterprise classification and number of employees.
11. Awareness is strongly correlated with public participation and the correlation between them is significant and positive. However, awareness is moderately correlated with available resources and enforcement and the correlation between them is significant and positive. Public participation is strongly correlated with

- available resources and enforcement and the correlation that exist between them is significant and positive. Available resources is strongly correlated with enforcement and there is a significant and positive correlation that exist between them.
12. Among the four independent variables, only the availability of resources was found to be significantly and positively associated with the extent of compliance to RA 9003, though their association is negligible. No association between the level of awareness and extent of compliance, between extent of public participation and extent of compliance, between level of enforcement and extent of compliance. Findings also revealed that the level of awareness, extent of public participation, availability of resources and extent of enforcement are not good predictors of the extent of compliance to RA 9003.
13. Among the major reasons for the high extent of compliance of inland resorts to RA 9003 are the ability of the inland resorts to sustain and support the solid waste management programs of the resort, the pro-active resort manager to implement the provisions of RA 9003, the strong public support and participation among employees, guests and customers in the activities related to waste management. On the other hand, the strict implementation of "No open-burning, open dumping, throwing, littering and burying of biodegradable and non-biodegradable materials in flood-prone areas, availability of sanitary landfills as disposal sites provided by the LGU, the trainings provided for sustainable solid waste management program and implementation in the barangay are the major reasons attributable to the efforts of the community that contributes to the high extent of compliance of inland resorts to RA 9003. Findings also revealed some of the least reasons for their compliance to RA 9003 such as the availability of solid waste management taskforce/enforcers to properly enforce and monitor the implementation of RA 9003, availability of training and education and awareness campaigns on the implementation of solid waste

management, technical and financial support of the government for the waste management program and implementation. Conversely, the reasonable garbage collection fees of the inland resorts, community orientation on solid waste management ordinances and programs in the barangay, and the incentives given to those who comply with best practices on solid waste management are some of the least reasons for the compliance to RA 9003 of the inland resorts resulting from the community efforts.

Conclusions

The inland resorts in the province of Iloilo are mostly micro enterprises with 1 to 9 employees, with less than 10 rooms and two recreational facilities that had been operating for less than 5 years. Most of them are without DOT accreditation and for those with DOT accreditation, mostly are Double AA accreditation while very few have Triple A accreditation, the highest accreditation level wherein the establishment is expected to comply with all the requirements of RA 9003 considering that they have the capacity to provide the necessary resources for complying with the law.

The level of awareness of RA 9003 was found to be statistically associated with resort DOT accreditation so this findings is an evidence that the null hypothesis in this regard can be rejected. It appears that those with higher accreditation have higher level of awareness on RA 9003. High extent of participation in programs and activities is statistically associated to enterprise classification, number of rooms, number of employees and number of recreational facilities. These finding is consistent with the findings on the level of awareness, which is those who have high level of awareness have are also with high public participation on the programs and activities related to solid waste management. It appear that generally, these establishments have very good appreciation of the law and that they are implementing it in their workplaces. If there are

areas that needs attention from policy implementers, this study pointed out that although generally there is high extent of public participation it is more observable among medium enterprises with more than 10 rooms and employees with 3 recreational facilities and the Class AAA and Class AA. Those that do not belong to these groups such as micro and small-sized enterprises with less than 10 rooms and less than 3 recreational facilities, may need more encouragement to enhance their participation and may need specific enhancement program that suit their needs and capacities.

Generally, a very high extent of enforcement of RA 9003 was reported by the inland resorts and that it is statistically associated with resort classification, length of business operation, number of rooms and number of recreational facilities. It shows that the medium-sized inland resorts have low extent of enforcement of solid waste management law as compared to micro and medium-sized resorts.

The extent of compliance with the solid waste management law is generally high but particularly, micro enterprises obtained the lowest ratings so this group again may need more attention from policy implementers to enhance their compliance to RA 9003.

A high level of awareness among the inland resorts to RA 9003 indicated their full awareness of RA 9003 and the importance of managing solid waste to the lives of people and that LGUs are responsible in the implementation and monitoring compliance with the law particularly the segregation of waste at source the biodegradables, recyclables, residuals and special wastes. However, the least rating was indicated on the incentives given to establishments compliant to solid waste management law.

The high extent of public participation to the programs and activities related to compliance to RA 9003 is observed in almost all categories of inland resorts. However, creating new opportunities for a meaningful engagement among the different sectors will encourage better participation of people in the community particularly in waste minimization.

Resort classification of inland resorts is strongly associated with their level of awareness. Public participation of inland resorts to the programs and activities related to compliance to RA 9003 is negatively associated with enterprise classification where better participation were found among micro enterprise resorts, number of rooms where higher extent of participation were found among inland resorts with lesser number of employees and lesser number of recreational facilities.

The number of rooms and number of recreational facilities are negatively associated with available resources however, it is positively associated with the length of business operation where inland resorts operating for a longer time has better provision of needed resources to comply with RA 9003.

Resort classification, number of rooms and number of recreational facilities are negatively associated with enforcement however is positively associated with the length of business operation. Majority of Inland resorts operating for a longer period indicated that RA 9003 is totally enforced.

Higher level of available resources and the very high extent of enforcement of RA 9003 results to a very high extent of compliance of inland resorts to RA 9003. Higher level of awareness to RA 9003, higher level of available resources and higher extent of enforcement of RA 9003 encourages better extent of participation among the inland resorts to the programs and activities related to compliance to RA 9003.

