
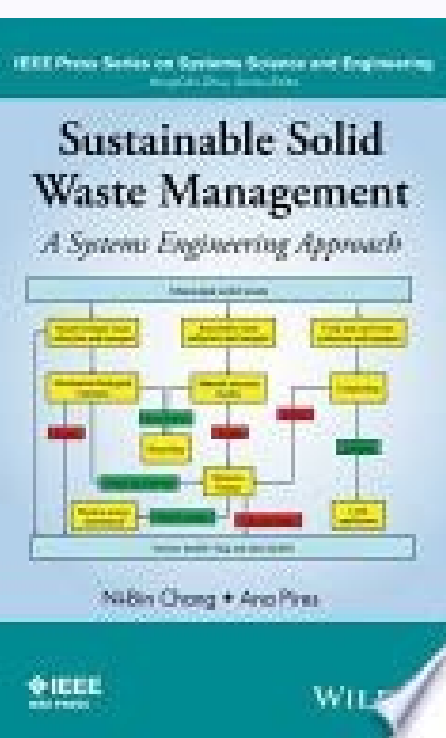


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Institutional Arrangements for Solid Waste Management in Cebu City, Philippines

Rio C. Anco¹, Nestor D. Archival² and Carmelita M. Rebancos³

ABSTRACT

The formulated solid waste management strategies in the highly urbanized Cebu City in Central Philippines was set to directly target identified waste concerns to fully maximize limited resources. Based on Friedman test conducted to evaluate differences of the solid waste generation in years 2007-2009, no statistically significant reduction effects of the prior solid waste ordinances and strategies implemented in 1990 and 2004 was found (p -value=0.431 < α =5%). It was realized that programs implemented must provide economic incentives to fully impress upon constituents that waste is a resource. A coordinated enforcement scheme through the formation of the Cebu Environmental Sanitation Enforcement Team (CESET) of the city government in partnership with the community and civil society and along with the creation of special environmental courts have resulted for the enforcement measures to take effect. Forging strategic partnerships arrangements with both local and international groups to help advance city waste management was deemed important particularly on the aspects solid waste management capability trainings, landfill facility improvement, waste to energy project implementation as well as on the procurement of waste management equipments. In a decentralized environmental management common among many developing countries, harnessing various institutional arrangements to enhance participation and cooperation among stakeholders could be found useful to enhance local government units' capacity to provide basic public services while also achieving environmental targets.

Key words: institutional arrangements, solid waste management, Cebu City

INTRODUCTION

The type of institutions present in a local government unit and the various arrangements between and among them critical to the realization of a sustainable solid waste management program. Institutions refer to conventions, norms and legal rules of a society that provide expectations, stability and meaning essential for coordination that in turn regularize life, support values and protect and produce interests (Vatn 2005). Hagedorn (2002) related that institutional arrangements geared toward co-ordination would arise depending on the features and implications of transactions related to nature and the ecosystem. Applied in the context of the local commons, Ostrom (1990) explained that institutional arrangement is essentially both the formal and informal rules influencing human behavior and could be categorized into three levels such as operational rules, collective choice rules, and constitutional choice rules. While operational and collective choice rules pertain to day to day rules made by resource users, and the rules used by users and external agents, respectively, constitutional choice rules determine eligibility to participate in the system and in setting rules for collective choice rules (Ostrom 1990).

Various institutional approaches for various facets of solid waste management could be employed to ensure sustainability. Solid waste management includes collection, transfer, recycling and disposal of solid wastes (Cointreau-Levine 1994, Ogo 2000). Institutional arrangements specific to solid waste management in a local government unit could be between and among key actors that include the local

government, the community, and the private sector, which could generally be categorized to fall under legal, regulatory and financing components (Figure 1).

The challenges of effective solid waste management are exacerbated with the growing urbanization (Ahmed and Ali 2004). Now with the decentralization of the management of environmental resources to local government units in the Philippines, the need for innovative approaches is pressing given some financial resources limitations. However, with the enactment of the Ecological Solid Waste Management Act (RA 9003) that sets the guidelines on solid waste avoidance and volume reduction, local government units remain uncertain particularly with regard to enforcement and financing of solid waste management program (Samalde 2003).

This paper aimed to present the specific case of Cebu City in its efforts to address the waste issues and concerns at all levels. Cebu City is a leading city in the Philippines attributed largely to being the gateway to central and southern parts of the country and having gained the prestige of being a top tourist destination in Southeast Asia. With its rich natural endowments coupled with its colorful historical background, it has achieved and maintained a vibrant economy resulting it to be recognized as a highly urbanized city in the Philippines. The city, however, is confronted with soaring population that aggravates the generation of solid wastes, thus, posing a challenge on its management.

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School-Based Solid Waste Management Initiative in the Philippines: Lessons and Experiences of the Toyota Auto Parts and Sta. Rosa City Partnership

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Abstract

Through the collaboration of multiple sectors, a four-year project on school-based solid waste management is initiated in the city of Sta. Rosa in Laguna. This paper synthesizes the experiences of the students, teachers, and school administrators during their solid waste management program development and implementation. Using document reviews, focus group discussions, and key informant interviews, the study's goal is to draw out the lessons learned and identify the best practices from the first batch of participating high schools. The program's success relies on the collaboration of both public and private sectors of the community. Within the school, the participation of the student body, faculty, and administration is critical in achieving an effective solid waste management program. It is essential for all stakeholders to be actively involved. This will ensure that the next batches of schools will achieve sustainability in their respective solid waste management programs.

