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# Solid Waste Management Strategy & Improvement of Existing Scenario Based on Market Waste

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*Abstract -* Waste never a good part of the Environment, whether sometimes it is useful when it is recyclable. However in this present situation the waste liable for a lot of unwanted event. It degrades our climate, modifies our environment as well as create unsuitable situation. In many underdeveloped & developing countries still it is a major problem due to lack of proper management. This creates a lot of problems to the environment. Sustainable management for market solid waste is a concerning fact in Khulna city to lessen environment pollution and odor nuisances which are also contribute to the climate changes. This study helps to scrutiny the existing management process and introduces a new proposal of management process to abate environmental pollution. This study march by the following steps (1)The location and the covered area of the markets are resolve (2)The quantity and the types of waste produce in the market is analyze (3)The storage capacity and the collecting techniques is analyze (4) Management techniques (recycling, Viennese, BOD pending) proposed. The result of this study gives an idea for selecting place for the management. Here different pans are used for different waste storage and these are collect separately which reduce hazardous effect on the environment.

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# Solid Waste Management Strategy & Improvement of Existing Scenario Based on Market Waste

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## I. Introduction

Solid wastes are all those wastes that are useless, unwanted and cast off materials arising from production and consumption or from human and animal activities. Solid wastes are various types; generally it is categorized as municipal wastes, industrial wastes and hazardous wastes. Market solid wastes are also a kind of municipal wastes. Various types of waste are generated from market especially food wastes, paper, cardboard, plastics, textiles, rubber, leather, wood, glass, ferrous metals etc. For the lacking of proper management process these are hazardous for surrounding environment and also liable for climate change. For the developing countries like Bangladesh market waste management is a growing environmental and financial problem (Raman et al. 2013).The waste management practices and the issue of sustainable. Development in Khulna city markets are reviewed in this paper. The method adopted by the city corporation was found to be ineffective and fall short of international standards in waste management practices and sustainable development that showed by the study (Adewole et al. 2013). Increasing waste generation, and inefficient collection and transportation infrastructure system, the ingredients of waste and climatic condition were need to be considered in solid waste management (Visvanathan). For the management of Solid waste technical, economical and social aspects on a sustainability root are also need to be considered because it is a multifaceted and multidisciplinary problem (Alamin et al. 2013). A complete understanding of the composition of a waste stream as well as the activities that determine its generation place requires for effective solid waste management (Rahman et al. 2013). Proper Storage, efficient collection and disposal of the solid waste that are generated from market area are essential components of the support services and facilities that must be preferred in management planning. Proper Solid Waste Management Plan provides a complete way and sets a path to achieve new waste minimization, diversion and disposal targets (Roy, 2013).

The main motive of this study is to introduce a sustainable management process for market solid wastes which is beneficial in economic consideration and defend the environment from its harmful effect.

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*Figure 1 :* Waste Dump Sites in Khulna City

## II. Generation of Waste & Existing Management Process

This study began with an interior policies and steps related to the Khulna city corporation sustainability and waste management. Also external documents including government rules, directions and various solid wastes composition were studies. In this study six markets in Khulna city are analysed including Doulotpur Bazar, New market Bazar, Boyra Bazar, Fulbarigate Bazar, Mistripara Bazar and Khalispur Bazar. At first the geographical location of the markets were seen and their covered area noted. By investigating each of these six markets it is seen that about 13-15 tons solid wastes are generated in per day. It is also scrutiny that about 83%foodwaste,6%paper,5%plastics,2%ferrousmetals,1. 5%wood,0.7%glass, 0.6% card board,0.5%textiles, 0.4%rubber, 0.3%leather is produced total of wastes per day in each market. Following typical diagram shows the average percentage of various waste produce in each of the markets.