Higher level of awareness to RA 9003, better provision of available resources and higher extent of enforcement encourages better extent of public participation to the programs and activities related to compliance to RA 9003. While better awareness of the law influences better provision available resources in order to comply with RA 9003. However, higher extent of enforcement of RA 9003 enhances the level of awareness of the people to RA 9003 also it encourages better provision of needed resources to comply with the law being enforced among them.

The high compliance of inland resorts to RA 9003 can be attributed the ability of the resorts to sustain and support the solid waste management programs of the resort (Available Resources), pro-active resort manager to implement the provisions of RA 9003 (Enforcement), and strong public support and participation among employees, guests and customers in the activities related to waste management (public participation). On the other hand, the strict implementation of no open-burning, open dumping, throwing, littering and burying of biodegradable and non-biodegradable materials in flood-prone areas (enforcement), availability of sanitary landfills as disposal sites provided by the LGU (available resources), and the trainings provided for sustainable solid waste management program and implementation in the barangay (awareness).

Recommendations

Based on the findings and conclusions above, the following are recommended:

1. Strengthen the resorts and hotels accreditation system to encourage more inland resorts, particularly those without DOT accreditation, as well as other tourism-related industries, to submit for accreditation and comply with RA 9593, the Tourism Act of 2009.
2. Sustain inland resorts' high level of awareness of RA 9003 by conducting regular and consistent awareness campaigns about the law's mandatory requirements to promote a better understanding of the law and participation among people in order to comply with the solid waste management law.
3. Inland resorts with 10 to 20 rooms with ten or more employees, Class AAA, Class AA and with three recreational facilities that only get a high extent of public participation are suggested to participate more actively in the programs and activities connected to compliance with RA 9003.

4. It is also recommended that medium enterprise inland resorts, Class AAA, those operating for less than 5 years with 10 to 20 rooms and 3 and 4 recreational facilities with only a moderate level of available resources provide the necessary budget for the allocation of needed resources to comply with RA 9003.
5. Medium enterprise inland resorts that indicated a low extent of enforcement of RA 9003 are recommended to strictly enforce the law and other ordinances implemented that supports for the compliance to RA 9003.
6. Maintain the high degree of compliance with RA 9003 in the province of Iloilo's inland resorts, and encourage those classified as micro enterprises to make every effort to improve their compliance with the solid waste management law and catch up to the rest of the categories.
7. Information Education Campaigns (IEC) on the provisions and mandatory requirements of RA 9003 must be strengthened in order to maintain and improve the level of awareness of RA 9003 among the various categories of inland resorts, to remind them of the law's key features and emphasize the corresponding penalties for violators and incentives provided for those who abide by the law.
8. To encourage active and full participation and involvement among medium enterprise inland resorts and those with more than 10 employees and a higher number of recreational facilities which recorded lower ratings than the rest of the categories, it is recommended that creation of meaningful opportunities for engagement among them must be designed to promote cooperation and higher level of participation of people particularly on waste minimization in order to address the growing problem on plastic wastes which was identified with the lowest rating in their participation particularly in the practice and promotional campaign against single use plastic and Styrofoam in all their activities and operations.

9. Given the significant relationship between available resources and the number of rooms and recreational facilities at inland resorts, it is suggested that inland resorts with more rooms and more recreational facilities to improve their provision of resources supplementary to the allocation of budget for the implementation and maintenance of solid waste management programs and activities and providing properly labelled segregated waste bins and storage areas. It is also suggested to provide recycling facilities and opportunities for recycling activities for livelihood and use in the community.
10. It is suggested that micro enterprise inland resorts, Class AAA, and those with three recreational facilities that have partially enforced RA 9003 to enhance and intensify their enforcement efforts on all of the mandatory provisions of RA 9003 particularly on the strict enforcement of waste segregation at source and total observance of “no littering, no throwing, no dumping of wastes in public areas, strictly prohibit the open burning of wastes and designating a regular solid waste management taskforce to monitor and implement solid waste management policies in the community.
11. Because of the significant relationship between available resources and compliance and enforcement, inland resorts should always provide these resources, especially in the form of funding, technology, facilities, skilled manpower and network of buyers for recyclable materials and recycle items, which has a significant impact on the extent of compliance to the inland resorts' solid waste management activities.
12. Given that public participation is strongly correlated with awareness, available resources, and enforcement, it is suggested that public awareness about the law be done on a regular basis to keep people reminded and improve their understanding of the solid waste management law, that resources needed for compliance with the law be made available at all times, and that enforcement be intensified to ensure that people's public participation is improved.

13. Given the moderate correlation between awareness and available resources, as well as between enforcement and awareness, it is recommended that IEC efforts be sustained and intensified to encourage a high level of available resources and a high level of enforcement of RA 9003 in order to improve the extent of compliance with RA 9003 and achieve a zero waste lifestyle.
14. It is strongly recommended that all provisions, particularly the mandatory requirements of RA 9003, be strictly enforced in order to stimulate better provision of necessary resources to comply with RA 9003, as available resources are directly related to enforcement. Conversely, stringent enforcement of RA 9003 will compel the inland resorts to provide at least the minimum requirements for compliance to the law.
15. Because not all of the survey instruments were collected, which has a substantial impact on the outcomes of this study due to the pandemic, it is highly suggested that a study on determining other factors in addition to the variables included in this study in relation to the compliance to RA 9003 be conducted to advance current knowledge about this phenomenon.