Introduction

The Philippine government drew up a decree to further the environmental cause. On July 24, 2000, the Philippine Congress enacted RA 9003 or the Ecological Solid Waste Management Act. This Act provides for an ecological solid waste management program, creating the necessary institutional mechanisms and incentives, declaring certain acts prohibited and providing penalties, appropriating funds thereof, and for other purposes." This Act mandated the Department of Education (DepEd), the Technical Education and Skills Development Authority (TESDA), the Commission on Higher Education (CHED), the Department of Environment and Natural Resources (DENR), and other concerned government agencies to "incorporate ecological solid waste management in the school system at all levels" (RA 9003, 2000).

This trend towards enlisting educational institutions had been taken up by private organizations after the National Solid Waste Management Commission (NSWMC) established a comprehensive approach in "Mainstreaming Ecological Solid Waste Management in the Philippine Educational System Project." Through the implementation of the DENR, the project sought to enhance the capacity of students' waste management through an Ecological Solid Waste Management Training Program. The NSWMC-Secretariat developed the Trainers' Training Program not only to instruct

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Usually, you can have it for a week, but you can make special arrangements too. A dumpster bag is smaller in size, ideal for home renovation or clean-out projects. Look for a "contact us" web page that provides the physical location and telephone number. Waste management benefits are many, especially when you have a specific type of waste to manage. Waste Management Benefits Convenience might be the biggest benefit that awaits you with hiring of a waste management service. If you're a business owner, you can forget about having trash accumulate around your space. Both homeowners and business owners can have reasons for contacting and hiring a waste management service. These bags will have a set capacity, and the company will drop it off and pick it up for you. It is composed of 17 Commission members, fourteen representatives from government agencies and three representatives from the private sector. Businesses and residences receiving curbside trash pickup can usually go to the waste management company's website to learn about pickup days and times. Be aware of limitations for what you can put in these dumpster bags. It's usually prohibited to throw away electronics, appliances, tires, toxic waste and food in them. Medical Waste Management Those accumulating medical waste can set up medical waste collection services to handle biohazardous, pharmaceutical, chemotherapy, pathological and hazardous waste. You might also find an email address or even a chat feature on the website, which you can use to reach out to get information about trash collection services. Be sure to check about special pickup days for recycling and oversized items. Pickup trash schedules may change for holidays and if inclement weather occurs, so double-check schedules if you're not sure. Waste Management Bag Dumpster Request If you have large amount of trash and need a special bag or dumpster, you can usually order rental by phone or online. Dumpster sizes and prices will vary, but you should be able to find both 20- and 30-cubic-yard ones. The company will deliver the dumpster to you and pick it up. Not only would it use your precious time to manage this trash, you risk putting off your customers if you allow it to build up. Chaired by the Department of Environment and Natural Resources (DENR), the Commission will prescribe policies to effectively achieve the objectives of RA 9003. MORE FROM QUESTIONSANSWERED.NET The National Solid Waste Management Commission (NSWMC) is the major agency tasked to implement Republic Act 9003, the Ecological Solid Waste Management Act of 2000. The law, signed in January 26, 2001, calls for the institutionalization of a national program that will manage the control, transfer, transport, processing and disposal of solid waste in the country. The Commission is also ordered to establish the National Ecology Center which will serve as the depot of information, research, database, training, and networking services for the implementation of the provisions of the solid waste management act. Hiring a waste management service relieves you of this responsibility, so you can focus on more important things. If you're a homeowner planning a remodeling project or a big cleaning job, you're going to need to do something with the waste that results. It will oversee the implementation of appropriate solid waste management plans by end-users and local governments as mandated by law. Waste management companies are equipped to handle waste collection from both small and large facilities. Finding a Waste Management Contact Number The easiest way to find a contact number for a waste management services is to use an internet search engine to find the company's website. NATIONAL ECOLOGY CENTER (NEC) The Implementing Rules and Regulations of RA 9003 prescribes the Roles of the National and Regional Ecology Centers which are: to provide technical expertise, information, training and networking services for the implementation of the provisions of the Act, facilitate training and education in integrated ecological solid waste management, establish and manage a comprehensive solid waste management information data base and dissemination system, promote the development of a recycling market through the establishment of a national recycling network that will enhance the opportunity for recycling, act as the hub for networking of LGUs, NGOs and industry on voluntary compliance of the pertinent provisions of the Act, provide or facilitate expert assistance in pilot modeling of solid waste management facilities including technologies and techniques for effective solid waste management, as well as develop, test and disseminate model waste minimization and reduction auditing procedures for evaluation options and act as the clearinghouse for cleaner production/cleaner technologies on solid waste management. The dumpster size will determine the weight of the trash for disposal, but you should be able to pay for extra tonnage if necessary. Instead of taking care of it yourself, call a waste management service to haul it away for you. Your waste management service will have a trash schedule that you'll need to know so you can plan accordingly.

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