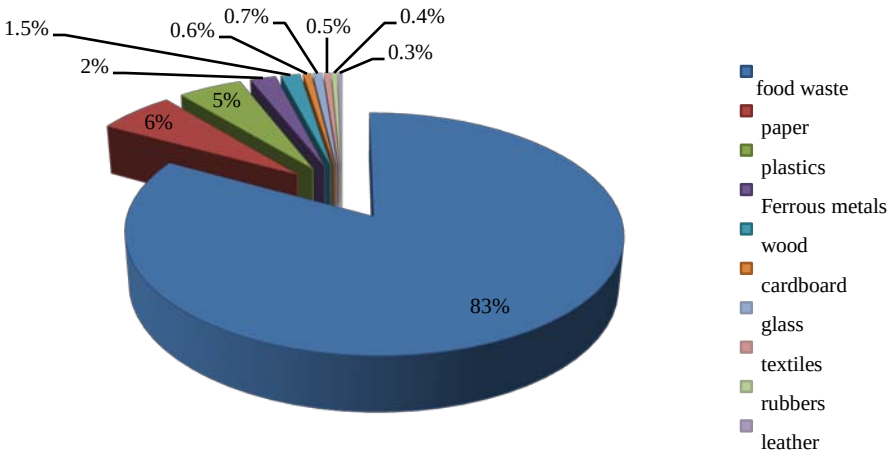


*Figure 2 :* Percentage of wastes in the Markets of Khulna City Corporation

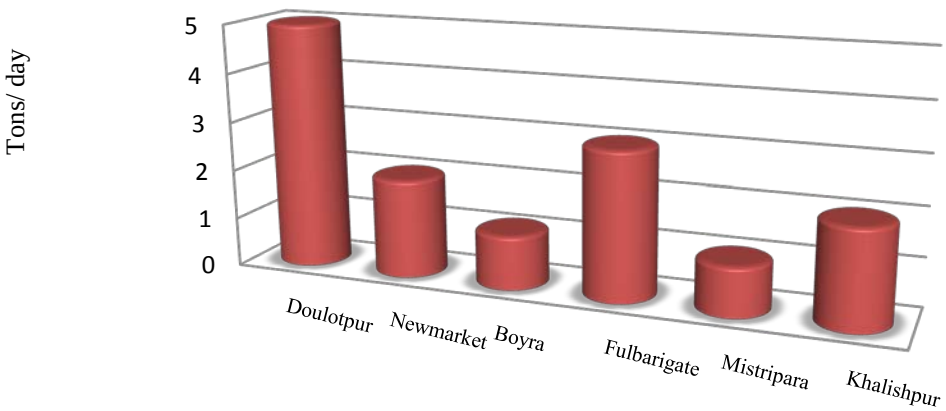


*Figure 3 :* Summation of wastes in the Markets of Khulna City Corporation



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The existing management process in these areas is shown by flow diagram.

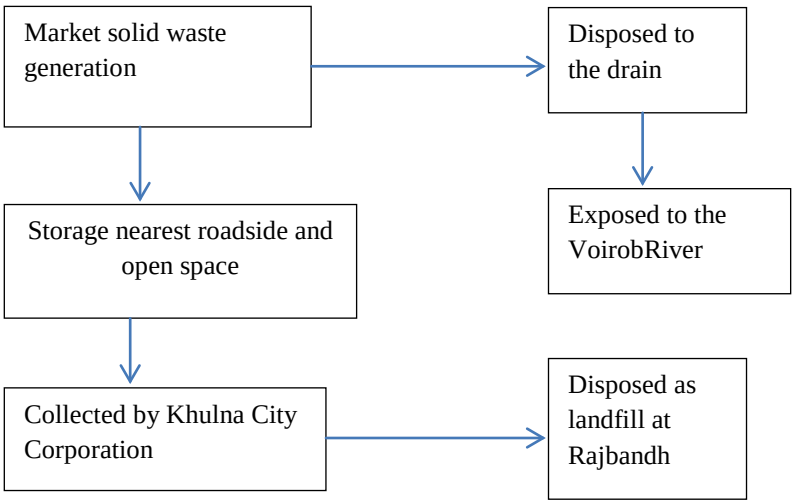


*Figure 4 :* Existing management process of solid waste

## III. New Proposed Management Process

New proposed management process progressed by the following diagram.

