

Solid Waste Management Practices of Households in the University of Eastern Philippines

Dr. Cherry I. Ultra
Faculty, College of Education

Prof. Allan A. Ultra
Faculty, College of Agriculture
University of Eastern Philippines, University Town, Northern Samar
Email: cherryultra@yhao.com

Rationale

The University of Eastern Philippines (UEP) campus is located 3 kilometers east of the capital town of Catarman and occupies an area of 419 hectares. A total of 63.8 hectares is its residential area, where its faculty, employees & students mostly reside with an estimated population of 7,000. Considered a University town, it consists of three distinct barangays, namely: Barangay Zone I, Zone II, and Zone III. The population in the university campus is growing and it does not have a sanitary landfill to dispose the garbage properly. Thus, residents has to resort to dumping their wastes in an open dumpsite, which is located in Catarman, Northren Samar.

The current situation of the solid waste management system in the three barangays of the University of Eastern Philippines is at a critical stage. At present, available equipment is not enough to collect all the wastes from the source to the disposal sites. There are areas where the garbage trucks cannot be accessed and the waste materials are merely dumped, spread, and left exposed to the environment. The main problem in solid waste management in the three barangays of the University of Eastern Philippines is the lack of ample attention posed by the local government in addressing the waste management problem. The study presented the solid waste management practices of households in the University of Eastern Philippines and identified the problems and solutions related to solid waste management.

REVIEW OF LITERATURE

Solid waste means garbage, refuse, and other discarded materials including, but not limited to, solid and liquid waste materials resulting from industrial, commercial, agricultural and residential activities (Mantell, 1975). On the other hand, Firth et al, (1995) defined “solid wastes as all wastes arising from human and animal activities that are normally solid and are discarded as useless or unwanted”. Technically, solid wastes are defined as “all organic and inorganic non-liquid, and non-gaseous portions of the total waste mass”. These definitions cover all wastes from the heterogeneous accumulations of agricultural, industrial and mineral wastes. Moreover, solid waste is defined as “matter in the wrong place” implying that a material becomes waste only when one ceases to have a use for it.

Solid wastes can be classified according to their sources: 1) municipal or household wastes at the home level; 2) commercial or industrial wastes from restaurants, factories, and markets; 3) farm and agricultural wastes from poultry, piggery, other animal manure, and stems.; 4) institutional wastes from hospitals, schools, churches, and prisons; and 5) others such as street sweepings, demolitions, and constructions (Firth, et al., 1995).

The study conducted by Chung and Poon (1996) on the attitudinal differences in source separation and waste reduction between the general public and housewives in HongKong mentioned that source separation of household waste has gained popularity among the general public in this country. Despite an increasing number of married women involved in full-time paid work, women were found to be most involved in waste management in most HongKong families. Thus, the attitude of this social group (i.e., housewives) was reported to be decisive in the success of the source separation of household waste and other recycling-related activities. Attitudinal differences between housewives and the general public were also observed with respect to the amount of available waste, the incentive level of waste collection charges, the acceptable level of green premium, the support of source separation of household waste, and a deposit-refund system on beverage containers and cell batteries. Although housewives were also found to support waste recycling and reduction.

The study conducted by Nestor (1994) investigated key issues in the design of a policy to promote recycling of old newspapers (ONP). The study presented empirical evidence that policies to increase supply will not give rise to a large increase in ONP recycling. Also, questions on the design of alternative policy measures were first addressed by calculating baseline recycling rates from the U.S. newsprint industry. This implied that the legislatively-determined recycling targets were often insufficient to induce levels of ONP recycling beyond those that would occur in the absence of government intervention.

Research Methodology

Both primary and secondary data were used to achieve the objectives of the study. The primary data consisted of 1) socio-economic characteristics of the sample respondents; 2) the types of domestic wastes that they produce; and 3) their current methods of solid waste disposal.

Relevant documents such as the solid waste management plans in the three identified barangays in the University of Eastern Philippines were accessed and used as basis for comparing existing garbage collection and disposal practices.

Primary and secondary data were utilized in order to achieve the objectives of the study. Focus group discussions were also conducted in the study sites to validate or confirm the data supplied by the 65 survey respondents on the problems and solutions related to solid waste management practices. This method was also used to supplement the data gathered through interviews with collection and administrative personnel.

In order to analyze the solid waste management system in the University of Eastern Philippines, all the pertinent information on the solid waste management system were studied, compiled, analyzed and presented into the various aspects of the solid waste management.

Descriptive statistics such as means, frequencies, and percentages were used in presenting the types of wastes produced and the solid waste management practices of households in the University of Eastern Philippines.

Results and Discussion

The sample households from UEP Zone III of the University of Eastern Philippines ranked plastics as their primary data gathered. This was followed by kitchen wastes, paper, cans and bottles because

In contrast, kitchen wastes ranked first among the solid wastes generated by the sample households in UEP Zone I and II. This was followed by plastics, paper, bottles, and cans, mentioned in order of importance. The main reason why kitchen wastes were the major wastes generated in these barangays was that most households preferred to prepare and cook their food.

Kitchen wastes were mostly generated by households with large families, and high income while plastics were mostly generated by households with small families and low income. It is evident that the type of waste generated by households differed by household size and income.

Only few households in Barangay Zone II and Zone I practices burning of plastic wastes. This practice was reported by poor households with low educational attainment.

Cans and bottles ranked last in all the sample barangays because the sample households did not consider these items as wastes but were used as containers for storage of various food items or sold to the junkshops.

In all the sample barangays, waste collection from households by garbage collectors was done on a regular basis. However, the schedule and the frequency of waste collection varied among the barangays.

As the problems encountered in solid waste management were frequent vehicle breakdown, which resulted in delays in waste collection and consequently, accumulation of waste; lack of knowledge of proper

solid waste disposal practices; lack of cooperation among households in practicing proper disposal of wastes; and low government budget for implementing solid waste management program.

Recommendations

The local government should devise better solid waste management systems in their localities. Each household should have separate containers for biodegradable and non-biodegradable wastes. Also, the solid waste collection personnel should provide a shift in the garbage collection and disposal schedule by type of waste in order to practice segregation at the disposal site. Further studies should be undertaken to examine the feasibility of converting biodegradable wastes into organic fertilizers through the composting method and recycling of non-biodegradable wastes.

Stakeholders concerned with promoting environmentalism should conduct trainings on proper solid waste management practices. These should be designed in a participatory manner, specifically with cooperation or involvement of the communities to ensure greater project success.

Reference

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