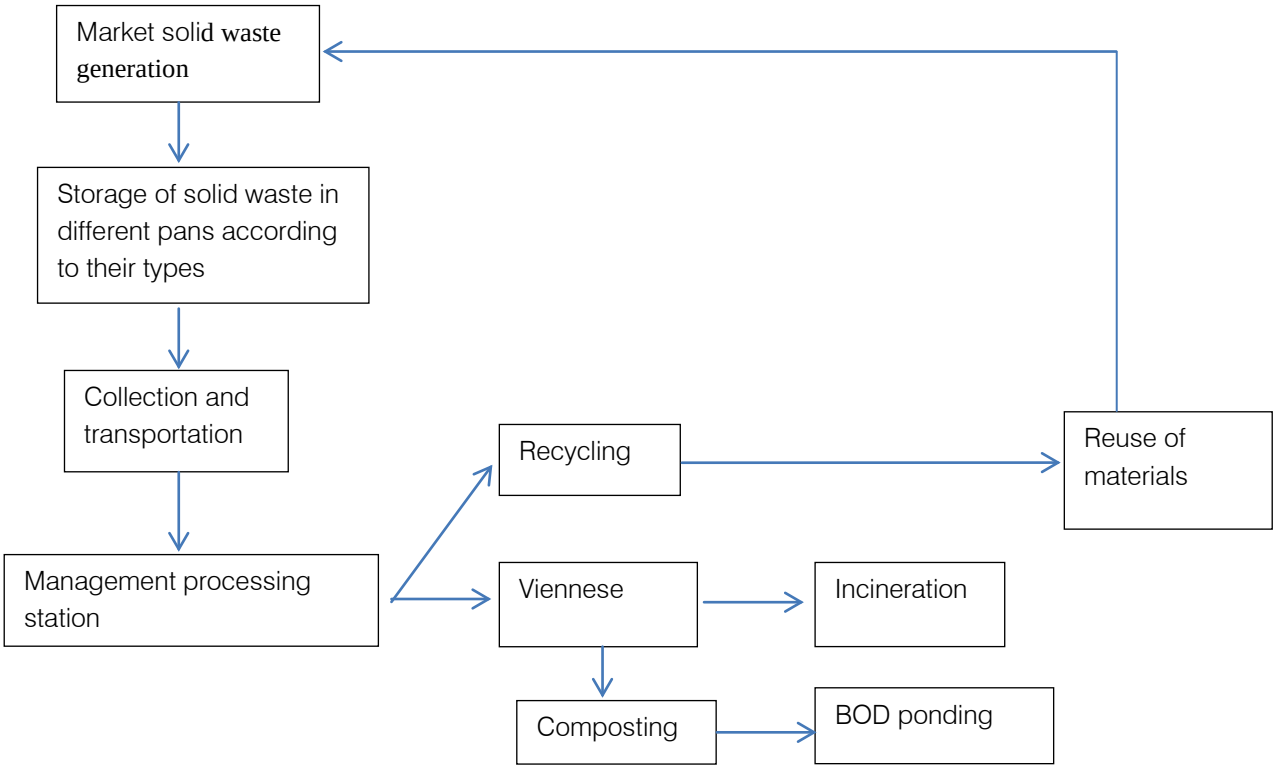


*Figure 5 :* Proposed management process of solid waste

In this process, firstly the types of wastes that are generated from market are recognised and these are stored separately in different bins according to their types. Then the wastes are separately collected in proper ways and transported to the processing station. Recyclable materials such as newspaper, bottles, plastic, containers, broken glass, cans, polythene etc. are prefer in recycling process and after recycling reuse the materials. Other wastes are preferred in Viennese process. In Viennese process wastes are separated in two categories (a) residual waste (b) bio waste. Residual wastes transfer into incineration plant and Bio wastes into compost. These compost are then disposed in BOD pending where oxidation occur by natural oxygen.

## IV. Conclusion

Environmental policy issues for market solid wastes management in Khulna are criticized in this



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paper and focus on weak points in the criteria used by pertinent studies for the storage of solid wastes. To ensure better human health and safety of workers involving in the process of waste disposal, effective solid management system is needed and it must be economically sustainable. By recycling in this management process, materials can be reused which is economical. In BOD pending process naturally oxidation takes place which is also economic and able to minimize environmental hazard. This study tried only to unfold a theoretical model for better solid waste management in Khulna city markets. To investigate the possibility of this model, a complete empirical study is necessity. This study will also prepare the platform for additional study and exploration of the market solid waste management.

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